UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

August 5, 2020

Mr. John Dinelli
Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
N-TSB-58
1448 S.R. 333
Russellville, AR 72802-0967

SUBJECT: ARKANSAS NUCLEAR ONE – INTEGRATED INSPECTION REPORT 05000313/2020002 AND 05000368/2020002

Dear Mr. Dinelli:

On June 30, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Arkansas Nuclear One. On July 8, 2020, the NRC inspectors discussed the results of this inspection with Mr. J. Sullivan, General Manager of Plant Operations, and other members of your staff. The results of this inspection are documented in the enclosed report.

Two findings of very low safety significance (Green) are documented in this report. Both findings involved violations of NRC requirements. We are treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

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

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,

John L. Dixon

Digitally signed by John L. Dixon
Date: 2020.08.05 13:43:33 -05'00'

John L. Dixon, Jr., Chief
Reactor Projects Branch D
Division of Reactor Projects

Docket Nos. 05000313 and 05000368
License Nos. DPR-51 and NPF-6

Enclosure:
As stated

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000313 and 05000368
License Numbers:	DPR-51 and NPF-6
Report Numbers:	05000313/2020002 and 05000368/2020002
Enterprise Identifier:	I-2020-002-0003
Licensee:	Entergy Operations, Inc.
Facility:	Arkansas Nuclear One
Location:	Russellville, AR
Inspection Dates:	April 1, 2020 to June 30, 2020
Inspectors:	I. Anchondo, Reactor Inspector R. Azua, Senior Reactor Inspector T. DeBey, Resident Inspector C. Henderson, Senior Resident Inspector J. O'Donnell, Senior Health Physicist T. Sullivan, Resident Inspector
Approved By:	John L. Dixon, Jr., Chief Reactor Projects Branch D 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 Arkansas Nuclear One, Units 1 and 2, 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

Failure to Design Alarm Chassis with Reflash Capability with Multiple Inputs			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000313/2020002-01 Open/Closed	None	71111.15
The inspectors identified a Green finding and associated non-cited violation of Title 10 of the *Code of Federal Regulations*, Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to assure that the applicable design basis requirements, associated with the Unit 1 safety-related electrical equipment room high temperature alarm chassis, were reviewed for suitability of application of materials, parts, equipment, and processes. Specifically, the licensee failed to ensure an alarm chassis with multiple inputs had alarm reflash capability to ensure operators would identify a degraded condition associated with the safety-related electrical equipment room emergency chiller system and take appropriate operator action during a loss of coolant accident.			

Failure to Take Corrective Actions for Conditions Adverse to Quality			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000368/2020002-02 Open/Closed	None	71152
The inspectors reviewed a self-revealed, Green finding and associated non-cited violation of Title 10 of the *Code of Federal Regulations,* Part 50, Appendix B, Criterion XVI, "Corrective Action," associated with the licensee's failure to assure that conditions adverse to quality, such as, defective material and equipment are corrected. Specifically, the licensee identified through a visual examination (VT-3) of a Unit 2 safety-related snubber and associated attachments identified multiple degraded conditions, but failed to take corrective actions to correct the defective material, a condition adverse to quality. Consequently, the failure to correct the adverse condition contributed to the failure of the snubber.			

Additional Tracking Items

None.

PLANT STATUS

Unit 1 began the inspection period at full power. On April 1, 2020, power was lowered to 80 percent as requested by the transmission system operator to support the 500 kV Mabelvale line maintenance outage. The unit was returned to full power on April 3, 2020.

Unit 2 began the inspection period in shutdown for Refueling Outage 2R27, which started on March 13, 2020. On April 20, 2020, Unit 2 commenced a reactor startup and the reactor was made critical. The unit was returned to full power on April 26, 2020.

On May 23, 2020, Unit 1 and Unit 2 power was lowered to 71 percent as requested by the transmission system operator to facilitate repairs on the 500 kV Mabelvale line. Unit 1 and Unit 2 were returned to full power on May 24, 2020.

On June 1, 2020, Unit 1 power was lowered to 30 percent to perform main generator voltage regulator power supply replacement and turbine governor valve stroke testing, and then the unit was returned to full power where it remained for the rest of the reporting period except for minor power reductions to support scheduled surveillances.

On June 2, 2020, Unit 2 power was lowered to 70 percent to perform circulation pump B bearing repairs. The unit was returned to full power on June 6, 2020, where it remained for the rest of the reporting period except for minor power reductions to support scheduled surveillances.

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 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.

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), resident inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time the resident inspectors performed periodic site visits each week and during that time conducted plant status activities as described in IMC 2515, Appendix D; observed risk significant activities; and completed on site portions of IPs. In addition, resident and regional baseline inspections were evaluated to determine if all or portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Impending Severe Weather Sample (IP Section 03.02) (1 Sample)

(1) Unit 1 and Unit 2 impending weather preparation for Tropical Depression Cristobal on June 8, 2020

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (4 Samples)

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

(1) Unit 2 pressurizer spray line train A on April 12, 2020
(2) Unit 1 electrical equipment room emergency chiller system train B for upper north electrical penetration room on April 20, 2020
(3) Unit 2 low pressure safety injection system train B on April 24, 2020
(4) Unit 1 penetration room ventilation system train A on April 30, 2020

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (6 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

(1) Unit 1 upper north electrical penetration room, hot mechanic shop, and decon room, Fire Zone 149-E, Fire Area B-1, on April 8, 2020
(2) Unit 2 new core protection calculator room, Fire Zone 2098C, Fire Area G, on April 20, 2020
(3) Unit 2 emergency safeguard room B, Fire Zone 2007-LL, Fire Area AA, on April 24, 2020
(4) Unit 2 emergency safeguard room A, Fire Zone 2014-LL, Fire Area B-6, on April 24, 2020
(5) Unit 2 vital switchgear room 2A4, Fire Zone 2100-Z, Fire Area SS, on May 6, 2020
(6) Unit 2 electrical switchgear room 2B53, Fire Zone 2091-BB, Fire Area B-3, on May 12, 2020

Fire Brigade Drill Performance Sample (IP Section 03.02) (1 Sample)

(1) Unit 2 fire drill for a fire in the emergency diesel generator 1 room, Fire Zone 2093-P, Fire Area KK, on June 15, 2020

71111.08P - Inservice Inspection Activities (PWR)

PWR Inservice Inspection Activities Sample (IP Section 03.01) (1 Sample)

(1) The inspectors verified that the reactor coolant system boundary, steam generator tubes, reactor vessel internals, risk-significant piping system boundaries, and containment boundary are appropriately monitored for degradation and that repairs and replacements were appropriately fabricated, examined, and accepted by reviewing the following activities from March 19, 2020, to June 22, 2020:

03.01.a - Nondestructive Examination and Welding Activities:

- Eddy Current Examination, Vessel Head Vent Line
- Ultrasonic Examination, Shutdown Cooling Heat Exchanger Channel Inlet Nozzle (N1)/2E-35A
- Visual Examination 2, Bolted Connection associated with Electrical Penetration 2E-66
- Liquid Penetrant Examination, Control Element Drive Mechanism Motor Housing Lower Weld 02-W-057
- Liquid Penetrant Examination, Control Element Drive Mechanism Motor Housing Lower Weld 02-W-069

03.01.b - Pressurized-Water Reactor Vessel Upper Head Penetration Examination Activities:

- Visual Examination 3, Reactor Vessel Head Instrumentation Nozzle and Vent Line

03.01.c – Pressurized-Water Reactor Boric Acid Corrosion Control Activities:

- 2R27 Boric Acid Corrosion Control Evaluation

Problem Identification and Resolution:

- The inspector reviewed 12 condition reports associated with inservice and operating experience issues and concluded that NDE/ISI related issues and operating experience are put into the corrective action program at low levels to ensure conditions and problems are identified

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) Unit 2 reactor startup from Refueling Outage 2R27 on April 20, 2020

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

(1) The inspectors observed and evaluated the Unit 1 licensed operator simulator evaluation scenario on June 10, 2020.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (3 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

(1) Unit 1 and Unit 2 Alternating Current diesel generator unavailability hours near the 50.65(a)(1) threshold on April 28, 2020
(2) Unit 1 emergency feedwater initiation and control system instrumentation Channel C multiple power supply failures on May 21, 2020
(3) Unit 2 low pressure safety injection system on June 5, 2020

Quality Control (IP Section 03.02) (1 Sample)

The inspectors evaluated the effectiveness of maintenance and quality control activities to ensure the following SSC remains capable of performing its intended function:

(1) Unit 2 pressurizer spray line train A snubber H-4 on April 20, 2020

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (6 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

(1) Unit 2 startup transformer 3 breaker B126 planned outage replacement activities causing unavailability of the Unit 1 technical specification required 500 kV offsite circuit on April 1, 2020
(2) Unit 2 emergent work activities for control element assembly calculator Channel 1 and 2 failures on April 28, 2020
(3) Unit 2 emergent work activities for the swing charging pump C failure due to an oil leak on May 13, 2020
(4) Unit 1 emergent work activities control rod drive cooling pump B failure on May 26, 2020
(5) Unit 2 emergent work activities and unplanned 72-hour limiting condition for operation entry for emergency feedwater system train B steam generator B discharge valve 2CV-1039-1 failing closed on May 27, 2020
(6) Unit 2 emergent work for service water pump A failed to start during quarterly surveillance testing on June 9, 2020

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (5 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

(1) Unit 1 safety-related switchgear and electrical rooms nonconservative heat load

values for a failed fan coil unit single failure operability determination on April 8, 2020
(2) Unit 2 engineering safety feature train B room Door 206 chalk test failure operability determination on April 24, 2020
(3) Unit 2 containment spray train A header isolation valve 2CV-5612-1 seat leakage operability determination on May 5, 2020
(4) Unit 2 pressurizer spray line train A snubber failure past operability and increased vibration levels operability determination on May 13, 2020
(5) Unit 2 reactor coolant pump speed probe failures operability determination on May 20, 2020

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

(1) Unit 2 pressurizer spray line train A snubber pin permanent modification on April 20, 2020
(2) Unit 2 reactor coolant speed probe replacement modification on May 22, 2020

Severe Accident Management Guidelines (SAMG) Update (IP Section 03.03) (1 Sample)

(1) Unit 1 and Unit 2 severe accident management guidelines update on April 21, 2020

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (9 Samples)

The inspectors evaluated the following post maintenance test activities to verify system operability and functionality:

(1) Unit 1 and Unit 2 auto transformer restoration following startup transformer 3 breaker B0126 replacement on April 13, 2020
(2) Unit 2 containment spray header motor operated valve 2CV-5612-1 and 2CV-5613-2 valve seat corrective maintenance on April 16, 2020
(3) Unit 2 pressurizer spray line train A weld repair for locations 2CCA-47-1 and 2CCA-15-3 on May 5, 2020
(4) Unit 2 containment sump isolation valve 2CV-5648-2 corrective maintenance on May 5, 2020
(5) Unit 2 pressurizer spray line train A buffing flaw repair on May 13, 2020
(6) Unit 2 in core instrument flange number 2, 4, and 6 corrective maintenance on May 13, 2020
(7) Unit 2 containment penetration 2P68 failed local leak rate testing repair on June 1, 2020
(8) Unit 2 emergency feedwater motor drive pump room unit cooler leak repair on June 2, 2020
(9) Unit 2 containment isolation and actuation signal relay failure replacement on June 11, 2020

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated Unit 2 Refueling Outage 2R27 activities from March 13 to April 21, 2020.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (4 Samples)

(1) Unit 1 penetration room ventilation system surveillance testing on April 23, 2020
(2) Unit 2 control element assembly drop time testing surveillance testing on April 24, 2020
(3) Unit 2 emergency diesel generator 2 buried fuel oil piping pressure testing on May 1, 2020
(4) Unit 2 swing charging pump C local operation surveillance testing on May 28, 2020

RCS Leakage Detection Testing (IP Section 03.01) (1 Sample)

(1) Unit 1 and Unit 2 reactor coolant system leakage surveillance on June 2, 2020

Containment Isolation Valve Testing (IP Section 03.01) (1 Sample)

(1) Unit 2 hot leg primary sample line containment isolation valve 2SV-5833-1 on April 27, 2020

71114.06 - Drill Evaluation

Drill/Training Evolution Observation (IP Section 03.02) (1 Sample)

The inspectors evaluated:

(1) Unit 2 annual dynamic simulator exam with drill and exercise performance indication opportunity on June 24, 2020

RADIATION SAFETY

71124.05 - Radiation Monitoring Instrumentation

Walkdowns and Observations (IP Section 03.01) (9 Samples)

The inspectors evaluated the following radiation detection instrumentation during plant walkdowns:

(1) SPING radiation monitors in Unit 1
(2) SPING radiation monitors in Unit 2
(3) 2RE8911, Area Radiation Monitor (ARM) in Health Physics (HP) Area – 386 foot elevation
(4) 2RE8914, ARM in Cask Washdown Area – 404 foot elevation

(5) Portable friskers used at the exit to the Unit 1 and Unit 2 radiologically controlled areas
(6) Survey meters ready for use in HP instrumentation room
(7) Telepole survey tools ready for use, HR-DR-348 and HR-DR-355
(8) Personnel contamination monitors used at the exit to the Unit 1 and Unit 2 radiologically controlled areas
(9) Small article monitors used at the exit to the Unit 1 radiologically controlled area

Calibration and Testing Program (IP Section 03.02) (11 Samples)

The inspectors evaluated the calibration and testing of the following radiation detection instruments:

(1) FASTSCAN-1 Whole Body Counting System, 05/05/2020
(2) Ludlum-177 Frisker, CHP-CR-067, 02/06/2020
(3) Telepole WR, HP-DR-348, 01/27/2020
(4) ARGOS-5AB, ARGOS-003, 07/31/2019
(5) Canberra GEM-5, GEM-002, 05/20/2019
(6) Canberra GEM-5, GEM-008, 05/22/2019
(7) Eberline PCM-1B, PCM-013, 08/31/2019
(8) Eberline PM-7, EPM-001, 03/31/2020
(9) Gamma Scintillation Tool Monitor (SAM11), GSAM-007, 12/17/2018
(10) Ludlum-177 Frisker, CHP-DR-156, 10/14/2019
(11) ARGOS-5AB, ARGOS-001, 07/14/2019

Effluent Monitoring Calibration and Testing Program Sample (IP Sample 03.03) (2 Samples)

The inspectors evaluated the calibration and maintenance of the following radioactive effluent monitoring and measurement instrumentation:

(1) Work Order (WO) 52804554, Unit 1 Effluent Process Radiation Monitor, RE-4642, 09/26/2019
(2) WO 52834502, Unit 1 SPING 3 Radiation Monitor, RX-9830, 03/06/2020

71124.06 - Radioactive Gaseous and Liquid Effluent Treatment

Walkdowns and Observations (IP Section 03.01) (4 Samples)

The inspectors evaluated the following radioactive effluent systems during walkdowns:

(1) Unit 1 Reactor Building Purge Exhaust System
(2) Unit 1 Liquid Radioactive Waste Systems
(3) Unit 1 Fuel Handling Area Exhaust System
(4) Unit 1 Gaseous Radioactive Waste System

Sampling and Analysis (IP Section 03.02) (4 Samples)

(1) June 18, 2020, Gaseous Effluent Filter, Gas and Charcoal Samples, Unit 2 Auxiliary Building Extension
(2) March 6, 2020, Liquid Effluent Sample, Neutralizing Tank
(3) April 26, 2019 - May 2, 2019, Liquid Effluent Sample, Unit 2 Turbine Building Sump

(4) February 8, 2018, Gaseous Effluent Sample, Charcoal and Gas, SPING 3, Unit 1 Fuel Handling Area

Dose Calculations (IP Section 03.03) (2 Samples)

The inspectors evaluated the following dose calculations:

(1) Dose Calculations Associated with Liquid Radioactive Waste Permits: 1LR2018-0030, 2LR2019-0006, 1LR2020-0012
(2) Dose Calculations Associated with Gaseous Radioactive Waste Permits: 1GR2018-0005, 1GR-2019-0050, 2GR2020-0009

Abnormal Discharges (IP Section 03.04) (1 Sample)

(1) There were no abnormal discharges during the monitoring period.

71124.07 - Radiological Environmental Monitoring Program

Environmental Monitoring Equipment and Sampling (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated environmental monitoring equipment and observed collection of environmental samples.

Radiological Environmental Monitoring Program (IP Section 03.02) (1 Sample)

(1) The inspectors evaluated the implementation of the licensee's radiological environmental monitoring program.

Groundwater Protection Initiative Implementation (IP Section 03.03) (1 Sample)

(1) The inspectors evaluated the licensee's implementation of the Groundwater Protection Initiative (GPI) program to identify incomplete or discontinued program elements. There were no incomplete or discontinued program elements identified.

71124.08 - Radioactive Solid Waste Processing & Radioactive Material Handling, Storage, & Transportation

Radioactive Material Storage and Control (IP Section 03.01) (3 Samples)

Inspectors evaluated the licensee's performance in controlling, labeling, and securing radioactive materials:

(1) The inspectors walked down the old and new Radwaste Buildings and Sealand Storage (O/S South) and observed the following containers' integrity, labeling, and security from unauthorized access:

- B-25 Box - EQ-116 containing Unit 1 Nozzle Dams
- Sealand - EQ-015 containing Aux/Rx Building Scaffold
- 55-gallon drums containing secondary resins

(2) The inspectors verified selected sealed sources, Source Identification Numbers 48, 171, 917, 1014, 1015, 1210 and 1211, were labeled, secured, and leak tested. The

inspectors reviewed the licensee's records regarding leak testing of sources in inventory and transactions in accordance with 10 CFR 20.2207.

(3) The inspectors reviewed the licensee's 10 CFR Part 37 security plan and associated annual program audits and assessments for program deficiencies regarding access controls and security for subject radioactive material.

Solid Radioactive Waste System Walkdown (IP Section 03.02) (2 Samples)

The inspectors walked down the following accessible portions of the solid radioactive waste systems and evaluated system configuration and functionality for:

(1) New and Old Radwaste Buildings
(2) Spent Resin Transfer System

Waste Characterization and Classification (IP Section 03.03) (3 Samples)

The inspectors evaluated the licensee's characterization and classification of radioactive waste. The inspectors reviewed the following selected 10 CFR Part 61 waste stream analyses:

(1) F-3 reactor coolant system filters
(2) F-4 spent fuel pool filters
(3) Dry active waste

Shipment Preparation (IP Section 03.04) (1 Sample)

(1) The inspectors observed the preparation and shipment of a non-excepted, low specific activity (LSA) dry active waste (DAW) radioactive material shipment, RSR-20-069. The shipment was classified as a LSA I shipment.

Shipping Records (IP Section 03.05) (5 Samples)

The inspectors evaluated the following non-excepted radioactive material shipments through a record review:

(1) RSR-18-047: LSA II of DAW
(2) RSR-18-167: LSA II of DAW
(3) RSR-19-138: LSA II of DAW and chillers
(4) RSR-20-023: LSA II of DAW
(5) RSR-20-047: LSA II of DAW

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS05: Safety System Functional Failures (SSFFs) Sample (IP Section 02.04) (2 Samples)

(1) Unit 1 (April 1, 2019 - March 31, 2020)
(2) Unit 2 (April 1, 2019 - March 31, 2020)

BI01: Reactor Coolant System (RCS) Specific Activity Sample (IP Section 02.10) (2 Samples)

(1) Unit 1 (April 1, 2019 - March 31, 2020)
(2) Unit 2 (April 1, 2019 - March 31, 2020)

BI02: RCS Leak Rate Sample (IP Section 02.11) (2 Samples)

(1) Unit 1 (April 1, 2019 - March 31, 2020)
(2) Unit 2 (April 1, 2019 - March 31, 2020)

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences (RETS/ODCM) Radiological Effluent Occurrences Sample (IP Section 02.16) (1 Sample)

(1) October 1, 2019 - December 31, 2019

71152 - Problem Identification and Resolution

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

(1) Unit 1 and Unit 2 obsolete equipment/parts management on June 26, 2020

Annual Follow-up of Selected Issues (IP Section 02.03) (1 Sample)

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

(1) Unit 2 pressurizer spray line A snubber failures and reactor coolant system piping defects extent of condition review on May 27, 2020

INSPECTION RESULTS

Failure to Design Alarm Chassis with Reflash Capability with Multiple Inputs			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000313/2020002-01 Open/Closed	None	71111.15
The inspectors identified a Green finding and associated non-cited violation of Title 10 of the *Code of Federal Regulations*, Part 50 (10 CFR Part 50), Appendix B, Criterion III, "Design Control," for the licensee's failure to assure that the applicable design basis requirements,			

associated with the Unit 1 safety-related electrical equipment room high temperature alarm chassis, were reviewed for suitability of application of materials, parts, equipment, and processes. Specifically, the licensee failed to ensure an alarm chassis with multiple inputs had alarm reflash capability to ensure operators would identify a degraded condition associated with the safety-related electrical equipment room emergency chiller system and take appropriate operator action during a loss of coolant accident.

Description: The inspectors reviewed the current license and design basis associated with the safety-related electrical equipment room emergency chiller system, Procedure OP-1203.012-N, "Annunciator K16 Corrective Action," Revision 49, and Procedure OP-1104.027, "Battery and Switchgear Emergency Cooling System," Revision 51. From this review, the inspectors identified the following:

- Unit 1 Safety Analysis Report: The electrical equipment room emergency chillers are designed to maintain a maximum temperature of 120 degrees Fahrenheit (F) in the safety-related 4160 V switchgear rooms, the electrical equipment rooms, and the battery/DC rooms during a loss of coolant accident (LOCA). Long-term operator actions may be required to open doors to the south electrical room (Room 104) to maintain temperatures within limits. The long-term operator actions were established in 2007 when it was identified by the licensee that during worst-case accident/ambient conditions, even if the south emergency switchgear room chiller VCH-4B and the south electrical equipment room emergency unit cooler VUC-14D are operating as designed, action was required to maintain operability of electrical equipment in the room. Additionally, Calculation CALC-91-E-0090-10, "ANO-1 North Electrical Room 149 HVAC Evaluation," Revision 4, determined that the maximum temperature of north electrical equipment room (Room 149) was 118.4 degrees F during a LOCA. Room 149's maximum temperature occurs with the north emergency switchgear room chiller VCH-4A and north equipment room emergency unit cooler VUC-14B are operating as designed.

- Procedure OP-1203.012-N: The safety-related electrical equipment room temperature high alarm setpoint was 104 degrees F and has multiple inputs from temperature switches in safety-related electrical equipment rooms and does not have reflash capability. The purpose of this alarm is to warn control room operators of a degraded condition with the safety-related electrical equipment room emergency chiller system. Additionally, if the alarm is received during a LOCA, Procedure OP-1203.012-N instructs operators to perform actions in accordance with Procedure OP-1104.027.

- Procedure OP-1104.027: In the worst-case LOCA ambient conditions, the following actions are needed as soon as 115 hours after the accident, but they are taken promptly whenever a room high temperature alarm (104 degrees F) is received, even if the south emergency switchgear room chiller VCH-4B and south electrical equipment room emergency unit cooler VUC-14D are operating as designed. The operator action is to open and hold open the door for the electrical equipment room (Door 49) and the missile door for the electrical equipment room (Door 62) as soon as practicable and within 115 hours. The inspectors did not identify any procedural requirement to monitor the temperatures of unaffected safety-related electrical equipment rooms, once a safety-related electrical equipment room high temperature alarm has been received during LOCA for Room 104 or Room 149.

From the information above, the inspectors concluded without reflash capability of the safety-related electrical equipment room temperature high alarm or additional monitoring of the unaffected safety-related electrical rooms, operators would not be able to identify a degraded condition associated with the safety-related electrical equipment room emergency chiller system and take appropriate alarm card corrective actions during a LOCA. The licensee entered this deficiency into the corrective action program as Condition Report CR-ANO-1-2020-00668.

Corrective Actions: The licensee initiated a procedure improvement form, PIF-1-20-0130, to update Procedure OP-1104.027 to implement additional monitoring when a room temperature high alarm is received and will not clear. Additionally, the licensee initiated a design change to create a reflash capability for the electrical equipment room temperature high alarm.

Corrective Action References: Condition Report CR-ANO-1-2020-00668

Performance Assessment:

Performance Deficiency: The licensee's failure to design an alarm chassis with multiple safety-related electrical room high temperature alarms with reflash capability was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee's failure to design an alarm chassis with multiple safety-related electrical room high temperature alarms with reflash capability would prevent operators from identifying a degraded condition associated with the safety-related electrical equipment room emergency chiller system and from performing appropriate alarm card corrective actions during a LOCA.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The finding was determined to be of very low safety significance (Green) because it (1) was not a design deficiency or qualification impacting operability or probabilistic risk assessment (PRA) functionality, (2) did not represent a loss of system and/or function, (3) did not represent an actual loss of function of at least a single train for longer than its technical specification allowed outage time, (4) did not represent a loss of the probability risk analysis function of two separate technical specification systems for greater than 24 hours, (5) did not represent a loss of probability risk analysis system and/or function for greater than 24 hours, and (6) did not result in the loss of a high safety-significant, nontechnical specification train.

Cross-Cutting Aspect: None. A cross-cutting aspect was not assigned to this finding because the performance deficiency occurred in 2007 and, therefore, is not indicative of current licensee performance.

Enforcement:

Violation: As required, in part, by 10 CFR Part 50, Appendix B, Criterion III, "Design Control," measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in 50.2 and as specified in the licensee application, for those structures, systems, and components to which this appendix applies. Measures shall also be established for the selection and review for suitability of application of materials, parts,

equipment, and processes that are essential to the safety-related functions of the structures, systems, and components.

Contrary to the above, from April 2007 to April 2020, the licensee failed to establish measures to assure that applicable regulatory requirements and the design basis, as defined in 50.2 and as specified in the licensee application that for those structures, systems, and components to which this appendix applies. Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems, and components for the Unit 1 safety-related electrical equipment room high temperature alarm chassis. Specifically, the licensee failed to ensure this alarm chassis with multiple inputs had alarm reflash capability to ensure operators would identify a degraded condition associated with the safety-related electrical equipment room emergency chiller system and take appropriate operator action during a LOCA.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Failure to Take Corrective Actions for Conditions Adverse to Quality			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000368/2020002-02 Open/Closed	None	71152

The inspectors reviewed a self-revealed, Green finding and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” associated with the licensee’s failure to assure that conditions adverse to quality, such as, defective material and equipment are corrected. Specifically, the licensee identified through a visual examination (VT-3) of a Unit 2 safety-related snubber and associated attachments identified multiple degraded conditions, but failed to take corrective actions to correct the defective material, a condition adverse to quality. Consequently, the failure to correct the adverse condition contributed to the failure of the snubber.

Description: During the 2020 Unit 2 spring refueling outage, a Lisega hydraulic snubber, 2CCA-15-H60, was found fully disconnected on the reactor building floor during the initial walkdown performed. During walkdowns to identify the source of the disconnected snubber, snubber 2CCA-13-H4 was also identified as disconnected at the pipe clamp. The snubber remained within the degraded pipe clamps, but the load pin could not be located. This condition prompted the licensee to complete a stress analysis to assure that the structural integrity of the piping system remained within design. The licensee concluded that after snubber 2CCA-13-H4 lost its load pin at the pipe clamp, the added vibration experienced in the system resulted in the failure of snubber 2CCA-15-H60. Prior to plant start-up, the inspectors reviewed the vibration analysis and did not identify any issues with continued operation of the pressurizer spray line system.

A review of the past maintenance history for snubber 2CCA-13-H4 revealed that in 2009, snubber 2CCA-13-H4 had been visually examined (VT-3) twice during maintenance activities per WO 51667491. The work was completed using Procedure 1306.003, “Visual Inspection, VT-3 & Limited Operability Testing of Snubbers,” Revision 28. During the initial VT-3 examination, the licensee documented multiple degraded conditions detailed as “spherical bearing damaged, load stud worn and deformed, extension worn down in pipe clamp,

excessive clearance from worn extension and bearing damage, and an unacceptable clearance on the structure clevis." The non-destructive examination (NDE) report referenced Condition Report CR-ANO-2-2009-02376 as a corrective action. The inspectors reviewed this condition report and noted that it was closed to Work Order WO 51667491, which performed the removal and installation of several snubbers in accordance with Procedure 1402.130, "Snubber Removal and Installation," Revision 51. As required by the procedure, the licensee performed a second VT-3 examination on snubber 2CCA-13-H4 after its maintenance had been completed. The inspectors noted that the second NDE report documented the following degraded conditions: "extension paddle has excessive wear, bearing does not have enough surface contact with paddle, pipe clamp has excessive wear from extension paddle rubbing in pipe clamp." The NDE report did not reference any additional corrective actions. The inspectors reviewed the Adverse Condition Analysis (ACA) report as documented in Condition Report CR-ANO-2-2020-0867. The inspectors concluded that no additional corrective actions (i.e., condition reports, work orders, evaluations, etc.) had been taken subsequent to the second VT-3 examination of snubber 2CCA-13-H4.

Corrective Actions: The licensee replaced snubber 2CCA-13-H4 and repaired the degraded pipe clamps.

Corrective Action References: Condition Reports CR-ANO-2-2020-00867, ANO-2-2020-02243, and ANO-2-2020-02797.

Performance Assessment:

Performance Deficiency: The licensee's failure to take corrective actions following the identification of multiple degraded conditions during a VT-3 examination of snubber 2CCA-13-H4 was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to correct the condition adverse to quality resulted in the failure of snubber 2CCA-13-H4.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The finding was determined to be of very low safety significance (Green) because it (1) was not a design deficiency or qualification impacting operability or PRA functionality, (2) did not represent a loss of system and/or function, (3) did not represent an actual loss of function of at least a single train for longer than its technical specification allowed outage time, (4) did not represent a loss of the probability risk analysis function of two separate technical specification systems for greater than 24 hours, (5) did not represent a loss of probability risk analysis system and/or function for greater than 24 hours, and (6) did not result in the loss of a high safety-significant, nontechnical specification train.

Cross-Cutting Aspect: None. A cross-cutting aspect was not assigned to this finding because the performance deficiency occurred in 2009 and, therefore, is not indicative of current licensee performance.

Enforcement:

Violation: As required, in part, by 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are corrected.

Contrary to the above, from August 15, 2009 to March 14, 2020, the licensee failed to correct a condition adverse to quality associated with snubber 2CCA-13-H4 defective material and equipment. Specifically, the VT-3 examination identified structural degradation of the extension paddle and pipe clamp of snubber 2CCA-13-H4, but failed to correct or evaluate these conditions adverse to quality.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Observation: Semiannual Trend Review	71152

The inspectors reviewed the licensee's corrective action program, performance indicators, system health reports, and other documentation available to help identify performance trends that might indicate the existence of a more significant safety issue. The inspectors verified that the licensee was taking corrective actions to address the identified adverse trends. The inspectors did not review any cross-cutting themes because none existed at the site.

To verify that the licensee was taking corrective actions to address identified adverse trends that might indicate the existence of a more significant safety issue, the inspectors reviewed the corrective action program documentation associated with a potential adverse trend in management of obsolete equipment from the time period of December 2019 through June 2020. Selected examples of these events included:

- CR-ANO-1-2020-0363: There are 27 overcurrent relays associated with the 4160 Vac safety-related motors that are scheduled for setting changes during the spring 2021 Unit 1 refueling outage. These overcurrent relays are obsolete and replacements are not available. The inspectors did not identify a bridging strategy or an equivalent replacement relay. Unavailability of these relay replacements could extend the outage time and result in a vulnerability of safety systems.

- CR-ANO-2-2020-2602: The emergency diesel generator B heat exchanger drain valve (2SW-1125) was leaking and the handwheel slipped when valve tightening was attempted. Work Order 542027 was issued to repair the valve, but after the valve was disassembled it was determined that parts were unavailable and cannot be purchased because of obsolescence. The valve was reinstalled in the as-found condition and was "externally watertight". An equivalent replacement will need to be identified and procured to repair the drain valve leakage. Leakage through this valve could potentially cause a loss of flow to the heat exchanger and threaten the inventory of the emergency cooling pond during situations where it is the source of service water.

- CR-ANO-2-2020-1060: During performance of Procedure OP-2305.003, "Emergency Safety Feature Response Time Test," Revision 41, it was determined that relay 2C40-K210B in the containment isolation actuation system (CIAS) had failed. Work Order 541387 was written to replace the failed relay, but an exact replacement

was not available, and an equivalency review was needed before the relay could be replaced. Although a replacement relay was identified and used, the licensee determined that neither the original relay nor the replacement relay were still being manufactured and that spare parts were in very limited supply. The failed relay was kept and designated to be rebuilt or refurbished so it could be reused. A similar issue was identified with another model of CIAS relay in Condition Report CR-ANO-2-2020-1235. Failure of a CIAS relay could result in an uncontrolled radiological release from containment.

- CR-ANO-2-2020-1786, 1944, 1968, 1970, 2142, and 2143: During performance of Work Order 52864561 to calibrate the steam dump and bypass control system, a valve did not stroke as expected. Subsequent actions ultimately resulted in multiple control system cards needing to be replaced. However, replacement cards were not available and emergent repair of failed cards was necessary. This event delayed the return of Unit 2 to power following Refueling Outage 2R27. Condition Report CR-ANO-2-01944 stated, "This event highlighted the obsolescence vulnerability of the SDBC system." Planned replacement of this system is scheduled for the fall 2024 Refueling Outage 2R30, but an adequate bridging strategy was not identified by the inspectors. Failure of the steam dump and bypass control system could cause a significant transient to the reactor and could negatively impact the ability of the plant to be cooled through the steam generators after a plant trip.

- CR-ANO-2-2020-2200: Alarms received in the control room for the alternate AC diesel generator flame detectors prompted troubleshooting that revealed that both the engine flame detectors had failed. These items are obsolete, and no replacements are on site for the repairs. An upgrade of the fire detection system is planned for the 2024-2028 timeframe, but it is not acceptable to have the alarms locked in until that work is done. A work request was generated to resolve this issue. Failure of these flame detectors reduces the ability of the alternate AC diesel generator fire protection system to detect and respond to system fires.

The licensee's immediate corrective actions for the recent potential adverse trend in equipment obsolescence included:

- Discussions have occurred among the site engineering staff relative to the site's program for managing obsolescence issues.

- The ANO equipment reliability team has initiated tasks to identify critical spares, document the risk significance of limited spares, and prioritize efforts to address the identified vulnerabilities.

- ANO site engineering has identified equipment obsolescence as an area that needs increased attention. An effort has been initiated to determine the safety significance of obsolescent equipment and to develop a bridging or replacement strategy. The site's goal is to have the affected Tier 1 equipment identified and prioritized by the end of July 2020.

The inspectors noted the following:

1. The licensee's immediate actions have not been in effect long enough to know whether they will reduce the number of obsolete equipment issues that are happening at the site.

2. Planning for replacement of obsolete components has resulted in the determination of equivalence when it actually did not exist. This has caused the inability to complete work orders and the necessity to defer that work until suitable parts can be identified and obtained.

3. Continued aging of the plants will result in additional items becoming obsolete and may challenge the site's ability to prevent future operability and functionality concerns.

4. The site's method of dealing with obsolescence issues has been more reactive than proactive, but that is being changed with a new initiative in the engineering department. Obsolescent components exist in both safety and nonsafety systems with a potential increasing site risk to initiating events and unplanned unavailability of systems needed to mitigate design basis events. Many potential benefits can be realized from a proactive response to addressing obsolescence issues, such as it will potentially reduce site risk due to obsolescent equipment.

5. The site has identified multiple instances of their equipment database not being updated after obsolete components were replaced with new, equivalent components (Condition Report CR-ANO-2-2019-03085). This weakness has a negative effect on work planning and parts inventory. A rollup Engineering Change (EC-84307) was performed to ensure that current equipment information is captured in the site's Asset Suite database. In the EC, 13 condition reports written in 2019 were identified with issues involving accuracy of the site's equipment database, drawings, or Asset Suite database. It is unclear if an attempt was made to identify similar issues prior to 2019, so database errors may still exist.

EXIT MEETINGS AND DEBRIEFS

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

- On June 19, 2020, the inspectors presented the public radiation safety inspection results to Mr. J. Dinelli, Site Vice President, and other members of the licensee staff.
- On June 22, 2020, the inspectors presented the inservice inspection results to Mr. J. Dinelli, Site Vice President, and other members of the licensee staff.
- On July 8, 2020, the inspectors presented the integrated inspection results to Mr. J. Sullivan, General Manager of Plant Operations, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Corrective Action Documents	CR-ANO-	C-2011-02952	
	Procedures	OP-1203.025	Natural Emergencies	73
		OP-2203.008	Natural Emergencies	53
		OP-2203.054	Abnormal Grid	4
71111.04	Calculations	CALC-2CCA-13-H4	Pipe Support CALC System Reactor Misc System	4
		CALC-2CCA-15-H60	Support Qual for 2CCA-15-H60	6
		CALC-80-D-1083A-01	Room 111 Heat Load Assessment	1
		CALC-84-D-1069-02	Room 105 Heat Load Assessment and HVAC Evaluation	2
		CALC-91-E-0090-08	ANO-1 4160V Switchgear HVAC Evaluation	2
		CALC-91-E-0090-10	ANO-1 North Electrical Room 149 HVAC Evaluation	4
		CALC-93-R-1040-01	ANO-1 AB Limiting Component Qualification Temperatures	4
		CALC-E-0090-06	Heat Load Determination for Rooms 95, 98, 99, 100, 104, 109, 110, 149 for Post-Accident Cooling and Appendix R	7
	Corrective Action Documents	CR-ANO-	1-2007-00339, 1-2020-00541, 2-2020-00629, 2-2020-00720, 2-2020-00755, 2-2020-00764, 2-2020-00823, 2-2020-01514, 2-2020-01523, 2-2020-01673	
	Corrective Action Documents Resulting from Inspection	CR-ANO-	1-2020-00643, 2-2020-01923, 2-2020-02197, 2-2020-02198, 2-2020-02199, 2-2020-02203	
	Drawings	2CCA-13-1	Large Pipe Isometric Reactor Coolant System	16
		2CCA-13-H4	Hanger Detail Reactor Coolant System	8
		2CCA-15-4	Large Pipe Isometric Pressurizer Spray System	11
		2CCA-15-H60	Pipe Support Detail Pressurizer Spray System	5

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		M-2230, Sheet 1	Piping and Instrument Diagram Reactor Coolant System	80
		M-2230, Sheet 2	Piping and Instrument Diagram Reactor Coolant System	46
		M-2231, Sheet 1	Piping and Instrument Diagram Chemical and Volume Control System	148
	Engineering Changes	EC-13704	Updated CALC-91-E-01334-01 (RM 79), CALC-84-D-1069-02 (RM 1050, and CALC-80-D-1083A-01 (RM 111) to Incorporate Cable Heat Losses	0
		EC-86288	Enhance Supports 2CCA-13-H4, 2CCA-13-1-H5, 2CCA-14-1-H3 and 2CCA-15-H60 As a Result of CR-ANO-2-2020-0720, CR-ANO-2-2020-1633, CR-ANO-2-2020-1655, and CR-ANO-2-2020-0755	0
	Miscellaneous	ULD-1-SYS-23	ANO Unit 1 Penetration Room Ventilation System	5
	Procedures	OP-1104.027	Battery and Switchgear Emergency Cooling System	51
		OP-1104.043	Penetration Room Ventilation System	31
		OP-1203.012N	Annunciator K16 Corrective Action	49
		OP-5120.417	In-Place Testing of the Unit 1 Penetration Filtration System	10
	Work Orders	WO	541943, 516094, 52841004	
71111.05	Calculations	CALC-95-R-0024-01	Basic Requirements for Component Database on Station Doors and Hatches	16
	Corrective Action Documents	CR-ANO-	2-2016-03077, 2-2020-01542, 2-2020-01691, 2-2020-02333, 2-2020-02334, C-2020-01033	
	Drawings	FP-102	Fire Operating Floor Plan EL 386'-0"	35
	Miscellaneous	3167	Fire Impairment	
		FBDRL 2020-08	Fire Pre-drill Brief Document	
		FHA	Fire Hazard Analysis Arkansas Nuclear One - Unit 1 and Unit 2	19
	Procedures	OP-1000.120	ANO Fire Impairment Program	25
		OP-1203.049	Fires in Areas Affecting Safe Shutdown	15
		OP-2203.049	Fires in Areas Affecting Safe Shutdown Technical Guidelines	18
	Work Orders	WO	481231	
71111.08P	Corrective Action Documents	CR-ANO-	2-2018-01069, 2-2019-00180, 2-2019-03046, 2-2019-03127, 2-2019-03209, 2-2020-00003, 2-2020-00325, 2-2020-00996, 2-2020-01205, 2-2020-01390, 2-2020-01427, 2-2020-01449	
	NDE Reports		Arkansas Nuclear One Unit 2 2R26, 10 Year Reactor Vessel	08/27/2018

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Examination, October 2018	
	Procedures	CEP-BAC-001	Boric Acid Corrosion Control (BACC) Program Plan	2
		CEP-NDE-0400	Ultrasonic Examination	7
		CEP-NDE-0477	Manual Ultrasonic Examination of Austenitic and Ferritic Vessels Not Greater than 2" in Thickness (ASME XI)	5
		CEP-NDE-0641	Liquid Penetrant Examination (PT) for ASME Section XI	9
		CEP-NDE-0902	VT-2 Examination	9
		CEP-NDE-0903	VT-3 Examination	6
		CEP-NDE-0955	Visual Examination (VE) of Bare-Metal Surfaces	307
		CEP-WP-GWS-1	General Welding Standard ASME/ANSI	2
		EN-DC-319	Boric Acid Corrosion Control Program (BACCP)	12
		SEP-CISI-ANO-105	Program Section for ASME Section XI, Division 1, ANO-2 Containment Inservice Inspection Program	1
		SEP-ISI-ANO2-105	Program Section for ASME Section XI, Division 1, ANO-2 Inservice Inspection Program	6
		SEP-PT-ANO-001	Arkansas Nuclear One ASME Section XI Inservice Inspection Pressure Testing (PT) Program Section	5
	Self-Assessments	LO-ALO-2019-00083 CA 2	Arkansas Nuclear One, Pre-NRC 2R27 ISI Activities Self-Assessment Report	12/03/2019
71111.11Q	Procedures	EN-RE-302	PWR Reactivity Maneuver	5
		OP-2102.016	Reactor Startup	28
71111.12	Calculations	CALC-92-D-2011-22	AAC Generator Building Heating and Ventilation and AC Eval	1
	Corrective Action Documents	CR-ANO-	1-2019-00292, 1-2020-00260, 1-2020-00445, 1-2020-00462, 1-2020-00571, 1-2020-00598, 2-1989-00092, 2-2000-00929, 2-2006-01238, 2-2011-00792, 2-2013-00691, 2-2016-04340, 2-2017-02321, 2-2017-03337, 2-2017-03355, 2-2017-03388, 2-2017-03410, 2-2017-03411, 2-2017-03616, 2-2017-03656, 2-2017-03700, 2-2017-03740, 2-2017-03977, 2-2017-04353, 2-2017-04354, 2-2017-04355, 2-2017-05087, 2-2018-00653, 2-2018-02583, 2-2018-04175, 2-2019-00125, 2-2019-00328, 2-2019-01003, 2-2019-01153, 2-2019-01314, 2-2019-01452, 2-2019-01751, 2-2019-01752, 2-2019-02104, 2-2019-02154, 2-2019-02253, 2-2019-02549, 2-2020-00513, 2-2020-00968,	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2-2020-01078, 2-2020-01234, 2-2020-01395, 2-2020-01424, 2-2020-01447, 2-2020-01486, 2-2020-01611, 2-2020-01615, 2-2020-01633, 2-2020-01642, 2-2020-01658, 2-2020-01665, 2-2020-01673, 2-2020-01682, 2-2020-01709, 2-2020-01731, 2-2020-01802, 2-2020-02104, 2-2020-02197, 2-2020-02198, 2-2020-02199, 2-2020-02203, C-2006-00682, C-2019-02209, C-2019-02571, C-2020-00456, C-2020-00624, C-2020-00636	
	Corrective Action Documents Resulting from Inspection	CR-ANO-	C-2020-01557	
	Drawings	E-2005, Sheet 1	Single Line Meter and Relay Diagram 4160 Volt System Engineering System Features	31
		E-2005, Sheet 2	Single Line Meter and Relay Diagram AAC Generator System 4.16 kV Generator and Switchgear	1
	Engineering Changes	EC-13191	Evaluate the Operational Requirements to Take Either One of the Three AACG Engine Room Rans Out of Service for Maintenance	0
	Miscellaneous	STM 2-33	Alternate AC Diesel Generator	28
		ULD-0-SYS-19	ANO Unit 1 and Unit 2 Alternate AC Generator System (AAC)	2
	Procedures	EN-DC-205	Maintenance Rule Monitoring	7
		OP-1107.002	ES Electrical System Operation	48
		OP-1202.008	Blackout	18
		OP-1416.050	Unit 1 and 2 ICA51A and IAC51B Relay Test Instructions	5
		OP-1416.053	Unit 1 and 2 IAC77 Relay Test Instructions	7
		OP-1416.084	Basler BE1-51 Relay Test Instructions	2
		OP-2104.037	Alternate AC Diesel Generator Operations	34
		OP-6030.110	Termination Splicing and Soldering of Cable and Wires	25
	Work Orders	WO	507265, 525148, 525878, 527408, 531333, 50236653, 52410511, 52617453, 52798794, 52803494, 52868761	
71111.13	Calculations	CALC-09-E-0002-01	ANO-1 Start-Up 2 Fast and Manual Transfer Capability	4
	Corrective Action Documents	CR-ANO-	2-2020-00642, 2-2020-00651, 2-2020-00657, 2-2020-00650, 2-2020-02122, 2-2020-02153, 2-2020-02171, 2-2020-02193,	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2-2020-02194, 2-2020-02282, 2-2020-02285, 2-2020-02319, 2-2020-02446, 2-2020-02451, 2-2020-02458	
	Miscellaneous	FHA	Fire Hazard Analysis Arkansas Nuclear One – Unit 1 and Unit 2	19
	Procedures	EN-MA-125	Troubleshooting Control of Maintenance Activities	25
		EN-OP-119	Protected Equipment Posting	12
		EN-WM-104	On Line Risk Assessment	21
		EN-WM-104	On Line Risk Assessment	22
		EN-WM-104	On Line Risk Assessment	22
		OP-1107.001	Electrical System Operations	131
		OP-1203.003	Control Rod Drive Malfunction Action	32
		OP-2105.009	CEDM Control System Operation	43
		OP-2107.001	Electrical System Operation	131
		OP-2203.049	Fires in Areas Affecting Safe Shutdown	20
	Work Orders	MWO	50236324	
		WO	543225, 543542, 543584, 545045	
71111.15	Calculations	CALC-91-E-0090-06	Heat Load Determination for Rooms 95, 98, 99, 100, 104, 109, 110, 149 for Post Accident Cooling and Appendix R	7
		CALC-91-E-0090-08	ANO-1 4160V Switchgear HVAC Evaluation	2
		CALC-91-E-0090-10	ANO-1 North Electrical Room 149 HVAC Evaluation	4
		CALC-92-E-0103-01	ANO-1 Switchgear, Battery, DC, and Corridor 98 HVAC Evaluation	5
		CALC-93-R-1040-01	ANO-1 AB Limiting Component Qualification Temperatures	4
		CALC-95-R-0024-01	Basic Requirements for the Component Database on Station Doors and Hatches	16
		CALC-ANOC-CS-15-00003	ANO Flood Protection Design Basis	8
		CALC-ANOC-CS-15-00012	ANO Flood Protection Room Evaluations - Units 1 and 2	2
	Corrective Action Documents	CR-ANO-	1-2020-00507, 1-2020-00541,1-2020-00585, 2-2019-02219, 2-2020-00220, 2-2020-00629, 2-2020-01491, 2-2020-01643, 2-	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2020-01706, 2-2020-01743, 2-2020-01954, 2-2020-01972, 2-2020-02000, 2-2020-02113, 2-2020-02115, 2-2020-02187, 2-2020-02192, 2-2020-02296	
	Corrective Action Documents Resulting from Inspection	CR-ANO-	1-2020-00668, 1-2020-00669, 2-2020-02264	
	Engineering Changes	EC-59915	Reduced Latching Requirements for Watertight Doors - Units 1 and 2	0
		EC-86248	Operability Input for CR-ANO-1-2020-00507	0
	Miscellaneous	ER-ANO-2006-0308	Evaluate Use of Manually Substituted RCP Speed Inputs to COLSS	0
		ULD-1-SYS-16	4.16 kV System	6
	Work Orders	WO	481231, 506581, 513857	
71111.18	Corrective Action Documents	CR-ANO-	2-2020-01688, 2-2020-01761, 2-2020-01788, 2-2020-01878, 2-2020-01917, 2-2020-01923, 2-2020-00720, 2-2020-00755, 2-2020-00764, 2-2020-00823	
	Engineering Changes	EC-35597	Evaluation for Wireless Vibe Data Equipment in Unit 2 Containment and Wireless Access Point	0
		EC-86288	Enhance Supports 2CCA-13-H4, 2CCA-13-H005, 2CCA-14-1-H003, and 2CCA-15-H60 As A Result of CR-ANO-2-2020-00720, CR-ANO-2-2020-01633, CR-ANO-2-2020-01655, and CR-ANO-2-2020-00755	0
		EC-86606	2CCA-13-H4 Load Pin Configuration Compliance	0
	Miscellaneous	1(2)DPG-001	Diagnostic Process Guideline	
		1(2)SAG-001	Initial Response	
		1(2)SAG-002	TSC Recommending Strategies	
		1(2)SAG-003	Inject into Steam Generators	
		1(2)SAG-004	Depressurize RCS	
		1(2)SAG-005	Inject into RCS	
		1(2)SAG-006	inject into containment	
		1(2)SAG-007	Reduce Containment Hydrogen	
		1(2)SAG-008	Control Containment Pressure	
		1(2)SAG-009	Mitigate Fission Product Release	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		1(2)SAG-010	Control SFP Level	
		1(2)TSG-001	Instrumentation	
		1(2)TSG-004	Benefit Consequence	
		ER-ANO-2006-0308	Evaluate Use of Manually Substituted RCP Speed Inputs to COLSS	0
	Procedures	EN-DC-106	Temporary Installation of Measurement and Test Equipment (M&TE)	1
	Work Orders	WO	516094, 541684, 541685, 52810939, 52814416	
71111.19	Corrective Action Documents	CR-ANO-	2-2020-00629, 2-2020-00720, 2-2020-00755, 2-2020-00764, 2-2020-00823, 2-2020-01030, 2-2020-01060, 2-2020-01061, 2-2020-01076, 2-2020-01081, 2-2020-01174, 2-2020-01235, 2-2020-01236, 2-2020-01322, 2-2020-01375, 2-2020-01381, 2-2020-01410, 2-2020-01412, 2-2020-01454, 2-2020-01519, 2-2020-01573, 2-2020-01589, 2-2020-01595, 2-2020-01572, 2-2020-01670, 2-2020-01871, 2-2020-01872, 2-2020-01928, 2-2020-01987, 2-2020-01991, 2-2020-02035, 2-2020-02048, C-2020-01245	
	Engineering Changes	EC-74216	Replacement of B0126 22kV Supply Breaker for SRT (Startup Transformer #3 Voltage Regulator)	0
		EC-86302	Pipe Surface Abrasion/Scratch on 2CCA-15-4", 2CCA-47-1" and 2CCA-13-3"	0
		EC-86348	Establish New Reference Values for 2CV-5612-1 and 2CV-5613-2	0
		EC-86403	Replace Corroded Sections of the 2VUC-6B Room Cooler Housing	0
		EC-86428	Evaluation of Indications on PZR Spray Line	0
	Miscellaneous	2-BOP-UT-20-035		
		2-BOP-UT-20-057		
		EN-CS-S-008-MULTI	Pipe Wall Thinning Structural Evaluation	2
		NCIG-05	Guidelines for Piping System Reconciliation	
	Procedures	OP-2104.005	Containment Spray	84, 86
		OP-2305.017	Local Leak Rate Testing	37
		OP-2305.054	Offsite Power Transfer Test	13

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		OP-3305.001	OPS System Alignment Tests	1
	Work Orders	WO	429657, 478111, 506581, 516094, 518796, 519374, 525675, 541387, 541519, 541821, 542787, 52864390	
71111.20	Calculations	CALC-07-E-0016-01	Accountability of Unit 2 Containment Sump Strainers Sacrificial Surface Area	3
		CALC-94-D-6007-06	Pipe Stress and Support Evaluation of ISO 2CCB-51-1	0
	Corrective Action Documents	CR-ANO-	2-2020-01439, 2-2020-00948, 2-2020-00755, 2-2020-01587, 2-2020-01590, 2-2020-01683, 2-2020-01710, 2-2020-01711, 2-2020-01824, 2-2020-00979, 2-2020-01115, 2-2020-01836, 2-2020-01843, 2-2020-01846, 2-2020-01860, 2-2020-01861, 2-2020-01892, 2-2020-01893, 2-2020-01745, 2-2020-01896, 2-2020-01899	
	Corrective Action Documents Resulting from Inspection	CR-ANO-	2-2020-01229, 2-2020-01908, C-2020-01446	
	Engineering Changes	EC-18260	GSI-191 Program Document Updates	0
		EC-47217	Spent Fuel Pool Cooling Pump Alternate Power Source Connection	0
		EC-85563	Evaluate and Provide Guidance for Providing Temp Power to Both U2 SFP Cooling Pumps	0
	Procedures	MRS-SSP-3156	Waterford 3 and ANO 2 Fuel Reconstitution 16x16 CE NFG Fuel Assemblies	3
		NF-ANO-19-049	Core Loading Plan for Arkansas Nuclear One Unit 2 Cycle 28	0, 1
		OP-1015.036	Containment Building Closeout	56, 57
		OP-2203.002	Spent Fuel Pool Emergencies	19
		OP-2302.049	ANO-2 Fuel Assembly Reconstitution	13
		OP-2503.003	Operation of Fuel Handling Equipment	81
		OP-6030.110	Termination Splicing and Soldering of Cable and Wire	25
	Work Orders	WO	52863684, 540856, 363443, 363443, 365081, 524119	
71111.22	Calculations	CALC-90-E-0116-01	ANO-2 EOP Setpoint Basis Document	15
		CALC-91-E-0090-	ANO-1 North Electrical Room 149 HVAC Evaluation	2

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		10		
	Corrective Action Documents	CR-ANO-	1-2009-00894, 2-2020-00960, 2-2020-01301, 2-2020-01305, 2-2020-01307, 2-2020-01410, 2-2020-01462, 2-2020-01463, 2-2020-01591, 2-2020-01794, 2-2020-01795, 2-2020-01796, 2-2020-01797, 2-2020-02058, 2-2020-02068, 2-2020-02315, C-2016-03493, C-2020-00965, C-2020-00974, C-2020-01030	
	Corrective Action Documents Resulting from Inspection	CR-ANO-	2-2020-02308	
	Drawings	M-2217, Sheet 1	P&ID Emergency Diesel Generator Fuel Oil System	64
	Engineering Changes	EC-13704	Updated CALC-91-E-01334-01 (RM 79), CALC-84-D-1069-02 (RM 105), and CALC-80-D-1083A-01 (RM 111) to Incorporate Cable Heat Losses	0
	Miscellaneous	TP-5120.403	Unit 2 Primary Containment Leak Rate Running Total	11
	Procedures	EN-MA-125	Troubleshooting Control of Maintenance Activities	25
		EN-RE-327	PWR Startup Critical Predictions and Evaluation Process	4
		OP-1104.043	Penetration Room Ventilation System	31
		OP-1618.035	Sampling and Analyzing Diesel Fuel Oil from Diesel Fuel Oil Transports	23
		OP-2104.002	Chemical and Volume Control	91
		OP-2104.033	Containment Atmosphere Control	80
		OP-2302.046	CEA Drop Time Test	19
		OP-2304.112	Plant Protection System Response Time Test Channel A	31
		OP-2304.113	Plant Protection System Response Time Test Channel B	31
		OP-2304.114	Plant Protection System Response Time Test Channel C	30
		OP-2304.115	Plant Protection System Response Time Test Channel D	24
		OP-2305.016	Remote Features Periodic Testing	29
		OP-5120.417	In-Place Testing of the Unit 1 Penetration Filtration Systems	10
	Work Orders	WO	512883, 517477, 52616755, 52661106, 52714799, 52713821, 52751177, 52807705, 52856733	
71114.06	Miscellaneous		SES-2-031 Scenario	
71124.05 April 2020	Calibration Records	ARGOS-003	ARGOS-5AB Personnel Contamination Monitor Calibration	07/31/2019
		CHP-CR-067	Ludlum-177 Frisker Calibration	02/06/2020

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		CHP-DR-156	Ludlum-177 Frisker Calibration	10/14/2019
		EPM-001	Eberline PM-7 Gamma Portal Monitor	03/31/2020
		FASTSCAN-1	Canberra FASTSCAN Whole Body Counting System Calibration	05/05/2020
		GEM-002	Canberra GEM-5 Portal Monitor Calibration	05/20/2019
		GEM-008	Canberra GEM-5 Portal Monitor Calibration	05/22/2019
		GSAM-007	Gamma Scintillation Tool Monitor Calibration	12/17/2018
		HP-DR-348	WR Telepole Calibration	01/27/2020
		PCM-013	Eberline Personal Contamination Monitor PCM-1B Calibration	08/31/2019
	Corrective Action Documents	CR-ANO-	1-2019-00839, 1-2019-02394, 1-2019-04103, 1-2019-04740, 2-2018-01529, 2-2018-01694, 2-2018-02545, 2-2019-01326, 2-2019-02272, C-2019-01052, C-2019-03356, C-2020-00039, HQN-2019-02578	
	Corrective Action Documents Resulting from Inspection	CR-ANO-	C-2020-01755	
	Miscellaneous	12-00023	Primary Calibration Report for Noble Gas Monitor NGM 203	2
		EP-CALC-ANO-1701	ANO Radiological Effluent EAL Values	1
		ODCM	ANO Offsite Dose Calculation Manual	29
	Procedures	EN-CY-102	Laboratory Analytical Quality Control	14
		EN-FAP-RP-007	Operation of the Radiation Protection Central Calibration Facility	2
		EN-RP-153	Radiation Protection Fundamentals Program	1
		EN-RP-208	Whole Body Counting / In-Vitro Bioassay	7
		EN-RP-210	Area Monitoring Program	1
		EN-RP-301	Radiation Protection Instrument Control	12
		EN-RP-302	Operation of Radiation Protection Instrumentation	6
		EN-RP-303	Source Checking of Radiation Protection Instrumentation	4
		EN-RP-304	Operation of Counting Equipment	6
		EN-RP-317	Central Calibration Facility	2
	Self-Assessments	LO-ALO-2019-	Radiation Protection - Pre-NRC FSA Radiation Safety –	02/26/2020

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		00086	Monitoring Instrumentation, Effluent Treatment, Environmental Monitoring and Solid Waste & Material Handling	
		NQ-2019-028	QA Audit Report QA-14/15-2019-ANO-1, 2019 QA Audit of Radiation Protection/Radwaste at Arkansas Nuclear One (ANO)	10/24/2019
	Work Orders	52804554	18 Month Calibration of Unit 1 Effluent Process Radiation Monitor, RE-4642	09/26/2019
		52806735	78 Week Calibration of Unit 2 Gaseous Process Radiation Monitor, RE-8271	01/03/2020
		52834502	18 Month Unit 1 SPING 2 Radiation Monitor, RE-9830	03/06/2020
		52862864	Unit 2 Containment High Range Radiation Monitor, 2RE-8925	03/30/2020
		52866230	18 Month Calibration of Unit 1 Main Steam Line Radiation Monitor, RE-2681	04/16/2020
71124.06 April 2020	Calculations	1GR2018-0005	Gaseous Radioactive Waste Permit	02/05/2018
		1LR2018-0030	Liquid Radioactive Waste Permit	03/29/2018
		1LR2020-0012	Liquid Radioactive Waste Release Permit	03/07/2020
		2GR2019-0050	Gaseous Radioactive Waste Release Permit	07/11/2019
		2GR2020-0009	Gaseous Radioactive Release Permit	01/21/2020
		2LR2019-0006	Liquid Radioactive Waste Release Permit	04/25/2019
		EN-RW-104	Scaling Factors	10/24/2019
	Corrective Action Documents	CR-ANO-	1-2018-04561, 1-2019-01326, 1-2019-01515, 2-2018-01418, 2-2018-01529, 2-2018-01644, 2-2018-03171, 2-2019-01056, 2-2020-01477, C-2020-00982, C-2020-01184	
	Miscellaneous		Annual Radioactive Effluent Release Report for 2018	04/25/2019
			Annual Radioactive Effluent Release Report for 2019	04/27/2020
			Results of Radiochemistry Cross Check Program	05/14/2020
			Results of Radiochemistry Cross Check Program	10/20/2019
	Operability Evaluations	1604.016	Analysis of Gaseous Waste Decay Tanks	16
	Procedures	1604.014	Reactor Building Purge Analysis	28
		1604.015	Analysis of Unit Vents	26
		1604.017	Analysis of Liquid Waste	33
		1607.009	Sampling the Treated Waste Monitor Tanks (T-16A/B)	16

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		1607.010	Sampling of Unit Vents	35
		1618.011	Sampling the Unit 1 Neutralizing Tank	9
		HES-06	Ventilation/Filtration Testing Program	9
	Self-Assessments	LO-ALO-2019-00086	Radiation Protection - Pre-NRC FSA Radiation Safety – Monitoring Instrumentation, Effluent Treatment, Environmental Monitoring and Solid Waste & Material Handling	02/06/2020
		QA-2/6-2019-ANO-1	Quality Assurance Audit Report; Chemistry, Effluent and Environmental Monitoring	09/26/2019
		WT-WTANO-2013-00057 CA 71	ANO Control Room Habitability Assessment	10/07/2019
71124.07 April 2020	Calibration Records	CRO-023	Air Station #1, Rotometer Calibration	03/27/2020
		CRO-025	Air Station #56, Rotometer Calibration	03/27/2020
		CRO-042	Air Station #2, Rotometer Calibration	03/27/2020
	Corrective Action Documents	CR-ANO-	2-2019-02068, C-2018-01068, C-2018-03464, C-2018-04141, C-2018-04299, C-2018-04646, C-2018-04709, C-2019-00081, C-2019-00489, C-2019-01469, C-2019-01578, C-2019-02058, C-2019-02564, C-2019-03149, C-2019-04560, C-2019-04568, C-2019-04671	
	Miscellaneous		Land Use Census 2019	09/03/2019
			Analytics Environmental Radioactivity Cross Check Program 2019	
			Groundwater Protection Plan Arkansas Nuclear One	7
		0CAN051901	Annual Radiological Environmental Operating Report for 2018	05/13/2019
		0CAN052001	Annual Radiological Environmental Operating Report for 2019	05/19/2020
		ANO1 TRM	Technical Requirements Manual	71
		SAR Figure No. 11.2-2	Monitored Ventilation Exhaust Release Points	
	Procedures	EN-CY-111	Radiological Groundwater Protection Program	10
		EN-CY-127	Land Use Census	1
		EN-CY-130-01	Radiological Environmental Monitoring Program (REMP) Arkansas Nuclear One	0
		EN-RP-113	Response to Contaminated Spills/Leak	9
		OP-1304.062	Meteorological Monitoring System Calibration	16

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Self-Assessments	2019 NUPIC Audit Report #24791	Radioanalytical Laboratory Audit Report	05/09/2019
		NAQA-17-0038	Audit Report 17-007 for the Audit of Environmental Dosimetry Company	09/01/2017
	Work Orders	WO-52823676	Semi-Annual Meteorological Monitoring Calibration	06/03/2019
		WO-52855008	Semi-Annual Meteorological Monitoring Calibration	11/25/2019
71124.08 April 2020	Corrective Action Documents	CR-ANO-	2-2018-03171, 2-2020-00444, C-2018-02840, C-2018-02871, C-2018-03001, C-2018-03959, C-2019-00542, C-2019-00663, C-2019-02020, C-2019-03880, C-2019-04122, C-2019-04770, C-2020-00754	
		CR-HQN-	2019-01094 2019-02856	
	Corrective Action Documents Resulting from Inspection	CR-ANO-	C-2020-01762	
	Miscellaneous		Annual Inventory of Radioactive Material Containers	05/26/2020
			ANO Part 37 Security Plan for the Protection of Category 1 and 2 Quantities of Radioactive Material	01/26/2016
			2019 Sealed Source Leak Test	08/12/2019
			2020 Sealed Source Leak Test	04/12/2020
		17-03187	10 CFR Part 61 Waste Stream Sample Screening and Evaluation: Dry Active Waste	08/01/2017
		18-11420	10 CFR Part 61 Waste Stream Sample Screening and Evaluation: Dry Active Waste	05/21/2019
		18-12412	10 CFR Part 61 Waste Stream Sample Screening and Evaluation: 2F3/U2 Reactor Coolant System Filters	05/21/2019
		19-05931	10 CFR Part 61 Waste Stream Sample Screening and Evaluation: Unit 1 Secondary Resin	10/27/2019
		19-09120	10 CFR Part 61 Waste Stream Sample Screening and Evaluation: Dry Active Waste	02/10/2020
		19-09121	10 CFR Part 61 Waste Stream Sample Screening and Evaluation: 1F4 /U1 Spent Fuel Pool Filters	03/03/2020
		19-09123	10 CFR Part 61 Waste Stream Sample Screening and	03/03/2020

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Evaluation: 2F4 /U2 Spent Fuel Pool Filters	
		19-09124	10 CFR Part 61 Waste Stream Sample Screening and Evaluation: 1F3/U1 Reactor Coolant System Filters	03/03/2020
	Procedures	1601.502	Radioactive Material Control at Radwaste	9
		EN-MP-120	Material Receipt	15
		EN-RP-100	Radiation Worker Expectations	12
		EN-RP-121	Radioactive Material Control	17
		EN-RW-101	Radioactive Waste Management	3
		EN-RW-102	Radioactive Shipping Procedure	18
		EN-RW-103	Radioactive Waste Tracking Procedure	4
		EN-RW-104	Scaling Factors	13
		EN-RW-105	Process Control Program	5
		EN-RW-106	Integrated Transportation Security Plan	6
		EN-RW-108	Radioactive Shipment Accident Response	3
	Self-Assessments		Annual Access Authorization and Security Programs Pertaining to Part 37	12/11/2019
		LO-ALO-2019-00086	Radiation Protection - Pre-NRC FSA Radiation Safety – Monitoring Instrumentation, Effluent Treatment, Environmental Monitoring and Solid Waste & Material Handling	02/06/2020
		NQ-2019-030	QA Audit: Audit of Security Including Cyber Security at Arkansas Nuclear One	12/09/2019
		QA-1-2019-ANO-1	QA Audit: Fitness for Duty and Access Authorization	08/09/2019
		QA-14/15-2019-ANO-1	2019 QA Audit of Radiation Protection/Radwaste at Arkansas Nuclear One (ANO)	10/24/2019
	Work Orders	489482	GEL Laboratories Ni-63 Analysis	10/04/2019
		506544	GEL Laboratories Ni-63 Analysis	04/03/2020
71151	Corrective Action Documents	CR-ANO-	C-2020-01230	
71152	Calculations	6600-M-2119	Technical Specification for Pipe Hangers, Supports, and Restraints for a Nuclear Power Plant for the Arkansas Nuclear One – Unit 2	5
		ANO-C-2443	Technical Specification for the Design of Q/Non-Q Pipe Support for ANO 1 & 2	0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		ANO-M-2410	Installation, Modification, Inspection, & Documentation of Piping Systems & Pipe, Supports, Hangers & Restrains	5
		SES-22	Snubber Design Criteria	2
	Corrective Action Documents	CR-ANO-	2-2009-02376, 2-2013-02242, 2-2020-00678, 2-2020-00681, 2-2020-00701, 2-2020-00703, 2-2020-00710, 2-2020-00720, 2-2020-00755, 2-2020-00867, 2-2020-01544, 2-2020-01648, 2-2020-01655, 2-2020-02243	
	Corrective Action Documents Resulting from Inspection	CR-ANO-	2-2020-02243	
	Drawings	1801558-03	Rear Bracket	08/1976
		2CCA-13-H4	Pipe Support Detail Reactor Coolant System	8
		2CCA-15-H60	Pipe Support Detail Pressurizer Spray System	4
	Miscellaneous	CD30-349	Design Report Summary	0
		CD35-209	Design Report Summary	1
		LF200515-LR-005	Train A Pressurizer Spray Line Support 2CCA-15-H60 Structural End Attachment Opening – ANO Unit 2	0
	Procedures	OP-1306.003	Visual Inspection (VT-3) of Snubbers	37
	Work Orders	WO	513466, 516086, 516094, 540955, 51665737, 51667491, 51674080, 52240727, 52863040	