



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
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November 7, 2017

Mr. Joel P. Gebbie  
Senior VP and Chief Nuclear Officer  
Indiana Michigan Power Company  
Nuclear Generation Group  
One Cook Place  
Bridgman, MI 49106

SUBJECT: DONALD C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2—INTEGRATED  
INSPECTION REPORT 05000315/2017003 AND 05000316/2017003

Dear Mr. Gebbie:

On September 30, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Donald C. Cook Nuclear Power Plant, Units 1 and 2. On October 19, 2017, the NRC inspectors discussed the results of this inspection with yourself and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspectors did not identify any findings or violations of more than minor significance.

This letter, its enclosure, and your response (if any) will be made available for public inspections 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* (CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

**/RA/**

Billy Dickson, Chief  
Branch 2  
Division of Reactor Projects

Docket Nos. 50-315; 50-316  
License Nos. DPR-58; DPR-74

Enclosure:  
IR 05000315/2017003; 05000316/2017003

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Letter to Joel Gebbie from Billy Dickon dated November 7, 2017

SUBJECT: DONALD C. COOK NUCLEAR POWER PLANT, UNITS 1 AND 2—INTEGRATED  
INSPECTION REPORT 05000315/2017003 AND 05000316/2017003

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-315; 05-316  
License Nos: DPR-58; DPR-74

Report No: 05000315/2017003; 05000316/2017003

Licensee: Indiana Michigan Power Company

Facility: Donald C. Cook Nuclear Power Plant, Units 1 and 2

Location: Bridgman, MI

Dates: July 1 through September 30, 2017

Inspectors: J. Ellegood, Senior Resident Inspector  
T. Taylor, Resident Inspector  
B. Bergeon, Operator Licensing Engineer  
M. Phalen, Senior Health Physicist  
K. Pusateri, Reactor Engineer  
R.K. Walton, Senior Operations Engineer

Approved by: B. Dickson, Chief  
Branch 2  
Division of Reactor Projects

Enclosure

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## **SUMMARY**

Inspection Report 05000315/2017003, 05000316/2017003; 07/01/2017 – 09/30/2017;  
Donald C. Cook Nuclear Power Plant, Units 1 & 2; Routine Integrated Inspection Report.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. The Nuclear Regulatory Commission's (NRC's) program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

## **REPORT DETAILS**

### **Summary of Plant Status**

Unit 1 operated at or near 100 percent until September 10, 2017, when the licensee began a power reduction for a planned refueling outage (RFO). On September 13, the licensee shut the plant down. Unit 1 remained shut down in an RFO for the remainder of the inspection period.

Unit 2 operated at or near 100 percent for the entire inspection period.

### **1. REACTOR SAFETY**

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

#### 1R04 Equipment Alignment (71111.04)

##### .1 Quarterly Partial System Walkdowns

##### a. Inspection Scope

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

- Unit 2 control air and plant air systems during work on Unit 2 control air receiver; and
- Unit 1 east containment spray following maintenance.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, Updated Final Safety Analysis Report (UFSAR), Technical Specification (TS) requirements, outstanding work orders (WOs), condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program (CAP) with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

These activities constituted two partial system walkdown samples as defined in Inspection Procedure (IP) 71111.04–05.

##### b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

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

- Unit 1 main control room heating, ventilation and air conditioning (HVAC) room;
- Unit 2 main control room HVAC room;
- Fire main distribution (post-indicating valves); and
- Unit 2 east (AB) 4kv.

The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems, or features in accordance with the licensee's fire plan.

The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event.

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

Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On July 24, 2017, the inspectors observed a fire brigade activation for a drill involving a fire in the Unit 2 main generator electric-hydraulic control oil pump skid. Based on this observation, the inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that the licensee staff identified deficiencies openly discussed them in a self-critical manner at the drill debrief, and took appropriate corrective actions. Specific attributes evaluated were:

- proper wearing of turnout gear and self-contained breathing apparatus;

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

Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

1R06 Flooding (71111.06)

.1 Internal Flooding

a. Inspection Scope

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

- Turbine building condenser pit 579’ elevation (Unit 1 and Unit 2).

Documents reviewed during this inspection are listed in the Attachment to this report. This inspection constituted one internal flooding sample as defined in IP 71111.06–05. In addition, the inspectors did not identify a history of cable degradation or failure due to submergence at the site. Therefore, the underground vaults inspection sample was not performed as defined in IP 71111.22, Section–02.

b. Findings

No findings were identified.



1R11 Licensed Operator Requalification Program (71111.11)

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

a. Inspection Scope

On August 8, 2017, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator requalification training. The inspectors verified that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and that training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

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

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

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

b. Findings

No findings were identified.

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

a. Inspection Scope

Between September 13 and September 17, 2017, the inspectors observed several activities associated with cooling down and draining the reactor coolant system at the beginning of the Unit 1 RFO. Activities observed included cooldown, transition to residual heat removal cooling, and draining the reactor coolant system to just below the reactor flange. These were activities that required heightened awareness or were related to increased risk. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms (if applicable);
- correct use and implementation of procedures;
- control board (or equipment) manipulations;

- oversight and direction from supervisors; and
- ability to identify and implement appropriate Technical Specification (TS) actions and Emergency Plan actions and notifications (if applicable).

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

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

b. Findings

No findings were identified.

.3 Annual Operating Test Results (71111.11A)

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of Annual Operating Test, administered by the licensee from February 28, through March 31, 2017, required by Title 10 of the *Code of Federal Regulations* (CFR) 55.59(a). The results were compared to the thresholds established in Inspection Manual Chapter 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process," to assess the overall adequacy of the licensee's licensed operator requalification training program to meet the requirements of 10 CFR 55.59. (02.02)

This inspection constituted one annual licensed operator requalification examination results sample as defined in IP 71111.11-05.

b. Findings

No findings were identified.

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

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

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

- Emergent supplemental diesel and fire pump outage week of August 14, 2017;
- 1-ESW-303 supply valve stuck to AFW room cooler; and
- 1-QRV-301 chemical and volume control system flow control valve troubleshooting post-unusual event.

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate

and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

Documents reviewed during this inspection are listed in the Attachment to this report. These maintenance risk assessments and emergent work control activities constituted three samples as defined in IP 71111.13–05.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- Steam generator power operated relief valve pneumatic positioner air leakage;
- 1 AB emergency diesel generator (EDG) casting oil leak and lockwire in crankcase; and
- fuel handling area exhaust fan material condition and test issues.

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and UFSAR to the licensee's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment to this report.

This operability inspection constituted three samples as defined in IP 71111.15–05.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

.1 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modification(s):

- Removal of hydrogen recombiners from the Technical Requirements Manual.

The inspectors reviewed the configuration changes and associated 10 CFR 50.59 safety evaluation screening against the design basis, the UFSAR, and the TS, as applicable, to verify that the modification did not affect the operability or availability of the affected system(s). As applicable, the inspectors verified that relevant procedure, design, and licensing documents were properly updated. Lastly, the inspectors discussed the plant modification with operations, and engineering to ensure that the individuals were aware of how the operation with the plant modification in place could impact overall plant performance. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

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

- Diesel fire pump operability test after planned maintenance;
- Unit 1 east residual heat removal pump oil change and valve preventative maintenance;
- Unit 1 east containment spray pump mechanical seal heat exchanger replacement; and
- Unit 1 control room indicating and display-3 outage.

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion); and test documentation was properly evaluated. The inspectors evaluated the activities against

TSS, the UFSAR, 10 CFR Part 50 requirements, licensee procedures, and various U.S. Nuclear Regulatory Commission (NRC) generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with post-maintenance tests to determine whether the licensee was identifying problems and entering them in the corrective action program (CAP) and that the problems were being corrected commensurate with their importance to safety. Documents reviewed are listed in the Attachment to this report.

This inspection constituted four post-maintenance testing samples as defined in IP 71111.19–05.

b. Findings

No findings were identified.

1R20 Outage Activities (71111.20)

.1 Refueling Outage Activities

a. Inspection Scope

The inspectors reviewed the Outage Safety Plan (OSP) and contingency plans for the Unit 1 RFO, which began September 13, 2017, to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense-in-depth. During the RFO, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the outage activities listed below:

- licensee configuration management, including maintenance of defense-in-depth commensurate with the OSP for key safety functions and compliance with the applicable TS when taking equipment out of service;
- installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication, accounting for instrument error;
- controls over the status and configuration of electrical systems to ensure that TS and OSP requirements were met;
- monitoring of decay heat removal processes, systems, and components;
- controls to ensure that outage work was not impacting the ability of the operators to operate the spent fuel pool cooling system;
- reactor water inventory controls including flow paths, configurations, and alternative means for inventory addition, and controls to prevent inventory loss;
- controls over activities that could affect reactivity;
- maintenance of secondary containment as required by TS;
- refueling activities, including fuel handling; and
- licensee identification and resolution of problems related to RFO activities.

Documents reviewed are listed in the Attachment to this report. Because the outage continued after the end of the inspection period, this activity does not constitute an RFO sample as defined in IP 71111.20–05.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

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

- 2CD EDG slow speed start surveillance (routine);
- Unit 1 motor driven auxiliary feedwater pump (in-service test); and
- Unit 1 pressure isolation valve test (in-service test).

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

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

- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted one routine surveillance testing sample and two in-service test samples as defined in IP 71111.22, Sections–02 and–05.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on July 18, 2017, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the CAP. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the Attachment to this report.

This emergency preparedness drill inspection constituted one sample as defined in IP 71114.06–05.

b. Findings

No findings were identified.

**2. RADIATION SAFETY**

2RS5 Radiation Monitoring Instrumentation (71124.05)

.1 Walkdowns and Observations (02.02)

a. Inspection Scope

The inspectors assessed select portable survey instruments that were available for use for current calibration and source check stickers, and instrument material condition and operability.

The inspectors observed licensee staff demonstrate performance checks of various types of portable survey instruments. The inspectors assessed whether high-range instruments responded to radiation on all appropriate scales.

The inspectors walked down area radiation monitors and continuous air monitors to determine whether they were appropriately positioned relative to the radiation sources or areas they were intended to monitor. The inspectors compared monitor response with actual area conditions for selected monitors.

The inspectors assessed the functional checks for select personnel contamination monitors, portal monitors, and small article monitors to verify they were performed in accordance with the manufacturer's recommendations and licensee procedures.

These inspection activities constituted one complete sample as defined in IP 71124.05-05.

b. Findings

No findings were identified.

.2 Calibration and Testing Program (02.03)

a. Inspection Scope

The inspectors assessed laboratory analytical instruments used for radiological analyses to determine whether daily performance checks and calibration data indicated that the frequency of the calibrations was adequate and there were no indications of degraded instrument performance. The inspectors assessed whether appropriate corrective actions were implemented in response to indications of degraded instrument performance.

The inspectors reviewed the methods and sources used to perform whole body count functional checks before daily use and assessed whether check sources were appropriate and aligned with the plant's isotopic mix. The inspectors reviewed whole body count calibration records since the last inspection and evaluated whether calibration sources were representative of the plant source term and that appropriate calibration phantoms were used. The inspectors looked for anomalous results or other indications of instrument performance problems.

The inspectors reviewed select containment high-range monitor calibration and assessed whether an electronic calibration was completed for all range decades, with at least one decade at or below 10 rem/hour calibrated using an appropriate radiation source, and calibration acceptance criteria was reasonable.

The inspectors reviewed select monitors used to survey personnel and equipment for unrestricted release to assess whether the alarm setpoints were reasonable under the circumstances to ensure that licensed material was not released from the site. The inspectors reviewed the calibration documentation for each instrument selected and discussed the calibration methods with the licensee to determine consistency with the manufacturer's recommendations.



The inspectors reviewed calibration documentation for select portable survey instruments, area radiation monitors, and air samplers. The inspectors reviewed detector measurement geometry and calibration methods for portable survey instruments and area radiation monitors calibrated onsite and observed the licensee demonstrate use of the instrument calibrator. The inspectors assessed whether appropriate corrective actions were taken for instruments that failed performance checks or were found significantly out of calibration, and that the licensee had evaluated the possible consequences of instrument use since the last successful calibration or performance check.

The inspectors reviewed the current output values for instrument calibrators. The inspectors assessed whether the licensee periodically measured calibrator output over the range of the instruments used with measuring devices that have been calibrated by a facility using National Institute of Standards and Technology traceable sources and corrective factors for these measuring devices were properly applied in its output verification.

The inspectors reviewed the licensee's 10 CFR, Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," source term to assess whether calibration sources used were representative of the types and energies of radiation encountered in the plant.

These inspection activities constituted one complete sample as defined in IP 71124.05-05.

b. Findings

No findings were identified.

.3 Problem Identification and Resolution (02.04)

a. Inspection Scope

The inspectors evaluated whether problems associated with radiation monitoring instrumentation were being identified by the licensee at an appropriate threshold and were properly addressed for resolution. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involve radiation monitoring instrumentation.

These inspection activities constituted one complete sample as defined in IP 71124.05-05.

b. Findings

No findings were identified.

#### 4. OTHER ACTIVITIES

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

#### 4OA1 Performance Indicator Verification (71151)

##### .1 Radiological Effluent Technical Specification/Offsite Dose Calculation Manual Radiological Effluent Occurrences

###### a. Inspection Scope

The inspectors sampled licensee submittals for the radiological effluent Technical Specification/Offsite Dose Calculation Manual radiological effluent occurrences Performance Indicator for the period from the third quarter of 2016 through the second quarter of 2017. The inspectors used Performance Indicator definitions and guidance contained in the Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 2013, to determine the accuracy of the Performance Indicator data reported during those periods. The inspectors reviewed the licensee's issue report database and selected individual reports generated since this indicator was last reviewed to identify any potential occurrences such as unmonitored, uncontrolled, or improperly calculated effluent releases that may have impacted offsite dose. The inspectors reviewed gaseous effluent summary data and the results of associated offsite dose calculations for selected dates to determine if indicator results were accurately reported. The inspectors also reviewed the licensee's methods for quantifying gaseous and liquid effluents and determining effluent dose. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one Radiological Effluent Technical Specification/Offsite Dose Calculation Manual radiological effluent occurrences sample as defined in IP 71151-05.

###### b. Findings

No findings were identified.

#### 4OA2 Identification and Resolution of Problems (71152)

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

###### a. Inspection Scope

As discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify they were being entered into the licensee's CAP at an appropriate threshold, adequate attention was being given to timely corrective actions, and adverse trends were identified and addressed. Some minor issues were entered into the licensee's CAP as a result of the inspectors' observations; however, they are not discussed in this report.

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

b. Findings

No findings were identified.

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

.1 Notice of Unusual Event for Excessive Leakage

a. Inspection Scope

The inspectors reviewed the plant's response to an unusual event. During plant shutdown, the licensee declared an unusual event when a relief valve in the letdown system opened but failed to reseat. The valve lifted because a steam void developed in the letdown line and the subsequent collapse of the steam bubble lifted a relief in the letdown system. After the pressure transient ended, the valve did not reseat and the licensee determined the leak to be in excess of 10 gallons per minute. The licensee entered the abnormal procedure and isolated the leak. The inspectors were in the control room during the event and where they verified the licensee took actions consistent with plant procedures.

Following the transient, the licensee reviewed plant response and determined a flow control valve in the letdown system had not operated properly. In addition, the inspectors identified that during the transient, conditions in the letdown system were at saturation with the collapse of the steam bubble causing a pressure transient. The licensee performed a walk-down of the affected portions of to verify the transient had not damaged piping subjected to the transient. The licensee repaired the flow control valve and un-isolated the letdown system. Subsequently, the licensee retracted the Notice of an Unusual Event (NOUE) after determining the leak rate had not met requirements for NOUE entry. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On October 19, 2017, the inspectors presented the inspection results to Mr. J. Gebbie, Chief Nuclear Officer, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The inspection results for the Radiation Monitoring Instrumentation Program review with Mr. J. Gebbie, Chief Nuclear Officer, on July 14, 2017.

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

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

J. Gebbie, Site Vice President  
J. Bowers, General Health Physics Supervisor  
M. Ellett, Regulatory Affairs Compliance Coordinator  
S. Fenton, Radiation Protection Technician  
C. Papas, Health Physicist  
J. Uffner, Radiation Protection Technician

#### U.S. Nuclear Regulatory Commission

B. Dickson, Chief, Reactor Projects Branch 2

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

#### Opened

None.

#### Closed

None.

#### Discussed

None.

## LIST OF DOCUMENTS REVIEWED

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

### 1R04 Equipment Alignment

- 12-EHP-4030-008-001, Monitoring and Trending of Gas Accumulation in ECCS, Revision 5
- 1-OHP-4021-008-009, Venting Trapped Gas in Support of Ultrasonic Testing, Revision 1
- 1-OHP-4021-009-001, Placing the Containment Spray System in Standby Readiness, Revision 30
- 2-OHP-4021-064-001, Operation of Plant and Control Air Systems, Revision 45
- AR 2017-7427, Gas Void on E CTS Eductor Line, August 2, 2017
- Drawing 1-5120A, Flow Diagram Compressed Air System Plant Air Turbine Room, Revision 65
- Drawing 1-5120C, Flow Diagram Compressed Air System (Arrg't of Control Air Equip.), Revision 36
- OP-1-5144-54, Flow Diagram Containment Spray Unit No. 1, May 24, 2016

### 1R05 Fire Protection

- AR 2017-8596, Error in Fire Pre-Plans Volume 1, September 8, 2017
- Cook Nuclear Plant Fire Drill Package, Drill Number 317-019-D, Control Fluid Pump Skid
- Fire Pre-Plans Volume 1, Fire Area AA 57A, Control Room HVAC Equipment Unit 1 Elevation 650'-0", Revision 29
- Fire Pre-Plans Volume 1, Fire Area AA 57B, Control Room HVAC Equipment Unit 2 Elevation 650'-0", Revision 29
- Fire Pre-Plans, Volume 1, Revision 29
- PMI-2270, Fire Protection Program, Revision 39
- OP-12-5152-16, Flow Diagram fire Protection-Water Yard Piping, Revision 16
- 12-OHP-4021-066-001, Fire Protection System (Water) Operation, Revision 43

### 1R06 Flood Protection Measures

- 12-EHP-4075-TCA-001, Operator Time Critical Actions, Revision 13
- 1-OHP-4024-118, Drop 74 and Drop 75, Annunciator #118 Response: Main and FPT, Revision 33
- 2-OHP-4024-218, Drop 81 and Drop 91, Annunciator #218 Response: Main and FPT, Revision 27
- Calculation MD-12-CW-005-N, Flooding Due to a Circulation Water Expansion Joint Failure, Revision 2
- PMP-4075-TCA-001, Time Critical Action Validation and Verification, Revision 15
- PMP-5091-FLD-001, Flood Protection Program Implementation, Revision 3

### 1R11 Licensed Operator Regualification Program

- 1-OHP-4021-001-004, Plant Cooldown from Hot Standby to Cold Shutdown, Revision 78
- 1-OHP-4021-002-005, RCS Draining, Revision 55
- 1-OHP-4021-017-002, Placing in Service the Residual Heat Removal System, Revision 30

- RQ-E-4203-U2-A, Period 4203 Unit 2 As-Found Simulator Evaluation Guide, Revision 2

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

- 12-FPP-2270-066-002, Establishment of Backup Fire Protection Water Supplies, Revision 6
- AR 2017-7823, SDG #1 Tripped While Performing Test, August 1,4 2017
- AR 2017-7828, Irregular Control of Load by SDG #2, August 18, 2017
- AR 2017-8009, 1-HV-AFP-WAC Expected to Exceed Maintenance Rule Unavailability, August 18, 2017
- AR-2017-8794, Wiring Inside 1-EPT-301 Affected Transducer Output, September 13, 2017
- Drawing OP-1-5129-68, CVCS-Reactor Letdown and Charging, Unit 1
- Drawing SOD-00300-001, Charging and Letdown System, Revision 12
- IP-ENG-001, Standard Design Process, Revision 00Y
- NEI 96-07, Revision 1, Guidelines for 10 CFG 50.59 Implementation, November 2000
- PMP-2291-OLR-001, In Line Risk Management, Revision 41
- PMP-2291-OLR-001, Online Risk Management, Revision 41
- PMP-2291-WAR-001, Work Activity Risk Management Process, Revision 48
- PMP-5041-TCC-001, Temporary Configuration Changes, Revision 0

### 1R15 Operability Evaluations

- AR 2016-10759, 2-MRV-223-VB Leaking Air
- AR 2017-0367, Air Leak on 2-MRV-223-PU
- AR 2017-8400, MR did not Request Specific UTC, August 31, 2017
- AR 2017-8824, 12-HV-AFX – Two Installed Trays Have Incorrect Batch Number, September 14, 2017
- AR 2017-8898, 12-HV-AFX-2 Amp Draw Above Nameplate, September 15, 2017
- AR 2017-8946, AFX Fan Charcoal, Door Seals and Latches, September 16, 2017
- AR 2017-8960, 12-HV-AFX Charcoal Filter Issue, September 17, 2017
- AR 2017-8978, 12-HV-AFX has Degraded Condition, September 17, 2017
- AR 2017-9015, Broken Lock Wire Found on Connecting Rod Nut Lock Bolts, September 18, 2017
- AR-2017-8775, 12-HV-AFX-2 Inlet Vane Damper, September 13, 2017
- AR-2017-8784, AFX Volume Damper Out of Tagged Position, September 13, 2017
- AR-2017-8909, WOER 200119657 Identification of Engineering Process, September 16, 2017
- Calculation MD-12-N2-001-N, Steam Generator PORV Nitrogen Supply Requirements for Consumed Volume and Tank Pressure, Revision 0
- Drawing W 510465K, Engine Base – Transverse Section, Supercharged Diesel Engine
- GT 2017-9006, Revise 12-IHP-4030-128-001, September 18, 2017
- N850901, CEQ Fan Motor Circulation Air Temperature Calculation, October 18, 1985
- UFSAR Chapter 14.2.1, Fuel Handling Accident, Revision 27.0
- UFSAR Chapter 9.9.3.2, Fuel Handling Area Ventilation System, Revision 27.0

### 1R18 Plant Modifications

- 50.59 Screening, SS-SE-2017-0208-00, Request to Remove the Hydrogen Recombiners from the TRM for U1 and U2, Revision 1
- Plant Operations Review Committee (PORC) – 4723 Meeting Minutes, July 20, 2017
- Unit 1 Technical Requirement for Operability, Section 8.6.3, Hydrogen Recombiners, Revision 70
- Unit 2 Technical Requirement for Operability, Section 8.6.3, Hydrogen Recombiners, Revision 70

## 1R19 Post-Maintenance Testing

- 12-MMP-3120-NETS-001, Receipt Inspection Report, Heat Exchanger Cast Iron Head and SS Tubes, 0430014788-1, Revision 6
- 12-OHP-4030-066-121FD, Diesel Fire Pump Operability Test, Revision 18
- 1-OHP-4021-009-001, Placing the Containment Spray System in Standby Readiness, Revision 30 Section XI Repair/Replacement Plan, WO 55369854-02, June 21, 2017
- AR 2017-5659, WO 55490449-01, 1-PP-35E-MTR, Lube and Clean Motor, July 6, 2017
- AR 2017-6521, Clarify Post-Maintenance Requirements for RHR Motor Lube and Clean Motor, July 5, 2017
- AR 2017-6545, RHR Pump Motors Post-Maintenance, July 6, 2017
- AR-WOER #20019011, Identify the Required EQ Inspections for 1-PP-35E-MTR
- EC 52330, Unit 1 & Unit 2 East & West Containment Spray Pump Mechanical Seal Heat Exchanger Part Number Change, May 8, 2013
- MHI-5075, ASME Section XI Repair/Replacement Program, Revision 17
- OP-1-98077-28, 120VAC Instrument Distribution Cab. "CRID-1" Elementary Diagram Sh-1, May 18, 2017
- VTD-FEDB-0001, Federal Brass Mounting Instructions for Type 550 Flush-Mounting Oil Level Gauges
- VTD-WEST-0116, Westinghouse Instructions for Large AC Motors
- Weld Map – 55369854-02
- WO 55363237-01, 1-PP-35E-MTR, Lube and Clean Motor
- WO 55369854, Ops: Fill/Vent 1E CTS PP 009-001 ATT3
- WO 55369854-02, Replace Containment Spray Pump Mechanical Seal Heat Exchanger for License Renewal Commitment
- WO 55495643-01, Replace Discharge Piping Spool Piece
- WO 55496654-03, 1-CRID-3-INV, Perform 12-IHP-6030-IMP-355, Post-Maintenance Test
- WO 55496829-01, Check Belts, Hoses, Air Filter and Change Oil
- WOER 20012492, Engineering to Review Welding to be Performed

## 1R20 Refueling and Other Outage Activities

- "Pre-Job Brief Package: Removal of the Reactor Head with Fuel in the Vessel"
- 12-MHP-4050-FHP-005, Core Unload/Reload and Incore Shuffle, Revision 4
- 12-MHP-4050-FHP-023, Reactor Vessel Head Removal with Fuel in the Vessel, Revision 1
- 1-OHP-127-041, Refueling Integrity, Revision 37
- 1-OHP-4021-001-004, Plant Cooldown from Hot Standby to Cold Shutdown, Revision 78
- 1-OHP-4021-003-001, Letdown, Charging and Seal Water Operation, Revision 69
- 1-OHP-4021-016-003, Component Cooling Water Systems Operation, Revision 46
- 1-OHP-4021-017-002, Placing in Service the Residual Heat Removal System, Revision 30
- 1-OHP-4030-114-030, Daily And Shiftly Surveillance Checks, Revision 40
- Clearance: R-CCW –CCWM-0659, 1-CCW-157, September 18, 2017
- IPTE Briefing Guide, EDG Load Sequence Testing, 1-OHP-4030-132-217A and 1-OHP-4030-132-217B, July 25, 2017
- OP-1-5135-42, Flow Diagram CCW Pumps and CCW Heat Exchangers, December 8, 2013
- OP-1-5135A-46, Flow Diagram CCW Safety-related Loads, October 26, 2015
- OP-1-5135B-25, Flow Diagram CCW Miscellaneous Services Auxiliary Building, March 13, 2013
- OP-1-5135C-8, Flow Diagram CCW Miscellaneous Services Auxiliary Building, June 22, 2014
- OP-1-5142-47, Flow Diagram Emergency Core Cooling (SIS), June 7, 2017
- PMI04050, Fuel Handling, Revision 12



- PMP-4100-SDR-001, Plant Shutdown Safety and Risk Management, Revision 44
- Unit 1 Shutdown Safety Report

#### 1R22 Surveillance Testing

- 1-OHP-4030-102-017, RCS Pressure Isolation Valves Leak Rate Surveillance Test, Revision 17
- 1-OHP-4030-156-017w, West Motor Driven Auxiliary Feedwater System Test, August 16, 2017
- 2-OHP-4021-032-008CD, Operating DG2CD Subsystems, Revision 28
- 2-OHP-4030-232-027CD, CD Diesel Generator Operability Test (Train A), Revision 45
- AR 2017-8020, Test Setup Maybe Too Conservative, August 18, 2017
- Donald C Cook Fifth Annual Interval Program Plan, Revision 0
- PMI-5071, In-Service Testing, Revision 5
- PMP-2010-PRC-001, Procedure Writing, Revision 30

#### 1EP6 Drill Evaluation

- Briefing Summary for ERO Training Drills, August 18, 2017
- June/July 2017 Training Drills, Narrative Summary and Timeline
- PMP-2080-EPP-101, Emergency Classification, Revision 20

#### 2RS5 Radiation Monitoring Instrumentation

- 12-THP-4030-RCP-802, Westinghouse Liquid Process Monitor Detector Calibration, Revision 2
- 12-THP-4030-RCP-813, Eberline Radiation Monitoring System Iodine Channel Calibration, Revision 2
- 12-THP-4030-RCP-814, Eberline Radiation Monitoring System Liquid Channel Calibration, Revision 1
- 12-THP-4030-RPC-801, Westinghouse RMS Area Monitor Calibration, Revision 2
- 12-THP-4030-RPC-815, Eberline Radiation Monitoring System Particulate and Low Range Noble Gas Calibration, Revision 4
- 12-THP-4030-RPC-816, Eberline Radiation Monitoring System DA1-1 and DA1-6 Area Monitor Calibration, Revision 1
- 12-THP-4030-RPC-817, Eberline Radiation Monitoring Mid and High Range Noble Gas Calibration, Revision 0
- 12-THP-4030-RPC-818, Eberline Radiation Monitoring System DA1-8 Area Monitor Calibration, Revision 4
- 12-THP-6010-RPC-512, Calibration of the Eberline Smart Portable Survey Meter(s), Revision 10
- 12-THP-6010-RPC-513, Calibration of the Eberline Model RO-7 Survey Meter, Revision 5
- 12-THP-6010-RPC-515, Calibration of the Eberline Model AMS-4, Revision 6
- 12-THP-6010-RPC-516, Calibration of the Mirion Technologies RDS-31 Meter and Smart Probes, Revision 0
- 12-THP-6010-RPC-517, Calibration of Portable Dose Rate Instruments, Revision 5
- 12-THP-6010-RPC-525, Calibration of the Radiological Contamination Friskers, Revision 14
- 12-THP-6010-RPC-529, Calibration of the RAS-1, Revision 12
- 12-THP-6010-RPC-531, Calibration of the Gilian Air Sampler, Revision 7
- 12-THP-6010-RPC-532, Self-Reading Dosimeter Calibration Check, Revision 10
- 12-THP-6010-RPC-535, Calibration of the ORTEC Fastscan Whole Body Counter, Revision 2
- 12-THP-6010-RPC-537, Calibration of the F&J Battery Powered Air Sampler, Revision 2

- 12-THP-6010-RPC-538, Calibration of the F&J DF-1 Low Volume Air Sampler, Revision 4
- 12-THP-6010-RPC-552, Calibration of the MGP Electronic Dosimeters, Revision 8
- 12-THP-6010-RPC-555, Calibration of the MGP Model AMP-50 and AMP-100 Area Monitors, Revision 3
- 12-THP-6010-RPC-558, Calibration of the PROTEAN WPC-1050, Revision 10
- 12-THP-6010-RPC-566, Source Characterization and Verification for the J.L. Shepherd Models M89 and M142-S, Revision 11
- 12-THP-6010-RPC-570, Calibration of the ARGOS-5 Personnel Monitors, Revision 9
- 12-THP-6010-RPC-571, Calibration of the Canberra GEM-5 Portal Monitor, Revision 4
- 12-THP-6010-RPC-577, Calibration of the Ludlum 3030P Alpha – Beta Sample Counter, Revision 3
- 12-THP-6010-RPC-579, Calibration of the Ludlum Model 2000 Scaler, Revision 2
- 12-THP-6010-RPC-588, Calibration of the MGP TelePole Wide Range, Revision 4
- 12-THP-6010-RPC-591, Calibration of the W Johnson Extender, Revision 3
- 12-THP-6010-RPC-592, Calibration of the Thermo-Electron SAM-11 Small Articles Monitor, Revision 8
- 12-THP-6010-RPC-593, Calibration of the Eberline PM-7 Personnel Monitor, Revision 6
- 12-THP-6010-RPC-596, Calibration of Thermo Scientific Small Article Monitor SAM-12, Revision 6
- 12-THP-6010-RPC-810, Title: Eberline Radiation Monitoring System Channel Restoraran, Revision 16
- 12-THP-6010-RPC-818, Eberline Radiation Monitoring System DA1-8 Area Monitor Calibration, Revision 4
- 12-THP-6010-RPI-500, Instrument Issue and Operational Testing, Revision 38
- 12-THP-6010-RPI-805, Radiation Monitoring System Setpoints, Revision 29
- 12-THP-6010-RPP-007, Radiation Protection Calculations and Technical Bases Documents, Revision 8
- 12-THP-6010-RPP-007, Radiation Protection Calculations and Technical Bases Instructions, Revision 10
- 12-THP-6010-RPP-100, Radiation Exposure Monitoring, Reporting, and Dose Control, Revision 16
- 12-THP-6010-RPP-101, Preparation and Control of Exposure Records and Reports, Revision 15
- 12-THP-6010-RPP-212, Operation of the ORTEC Fastscan Whole Body Counter, Revision 8
- 12-THP-6010-RPP-403, Portable Air Sampling, Revision 24
- 12-THP-6020-INS-526 Post, Accident Sampling Instrument Calibration, September 9, 2014
- 12-THP-6020-INS-526, Post Accident Sampling Instrument Calibration, April 23, 2015
- 12-THP-6020-INS-526, Post Accident Sampling Instrument Calibration, March 10, 2016
- 1-IHP-4030-113-018, Unit Vent Effluent Radiation Monitor VRS-1500 Low and High-Range Noble Gas and Sample Flow Channel Operational Test, Revision 15
- 1-IHP-4030-113-032A, Containment Upper Compartment Train "A" High-Range Radiation Monitor VRA-1310 Channel Calibration, August 18, 2016
- 1-IHP-4030-113-032B, Containment Lower Compartment Train "B" High-Range Radiation Monitor VRA-1310 Channel Calibration, August 24, 2016
- 2-IHP-4030-213-018, Unit Vent Effluent Radiation Monitor VRS-1500 Low and High-Range Noble Gas and Sample Flow Channel Operational Test, Revision 13
- 2-IHP-4030-213-032A, Containment Upper Compartment Train "B" High-Range Radiation Monitor VRA-2410 Channel Calibration, September 1, 2016
- 2-IHP-4030-213-032B, Containment Lower Compartment Train "B" High-Range Radiation Monitor VRA-2410 Channel Calibration, August 18, 2016
- Annual Audit Portable Instrumentation 2015

- Annual Audit Portable Instrumentation 2016
- AR 2015-02089, Failure to Identify or Question Condition (Grab Sample Results), May 11, 2017
- AR 2016-02109, PA Finding PAO-16-02-01, Augmented Quality Requirements, February 22, 2016
- AR 2016-10680, Repetitive Long Standing Equipment Issues Performance Gap, September 23, 2016
- AR 2017-04835, Issue with High Level Tritium Analysis Identified, May 11, 2017
- AR 2017-05165, Intermittent Alarm on 2SRA-2900, May 20, 2017
- D.C. Cook Nuclear Plant Updated Final Safety Analysis Report, Section 11, Revision 26
- GT-2016-14368, SA Radiation Monitoring Instrumentation, June 20, 2017
- Hopewell Designs Inc., Model BX-3 Box Irradiator Source Validation Report, November 24, 2015
- Hopewell Designs Inc., Model BX-3 Box Irradiator Source Validation Report, November 28, 2016
- Nuclear Oversight Quarterly Report for Radiation Protection, 1st Quarter of 2016
- Nuclear Oversight Quarterly Report for Radiation Protection, 1st Quarter of 2017
- Nuclear Oversight Quarterly Report for Radiation Protection, 2nd Quarter of 2016
- Nuclear Oversight Quarterly Report for Radiation Protection, 3rd Quarter of 2016
- Nuclear Oversight Quarterly Report for Radiation Protection, 4th Quarter of 2016
- THG-038, Source Check Guidelines, Revision 23

#### 4OA1 Performance Indicator Verification

- Various ROP Parent Process Data Review Reports for Radiological Effluents, July 2016 – June 2017

#### 4OA2 Problem Identification and Resolution

- AR 2017-6798, Independent Inspection Program Discrepancy, July 14, 2017

#### 4OA3 Event Follow-Up

- 1-OHP-4022-020, Excessive Reactor Coolant Leakage, Revision 12
- AR 2017-8149, 1-SV-51, Possible Point of Saturation during Unusual Event, September 13, 2017
- AR-2017-8716, 1-SV-51 Leakrate of 12.2GPM after Unit 1 Reactor Trip, September 17, 2017
- EN 52967, Unusual Event Due to Letdown Relief Valve Discharge to the Pressurizer Relief Tanks, September 13, 2017, and Updated September 15, 2017

## LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
CAP	Corrective Action Program
CFR	<i>Code of Federal Regulations</i>
EDG	Emergency Diesel Generator
HVAC	Heating, Ventilation and Air Conditioning
IP	Inspection Procedure
NOUE	Notice of Unusual Event
NRC	Nuclear Regulatory Commission
OSP	Outage Safety Plan
RCS	Reactor Coolant System
RFO	Refueling Outage
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WO	Work Order