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

February 08, 2024

Doug Pehrson, Site Vice President
Entergy Operations, Inc.
N-TSB-58
1448 S.R. 333
Russellville, AR 72802-0967

SUBJECT: ARKANSAS NUCLEAR ONE – INTEGRATED INSPECTION REPORT 05000313/2023004 AND 05000368/2023004 AND INDEPENDENT SPENT FUEL STORAGE INSTALLATION INSPECTION REPORT 07200013/2023002

Dear Doug Pehrson:

On December 31, 2023, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Arkansas Nuclear One. On January 17, 2024, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

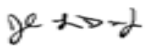
Two findings of very low safety significance (Green) are documented in this report. Two of these findings involved violations of NRC requirements. Two Severity Level IV violations without an associated finding are also documented in this report. We are treating these violations as non-cited violations (NCVs) consistent with section 2.3.2 of the Enforcement Policy.

If you contest the violations or the significance or severity 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.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; 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,



Signed by Dixon, John
on 02/08/24

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

Docket Nos. 05000313, 05000368, 07200013
License Nos. DPR-51, NPF-6

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV

ARKANSAS NUCLEAR ONE – INTEGRATED INSPECTION REPORT 05000313/2023004 AND 05000368/2023004 AND INDEPENDENT SPENT FUEL STORAGE INSTALLATION INSPECTION REPORT 07200013/2023002 – DATED FEBRUARY 08, 2024

DISTRIBUTION:
JMonninger, ORA
JLara, ORA
GMiller, DORS
MHay, DORS
DCylkowski, RC
VDricks, ORA
LWilkins, OCA
FGaskins, RIV/OEDO
TWengert, NRR
AMoreno, RIV/OCA
RAlexander, RSLO
GWarnick, DRSS
JDixon, DORS
ASanchez, DORS
EAllen, DORS
TDebey, DORS
AElam, DORS
R4-DORS-IPAT
R4Enforcement

DOCUMENT NAME: ANO2023004-IR-AS
ADAMS ACCESSION NUMBER: **ML24039A084**

X SUNSI Review		X Non-Sensitive ☐ Sensitive		X Publicly Available ☐ Non-Publicly Available	
OFFICE	RI:DORS/D	SPE:DORS/D	BC:DORS/D		
NAME	TDebey/TMD	ASanchez/AAS	JDixon		
DATE	02/08/24	02/08/24	02/08/24		

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Nos:	05000313, 05000368, 07200013
License Nos:	DPR-51 and NPF-6
Report No:	05000313/2023004, 05000368/2023004, 07200013/2023002
Enterprise Identifier:	I-2023-004-0007 and I-2023-002-0083
Licensee:	Entergy Operations, Inc.
Facility:	Arkansas Nuclear One
Location:	Russellville, AR
Inspection Dates:	October 1, 2023, to December 31, 2023
Inspectors:	L. Brookhart, Senior Spent Fuel Storage Inspector T. DeBey, Resident Inspector J. Drake, Senior Reactor Inspector J. Freeman, Spent Fuel Storage Inspector R. Kopriva, Senior Project Engineer J. Melfi, Project Engineer A. Sanchez, Senior Project Engineer
Approved By:	John L. Dixon, Jr., Chief Reactor Projects Branch D Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Arkansas Nuclear One, 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 Properly Evaluate the Design Change to Utilize the Work Platform within the Auxiliary Building			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000313,05000368/2023004-01 Open/Closed	[H.3] - Change Management	60856
The inspectors identified a Green finding and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to verify the adequacy of design for the plant modification of utilizing the work platform within the auxiliary building to withstand the site's design-basis tornado winds and missiles accident requirements.			

Failure to Provide Adequate Basis for Cask Spacing			
Cornerstone	Severity	Cross-Cutting Aspect	Report Section
Not Applicable	Severity Level IV NCV 05000313,05000368/2023004-02 Open/Closed	Not Applicable	60856
The inspectors identified a Severity Level IV non-cited violation of 10 CFR 72.48(d)(1) when the licensee failed to provide adequate basis for the change related to placement of HI-STORM FW casks next to HI-STORM 100 casks.			

Failure to Analyze for Tornado Missiles and Winds for Transportation Operations to ISFSI			
Cornerstone	Severity	Cross-Cutting Aspect	Report Section
Not Applicable	Severity Level IV NCV 05000313,05000368/2023004-03 Open/Closed	Not Applicable	60856
The inspectors identified a Severity Level IV non-cited violation of 10 CFR 72.212(b)(6) when the licensee failed to determine whether or not reactor site parameters including analyses of tornado missiles were enveloped by the cask design bases for some outdoor transportation operations.			

Failure to Perform Appropriate Post-Maintenance Testing of Unit 1 Reactor Coolant Pump Underpower Relay			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000313/2023004-05 Open/Closed	[H.7] - Documentation	71153
The inspectors identified a Green finding and associated non-cited violation of Arkansas Nuclear One, Unit 1, technical specification 5.4.1.a, Regulatory Guide 1.33, revision 2, appendix A, section 9.a, for the licensee's failure to properly pre-plan and perform post-maintenance testing to assess the performance of safety-related equipment. Specifically, the licensee failed to perform post-maintenance testing on the 'D' reactor coolant pump underpower relay which is a safety-related structure, system, or component, after its installation in the plant.			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000313,05000368/ 2023004-04	Holtec HI-STORM FW Overpack Version E1 Vent Design Change	60856	Open
LER	05000313/2023-002-00	Reactor Protection System Underpower Relay Test Failure Resulting in Condition Prohibited by Technical Specifications	71153	Closed

PLANT STATUS

Unit 1 began the inspection period at approximately 100 percent power. On December 4, 2023, Unit 1 entered mode 3 to repair an intermediate cooling water leak in the reactor building on reactor coolant pump C seal cooler. Upon completion of repairs, operators returned the reactor to 100 percent power on December 6, 2023. On December 14, 2023, operators, unexpectedly, were required to lower reactor power to 79 percent power due to an invalid heat balance calculation brought on during plant computer maintenance. The plant computer issue was resolved, and the unit was returned to 100 percent power on December 15, 2023. The unit remained at approximately 100 percent power for the remainder of the inspection period.

Unit 2 began the inspection period at approximately 100 percent power and remained there for the entire inspection period.

INSPECTION SCOPES

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

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of seasonal cold temperatures for the following systems:

- Units 1 and 2 service water intake structures on November 2, 2023

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (2 Samples)

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

(1) Unit 1 4160 Vac power buses A1 through A4 for planned testing of 4160 Vac – powered reactor building spray pump on October 16, 2023.
(2) Unit 2 480 Vac vital power buses 2B51 through 2B54 and 2B61 through 2B64 during issues with 480 Vac – powered charging pumps and planned outage of the 'A' charging pump on November 8, 2023.

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (2 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 2 north 4160 Vac vital switchgear 2A3, fire zone FZ-2101-AA, on October 3, 2023
(2) Unit 2 new core protection calculator room, fire zone FZ-2098-C, on October 3, 2023

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

(1) The inspectors evaluated the onsite fire brigade training and performance during an unannounced fire drill in the Unit 1, fire zone FZ-75-AA, T-28 diesel fuel tank, common feedwater pumps, and Unit 1 control rod drive cooling pumps on October 5, 2023.

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (3 Samples)

(1) The inspectors observed and evaluated licensed operator performance in the control room during Unit 1 small downpower for control rod drive breaker testing and reactor building "at power" entry for leak inspection on November 1, 2023.
(2) The inspectors observed and evaluated licensed operator performance in the control room during Unit 1 shutdown and startup for forced outage to repair ICW leak on P-32C reactor coolant pump on December 4, 2023.
(3) The inspectors observed and evaluated licensed operator performance in the control room during Unit 2 downpower for main turbine control and stop valve testing on December 11, 2023.

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

(1) The inspectors observed and evaluated a Unit 2 scenario on feedwater control problems on October 24, 2023.

71111.12 - Maintenance Effectiveness

Quality Control (IP Section 03.02) (1 Sample)

The inspectors evaluated the effectiveness of maintenance and quality control activities to ensure the following structure, system, and component (SSC) remains capable of performing its intended function:

(1) Bussman fuse holders on December 4, 2023

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (2 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 1 elevated risk due to planned maintenance on vital inverter Y-24 and engineered safeguards action system surveillance on October 25, 2023
(2) Unit 2 isophase bus duct cooler 2B-8B emergent repair and maintenance on November 28, 2023

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (1 Sample)

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

(1) Unit 2 operability evaluation on emergency diesel generator B loose jacket cooling water heat exchanger bolts on October 21, 2023

71111.24 - Testing and Maintenance of Equipment Important to Risk

The inspectors evaluated the following testing and maintenance activities to verify system operability and/or functionality:

Post-Maintenance Testing (PMT) (IP Section 03.01) (8 Samples)

(1) alternate ac diesel generator (common unit) following planned maintenance on September 28, 2023
(2) Unit 1 high pressure injection control valve CV-1278 following planned motor-operated valve maintenance on October 12, 2023
(3) Unit 1 high pressure injection control valve CV-1219 following planned motor-operated valve maintenance on October 12, 2023
(4) Unit 1 containment spray block valve CV-2400 following planned major motor-operated valve maintenance on October 18, 2023
(5) Unit 2 sluice gate valve 2CV-1470-1 following planned maintenance on October 30, 2023
(6) Unit 2 4160 Vac breaker to service water pump 2P-4A following planned maintenance on November 2, 2023
(7) Unit 2 service water to control room emergency ventilation cooler 2CV-1509-1 following planned maintenance on November 15, 2023
(8) Unit 2 service water to emergency feedwater pump 2P-7B motor-operated valve 2CV-0716-1 following planned major motor-operated valve maintenance on December 6, 2023

71114.06 - Drill Evaluation

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

The inspectors evaluated:

(1) Unit 1 drill for failed fuel with steam generator tube rupture that led to declaration of a General Emergency on October 31, 2023

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS09: Residual Heat Removal Systems (IP Section 02.08) (2 Samples)

(1) Unit 1 (October 1, 2022, through September 30, 2023)
(2) Unit 2 (October 1, 2022, through September 30, 2023)

MS10: Cooling Water Support Systems (IP Section 02.09) (2 Samples)

(1) Unit 1 (October 1, 2022, through September 30, 2023)
(2) Unit 2 (October 1, 2022, through September 30, 2023)

71152S - Semiannual Trend Problem Identification and Resolution

Semiannual Trend Review (Section 03.02) (1 Sample)

(1) The inspectors reviewed the licensee's corrective action program for potential adverse trends that might be indicative of a more significant safety issue. The inspectors performed an in-depth review of the licensee's fire protection systems, maintenance rule program, obsolescence program, containment concrete inspection, and corrective actions related to these items. The inspectors did not identify any more than minor trends of safety significance.

71153 - Follow Up of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event reports (LERs):

(1) LER 05000313/2023-002-00, Reactor Protection System Underpower Relay Test Failure Resulting in Condition Prohibited by Technical Specifications (Agencywide Documents Access and Management System (ADAMS) Accession No. ML23160A212). The inspection conclusions associated with this LER are documented in this report under Inspection Results section 71153. This LER is Closed.

OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

60855 - Operation of an ISFSI

The inspectors performed a review of the licensee's independent spent fuel storage installation (ISFSI) activities to verify compliance with requirements of the three systems in use at the site. The systems include: the Holtec HI-STORM FW Certificate of Compliance (CoC) 72-1032, License Amendment 5 and the Final Safety Analysis Report (FSAR), revision 8; the Holtec HI-STORM 100 CoC 72-1014, License Amendment 13 and FSAR, revision 18; and the Sierra Nevada Ventilated Storage Cask System CoC 72-1007, License Amendment 6 and FSAR, revision 9. The inspectors reviewed selected procedures, corrective action reports, and records to verify ISFSI operations were compliant with each Certificates' technical specifications, requirements in the FSAR, and NRC regulations.

Operation of an ISFSI (1 Sample)

(1) Inspectors evaluated the licensee's dry cask storage loading operations from September 25-29, 2023, during an on-site inspection. The triennial review included observation of site loading activities for the first FW storage cask placed into service and a review of evaluations, changes, calculations, and program implementation related to ISFSI activities since the last NRC ISFSI inspection conducted in May 2022.

During the on-site inspection, the inspectors evaluated and observed the following activities:

- heavy load lifts to remove the Transfer Cask VW and canister from auxiliary building to the low profile transporter
- transportation operations using the rail car to move the Transfer Cask to the Cask Transfer Facility
- walkdown of the ISFSI pad
- heavy load lifts using the Vertical Cask Transporter to set the Transfer Cask onto of the HI-STORM FW overpack
- heavy load lifts using the Vertical Cask Transporter to download the canister from the Transfer Cask into the HI-STORM FW overpack

The inspectors reviewed and evaluated the following documentation during the inspection:

- fuel selection evaluations for the canisters loaded since the last NRC ISFSI inspection (canisters 76 - 81)
- radiation surveys for radiological dose at the owner-controlled boundary to verify compliance with the requirements of 10 CFR 72.104 for years 2021 - 2022
- selected ISFSI-related condition reports issued since the last NRC ISFSI inspection
- quality assurance program implementation, including recent audits, surveillances, receipt inspection, and quality control activities related to ISFSI operations
- compliance to technical specifications for operational surveillance activities and FSAR required annual maintenance activities

60856 - Review of 10 CFR 72.212(b) Evaluations

Evaluate the licensee's program implementation for inclusion and use of the HI-STORM FW storage system into the site's existing 10 CFR Part 50 and Part 72 programs. The inspection scope included a review of the licensee's programs for heavy loads, emergency planning, fire protection, quality assurance, radiation protection, and site calculations to verify compliance with 10 CFR 72.212 requirements.

Review of 10 CFR 72.212(b) Evaluations (1 Sample)

(1) From August through November 2023, the NRC conducted an inspection of ANO's 10 CFR Part 72 program implementation and 10 CFR 72.212 Report in preparation of the licensee's first loading campaign using the Holtec HI-STORM FW storage system. Licensee calculations and evaluations were reviewed to verify compliance with requirements of the Certificate of Compliance 72-1032, License Amendment 5, and the HI-STORM FW Final Safety Analysis Report (FSAR), revision 8. The inspectors reviewed selected procedures, corrective action reports, calculations, and evaluations to verify ISFSI operations were compliant with the Certificate's technical specifications, requirements in the FSAR, and NRC regulations.

The following programs, procedures, and calculations were inspected:

- site-specific analysis that confirmed the licensee met the license conditions for flooding, tornadoes, lightning, blockage of inlet openings, off-normal temperature requirements, and snow and ice
- evaluations to confirm annual dose equivalent would meet 10 CFR 72.104 and 72.106 requirements
- evaluations under 10 CFR 50.59 for the ISFSI's impact on the reactor facility and compliance to site's heavy load program
- calculations for structural and seismic stability for the transfer cask for all placement locations within the fuel building, cask transfer facility, and while being transported
- work orders and procedures that the fuel building's crane met ASME B30.2 for annual maintenance requirements
- load testing and non-destructive testing records of special lifting devices used during loading operations
- fuel selection procedures to ensure fuel contents meet license conditions
- analyses to determine maximum weights placed on the cask handling crane during loading operations
- fire and explosion hazards analysis for the ISFSI and a walkdown of the heavy haul path to ensure all hazards had been identified and evaluated
- quality assurance program, corrective action program, and implementing procedures for incorporation of FW system related activities
- 10 CFR 72.48 program and associated reviews for identified changes to utilize the FW storage system
- comprehensive review of the site's HI-STORM FW 72.212 report, revision 0

INSPECTION RESULTS

<table>
<tr><td colspan="4">Failure to Properly Evaluate the Design Change to Utilize the Work Platform within the Auxiliary Building</td></tr>
<tr><td>Cornerstone</td><td>Significance</td><td>Cross-Cutting Aspect</td><td>Report Section</td></tr>
<tr><td>Mitigating Systems</td><td>Green
NCV 05000313,05000368/2023004-01
Open/Closed</td><td>[H.3] - Change Management</td><td>60856</td></tr>
<tr><td colspan="4">The inspectors identified a Green finding and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” for the licensee's failure to verify the adequacy of design for the plant modification of utilizing the work platform within the auxiliary building to withstand the site's design-basis tornado winds and missiles accident requirements.</td></tr>
<tr><td colspan="4">Description: The licensee made a change to utilize a new dry cask storage system (HI-STORM FW system). The Transfer Cask (TC) and canister is loaded with fuel in the site's cask loading pit which is at an elevation equal to the bottom of the spent fuel pool (within a Class 1 Structure). Once the TC is fully loaded and the canister lid installed, the TC and loaded canister, are raised by the auxiliary building's overhead bridge crane to the top of the spent fuel pool and placed on a work platform. The work platform supports and suspends the loaded TC above the cask loading pit. The work platform sits on top of the concrete floor of the auxiliary building.

The licensee's Unit 1 FSAR, section 5, and Unit 2, section 5, describe those components in Class 1 buildings, such as penetrations, locks, doors, large openings, spent fuel pool, emergency diesel generator rooms, etc., are inherently tornado protected by virtue of their being housed in tornado resistant structures. However, the superstructure over the deck of the spent fuel pool consists of a steel frame clad with light gauge metal siding and roof decking. Portions of siding and roof deck can be blown off (during a tornado event) but the steel frame is designed to assure that it will not collapse or distort so as to allow the overhead bridge crane to fall. Therefore, since the work platform and upper portion of the TC are not within the Class 1 structure, they would be subject to tornado winds and missiles in accordance with ANO's design bases requirements stated in FSAR, Section 5.1.5 "Wind and Tornado Loads."

The licensee had performed the appropriate calculations to ensure the work platform was structurally stable during a seismic event in calculation HI-2220114 "Structural Analysis of Work Platform and Cover," revision 4, to ensure the work platform does not fail and the TC would not fall into the cask loading pit and cause damage to Part 50 structures or systems. However, the inspectors identified that the licensee failed to analyze the work platform, which sits above the auxiliary building Class 1 structure, to continue to perform its safety function of holding the TC during a tornado event in accordance with FSAR, section 5.1.5, requirements. In accordance with NRC regulations and ANO's FSAR design-basis requirements, the licensee is required to ensure that plant modifications are adequately analyzed and meet all appropriate design considerations.

Corrective Actions: The licensee placed the issue into the corrective action program and performed a new tornado analysis in appendix G and appendix H of calculation HI-2220114, revision 5, to ensure that the work platform would withstand a tornado event and Part 50 safety-related structures would continue to be available, reliable, and capable to perform their safety functions.</td></tr>
</table>

Corrective Action References: condition report CR-ANO-1-2023-01533 and HI-2220114 "Structural Analysis of Work Platform and Cover," revision 5

Performance Assessment:

Performance Deficiency: The licensee's failure to perform an adequate tornado analysis of the work platform to support the TC within the auxiliary building 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 or evaluate the work platform to ensure it would continue to perform its safety function of holding the TC during a tornado event did not ensure the availability, reliability, and capability of Part 50 safety-related structures, systems, and components.

Significance: The inspectors assessed the significance of the finding using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The inspectors determined that the finding had very low safety significance (Green) because the licensee's subsequent analysis determined the work platform would withstand a tornado event and would not affect Part 50 structures, systems, and components.

Cross-Cutting Aspect: H.3 - Change Management: Leaders use a systematic process for evaluating and implementing change so that nuclear safety remains the overriding priority. Specifically, the licensee did not use a systematic approach when implementing an engineering change for the FW system work platform that was not evaluated to withstand tornado winds and missiles in a manner that ensured nuclear safety.

Enforcement:

Violation: Title 10 CFR Part 50, Appendix B, Criterion III "Design Control," requires, in part, that measures shall be established to assure that applicable regulatory requirements and the design-basis are correctly translated into specifications, drawings, procedures, and instructions. The licensee performed calculation HI-2220114, in part, to comply with those regulatory requirements.

Contrary to the above, on September 19, 2023, the licensee utilized the work platform design change and failed to verify the design-basis was correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to ensure that the work platform was adequately designed per calculation HI-2220114 to withstand tornado winds and missiles when used in the auxiliary building.

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

Failure to Provide Adequate Basis for Cask Spacing			
Cornerstone	Severity	Cross-Cutting Aspect	Report Section
Not Applicable	Severity Level IV NCV 05000313,05000368/2023004-02 Open/Closed	Not Applicable	60856

The inspectors identified a Severity Level IV non-cited violation of 10 CFR 72.48(d)(1) when the licensee failed to provide adequate basis for the change related to placement of HI STORM FW casks next to HI-STORM 100 casks.

Description: The licensee changed dry storage cask designs from the Holtec HI-STORM 100 to the HI-STORM FW. When implementing the new design, instead of following FW Final Safety Analysis Report (FSAR), revision 8, section 1.4, table 1.4.1 cask spacing of 15 feet by 15 feet, the licensee chose a spacing of 16.5 by 13.5 feet. The licensee utilized the 10 CFR 72.48 process to implement this change. The licensee provided 10 CFR 72.48 screen, “72.48-1602,” revision 0, which stated the thermal effect of neighboring HI-STORM FW casks on the HI-STORM 100 cask at the licensees ISFSI pad was similar to the interaction between two HI-STORM 100s. The technical basis for this statement referenced a thermal evaluation (RRTI-3127-0001, “ISFSI Layout Thermal Analysis,” revision 0) that stated, in part, that the proposed spacing of 16.5 feet by 13.5 feet reduced the area between casks (tributary area) and increased the design-basis heat load.

The RRTI evaluated the reduction in area between casks by demonstrating the ISFSI pad placement along with the cask array used at the licensee facility was more conservative than what was evaluated in the FSAR. The RRTI also bounded the effects of the design-basis heat loads of the HI-STORM 100 (36.6 kW) on the higher HI-STORM FW (44.09 kW) in section 2.1 due to the HI-STORM 100 having a lower, more conservative, design-basis heat load then what was modeled in the HI-STORM FW FSAR. However, when discussing the design-basis heat load effects of the HI-STORM FW on the HI-STORM 100, the licensee failed to provide adequate basis and stated the interaction was “similar to” the interaction between two HI-STORM 100s even though the heat load increased 20 percent in a non-conservative manner.

Corrective Actions: The licensee entered the issue into the corrective action program and revised the RRTI and provided an adequate basis that the interaction of the HI-STORM FW on the HI-STORM 100 is similar to the interactions between two HI-STORM 100s. This was demonstrated using heat transfer equations showing the fuel cladding temperature increase was less than 1 degree F.

Corrective Action References: condition report CR-ANO-C-2023-03844 and RRTI-3127-0001, “ISFSI Layout Thermal Analysis,” revision 1

Performance Assessment: None

The Reactor Oversight Process (ROP) does not specifically consider violations of 10 CFR Part 72 in its assessment of licensee performance. The inspectors determined that the violation was of more than minor significance using NRC Inspection Manual Chapter 0612, Appendix E, "Example of Minor Issues." Specifically, the example 3.n was found to be similar and resulted in a more than minor determination since the licensee revised the calculation in order to establish operability within design-basis limits.

Enforcement: The ROP's significance determination process does not address 10 CFR Part 72 violations, therefore it is necessary to address this violation using traditional

enforcement. This violation was dispositioned per the traditional enforcement process using section 2.3 of the NRC's Enforcement Policy. Traditional enforcement violations are not assessed for cross-cutting aspects.

Severity: Consistent with guidance in the NRC Enforcement Manual, part 1, section 1.2.6.D, if a violation does not fit an example in the Enforcement Policy violation examples, it should be assigned a severity level: (1) commensurate with its safety significance; and (2) informed by similar violation addressed in the violation examples. The inspectors determined that the violation was similar to section 6.1.d.2 of the NRC Enforcement Policy as a Severity Level IV violation. The violation was of very low safety significance because the licensee's subsequent evaluation demonstrated the changes did not result in temperatures in the canister exceeding design-basis limits.

Violation: Title 10 CFR 72.48(d)(1) requires, in part, that the licensee shall provide written evaluations which provides the basis for the determination that the change does not require a Certificate of Compliance (CoC) amendment.

Contrary to the above, on September 28, 2023, the licensee failed to provide written evaluations which provided the basis for the determination that the change does not require a CoC amendment. Specifically, 72.48 screen 72.48-1602 and referenced RRTI-3127-0001 failed to adequately evaluate the thermal effect of the HI-STORM FW canisters on the HI-STORM 100 canisters while on the ISFSI pad.

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

Failure to Analyze for Tornado Missiles and Winds for Transportation Operations to ISFSI			
Cornerstone	Severity	Cross-Cutting Aspect	Report Section
Not Applicable	Severity Level IV NCV 05000313,05000368/2023004-03 Open/Closed	Not Applicable	60856

The inspectors identified a Severity Level IV non-cited violation of 10 CFR 72.212(b)(6) when the licensee failed to determine whether or not reactor site parameters including analyses of tornado missiles were enveloped by the cask design bases for some outdoor transportation operations.

Description: The Holtec HI-STORM FW FSAR, Section 2.2, "HI-STORM FW Design Loading," which includes Section 2.2 iv. Short Term Operations, "normal operation evolutions necessary to support fuel loading or unloading activities," describes the general design criteria for the cask system. This includes all off-normal condition loads, environmental phenomena, and accident conditions. Specifically, FSAR, Section 2.2.3.e. "Environmental Phenomena and Accident Condition Design Criteria - Tornado," describes that the FW system must withstand pressures, wind loads, and missiles generated by a tornado while maintaining kinematic stability, and continued integrity of the canister must be demonstrated. Tornado hazards are evaluated in FSAR, Section 3.1.2.1.e., "Design Criteria and Applicable Loads - Tornado, Section 3.4.4.1 Safety Analysis," and Section 12.2.6.1, "Tornado Analysis." These sections of the FSAR do not include an analysis for tornado hazards for all transportation activities performed at ANO.

On April 15, 2022, the U.S. NRC issued Enforcement Guidance Memorandum (EGM) 22-001 (ML22087A496), titled, “Enforcement Discretion for Noncompliance of Tornado Hazards Protection Requirements at ISFSIs.” The EGM provided guidance to the NRC staff to exercise enforcement discretion for violations of 10 CFR 7.212(b) and 10 CFR 72.122(b), “Protection against environmental conditions and natural phenomena.” The EGM described that the NRC had identified that some ISFSI licensees had not performed the necessary evaluations to demonstrate that their site-specific parameters with respect to severe weather events, including tornadoes, were enveloped by the design bases of the spent fuel storage cask system.

The EGM provided NRC inspectors the basis to provide discretion if: (1) the licensee performed an assessment of all outdoor dry cask storage activities that were not explicitly analyzed for tornado hazards in the system's FSAR; (2) the issue was entered into the corrective action program (CAP) including a request for the Certificate of Compliance holder to request an amendment within 6 months of the date of the EGM or implement physical design modifications and/or perform evaluations that demonstrate important to safety structures, systems, and components (SSCs) are designed to withstand the effects of natural phenomena, including tornadoes and tornado-generated missiles prior to the expiration date of the EGM (April 15, 2024); and (3) the licensee established additional measures to mitigate tornado hazards, through procedures, during periods of ISFSI handling operations. These actions included, restricting outdoor dry cask storage activities during periods of adverse weather, establishing meteorological criteria, designating staff to monitor weather during ISFSI handling operations, describing actions to take in the event of severe weather necessary to place the cask in an analyzed condition, minimizing the duration of ISFSI handling operations during which ISFSI important to safety SSCs are in an unanalyzed condition.

The licensee had chosen to implement the guidance of the EGM for their FW loading campaign in September 2023. However, the inspectors identified that the licensee had performed an inadequate assessment of their outdoor activities and licensee procedure IP 3407.008, “HI-STORM FW Response to Abnormal Conditions,” revision 0, failed to ensure adequate actions to place the cask system in an analyzed condition if a hazardous weather event was approaching. Specifically, procedure IP 3407.008 directed the staff, in steps 5.13.d and 5.13.e, to leave the HI-TRAC Transfer Cask on the low profile transporter either outside on the turning pad or inside the turbine building. Being left outside on the turning pad was not a protected nor analyzed condition and the turbine building is not a Class 1 structure and is not analyzed to provide protection to the Transfer Cask while being transported by the low profile transporter.

Corrective Actions: The licensee entered the issue into their CAP and revised calculation HI-2220270, “Evaluation of Plant Hazards at ANO Nuclear Power Plant,” revision 3. In the revision, the licensee performed a tornado wind and missile evaluation in a new appendix (appendix J) for the situation when the Transfer Cask was on the low profile transporter. The calculation demonstrated the Transfer Cask would remain stable on the low profile transporter and not tip over if left outside during a tornado event.

Corrective Action References: condition report CR-ANO-C-2023-03848

Performance Assessment: None

The Reactor Oversight Process (ROP) does not specifically consider violations of 10 CFR Part 72 in its assessment of licensee performance. The inspectors determined that

the violation was of more than minor significance using NRC Inspection Manual Chapter 0612, Appendix E, "Example of Minor Issues." Specifically, example 3.n was found to be similar and resulted in a more than minor determination since the licensee revised the calculation in order to establish operability during a general design criteria environmental phenomena accident condition.
Enforcement: The ROP's significance determination process does not address 10 CFR Part 72 violations, therefore it is necessary to address this violation using traditional enforcement. This violation was dispositioned per the traditional enforcement process using section 2.3 of the NRC's Enforcement Policy. Traditional enforcement violations are not assessed for cross-cutting aspects. Severity: Consistent with guidance in the NRC Enforcement Manual, part 1, section 1.2.6.D, if a violation does not fit an example in the Enforcement Policy violation examples, it should be assigned a severity level: (1) commensurate with its safety significance; and (2) informed by similar violation addressed in the violation examples. The inspectors determined that the violation was similar to section 6.1.d.2 of the NRC Enforcement Policy as a Severity Level IV violation. The violation was of very low safety significance because the licensee's subsequent evaluation demonstrated the Transfer Cask would withstand tornado accident conditions while transported by the low-profile transporter. Violation: Title 10 CFR 72.212(b)(6), states, in part, that the general licensee must review the Safety Analysis Report referenced in the amended Certificate of Compliance and the related NRC Safety Evaluation Report, prior to use of the general license, to determine whether or not the reactor site parameters, including analyses of earthquake intensity and tornado missiles, are enveloped by the cask design bases considered in these reports. Contrary to the above on September 27, 2023, the licensee failed to determine whether or not reactor site parameters, including analyses of tornado missiles, were enveloped by the cask design bases. Specifically, the licensee failed to perform an analysis consistent with FSAR, section 2.2, to demonstrate the Transfer Cask would maintain kinematic stability and continued integrity of the canister during short-term operations when the Transfer Cask was on the low-profile transporter. Enforcement Action: This violation is being treated as a non-cited violation, consistent with section 2.3.2 of the Enforcement Policy.

Unresolved Item (Open)	Holtec HI-STORM FW Overpack Version E1 Vent Design Change URI 05000313,05000368/2023004-04	60856
Description: In September 2023, the licensee loaded their first HI-STORM FW Version E1 overpack. This new overpack design moved the inlet vents higher, above ground level, to preclude floodwater ingress into the canister. Changing the height of the inlet vents creates a potential trap for floodwater. If enough floodwater enters the vents to block airflow, this could result in an adverse thermal effect on the Multi Purpose Canister (MPC). This scenario was evaluated by the licensee through a thermal evaluation. The inspectors questioned the licensee if rainwater can enter through either the inlet or outlet vents. This scenario would be similar to the floodwater ingress event; however, it would be undetectable when performing the daily technical specification vent surveillance. The inspectors learned of operating experience from other licensees that rainwater ingress has occurred at multiple sites utilizing other FW overpack designs. The inspectors have submitted a Technical Assistance Request		

(TAR) to the Division of Fuel Management to evaluate if rainwater ingress is possible and if the thermal analysis provided for such an event is adequate.

Planned Closure Actions:

- Determine if Holtec's design change should have accounted for water intrusion (e.g. rain or flood water).
- Determine if the thermal evaluations are adequate to ensure safety limits are not exceeded.
- Determine if the design change was performed in accordance with 10 CFR 72.48 requirements.
    - If water can become trapped inside the overpack (as operating experience has documented for other FW cask variants), the licensee can no longer verify natural convection cooling using technical specification vent surveillance requirements.
    - The design change may have increased the frequency of an accident when a canister contains the design-basis heat load with water trapped inside since it would exceed normal and short-term design-basis temperature limits.

Licensee Actions: According to the ANO site-specific analysis, the licensee loads the canisters to below 90 percent of the design-basis heat load and have evaluated that normal and short-term design basis temperature limits are not exceeded for this condition. Additionally, the licensee entered the condition into its corrective action program and initiated actions to review the results of the NRC's TAR evaluation when available.

Corrective Action References: condition report CR-ANO-C-2023-03873

Failure to Perform Appropriate Post-Maintenance Testing of Unit 1 Reactor Coolant Pump Underpower Relay			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000313/2023004-05 Open/Closed	[H.7] - Documentation	71153

The inspectors identified a Green finding and associated non-cited violation of Arkansas Nuclear One, Unit 1, technical specification 5.4.1.a, Regulatory Guide 1.33, revision 2, appendix A, section 9.a, for the licensee's failure to properly pre-plan and perform post-maintenance testing to assess the performance of safety-related equipment. Specifically, the licensee failed to perform post-maintenance testing on the 'D' reactor coolant pump underpower relay which is a safety-related structure, system, or component, after its installation in the plant.

Description: On February 14, 2023, the inspectors observed a trip of the Unit 1 reactor during maintenance activities involving a failed underpower relay for the 'D' reactor coolant pump (EN 56351). Subsequent inspection revealed that the failed underpower relay was installed in October 2022 during a refueling outage, but no post-maintenance testing was performed to ensure that the relay could perform its required function of immediate detection of a sheared shaft on 'D' reactor coolant pump. The site had performed relay checks per Procedure OP-1412.022, "Protect, Relay Test & Insp of RCS Pump Undpwr Relay GE Mdl CFW11E," revision 8, that performed bench testing of the relay, but it did not perform an operability

check of the relay as installed in the control room. Additionally, the site had failed to properly classify the relay as safety-related equipment that provided an input to the reactor protection system. That classification error contributed to the lack of appropriate post-maintenance testing. As a result, the relay was inoperable from its installation date until it failed a surveillance test on February 8, 2023. After the failed relay was discovered, a temporary modification was installed in the underpower relay circuitry until the replacement was attempted on February 14, 2023, and the reactor trip occurred.

Regulatory Guide 1.33, revision 2, appendix A, paragraph 9.a states that procedures of a type appropriate to the circumstances should be provided to ensure that instruments, controls, and other measuring and testing devices are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy. Post-trip inspection of the failed relay showed that it was not properly configured prior to its installation in October 2022. Although the site had documentation to show the correct relay configuration, that documentation was not found or made available to the technicians who performed the work. Because of the improper configuration, the relay was incapable of performing its intended function.

Corrective Actions: Following the reactor trip, the licensee successfully replaced the failed underpower relay with a properly configured, calibrated relay, and performed appropriate post-maintenance testing to demonstrate its operability.

Corrective Action References: condition reports CR-ANO-1-2023-00252, CR-ANO-1-2023-00290, CR-ANO-1-2023-00325, CR-ANO-1-2023-00399, CR-ANO-1-2023-00611, CR-ANO-1-2023-00650, CR-ANO-1-2023-00837, and CR-ANO-1-2023-00961

Performance Assessment:

Performance Deficiency: The licensee's failure to properly pre-plan and perform maintenance that could affect the performance of safety-related equipment was a performance deficiency. Specifically, the licensee failed to properly maintain the 'D' reactor coolant pump underpower relay, which is a safety-related structure, system, or component, when the relay was replaced during the Unit 1 refueling outage 1R30. This failure contributed to the February 14, 2023, Unit 1 reactor trip during online maintenance that would otherwise have not been necessary.

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 safety-related pump power relay was inoperable from December 2022 through February 8, 2023, during which it would not have detected the conditions of a locked rotor, sheared shaft, or loss of power to the 'D' reactor coolant pump.

Significance: The inspectors assessed the significance of the finding using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." In accordance with IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," issued November 30, 2020, the finding is of Green significance because the finding did not represent a deficiency affecting design or qualification of a mitigating structure, system, or component; did not involve a single-train technical specification (TS) system; did not represent the loss of probabilistic risk assessment (PRA) function one train of a multi-train system for greater than its TS allowed outage time; did not represent the loss of PRA function of two separate TS systems for greater than 24 hours; did not represent the loss of a PRA

system and/or function as defined in the PRIB or the licensee's PRA for greater than 24 hours; and did not represent the loss of the PRA function of one or more non-TS trains of equipment designated as risk-significant in accordance with the licensee's maintenance rule program for greater than 3 days. Additionally, the finding did not involve external events mitigating systems, the reactor protection system, fire brigade, or flexible coping strategies.

Cross-Cutting Aspect: H.7 - Documentation: The organization creates and maintains complete, accurate and up-to-date documentation. The inspectors determined that the most significant contributing cause of this performance deficiency was failure of the site to maintain complete and accurate documentation and instructions for the configuration of the underpower relay. Providing complete and accurate documentation to the site technicians would likely have prevented this performance deficiency and helped ensure proper functioning of the reactor coolant pump underpower detection circuitry.

Enforcement:

Violation: Unit 1 technical specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the applicable procedures in Appendix A to Regulatory Guide 1.33. Appendix A, section 9.a, states, in part, that maintenance that can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances.

Contrary to the above, from December 2022 through February 8, 2023, the licensee failed to properly pre-plan and perform post-maintenance testing to assess the performance of safety-related equipment. Specifically, the licensee failed to perform post-maintenance testing on the 'D' reactor coolant pump underpower relay which is a safety-related structure, system, or component, after its installation in the plant.

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

EXIT MEETINGS AND DEBRIEFS

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

- On November 16, 2023, the inspectors presented the ANO's Review of 10 CFR 72.212(b) and the Triennial ISFSI inspection results to Brad Wertz, General Manager Plant Operations, and other members of the licensee staff.
- On January 17, 2024, the inspectors presented the integrated inspection results to Doug Pehrson, Site Vice President, and other members of the licensee staff.

THIRD PARTY REVIEWS

Inspectors reviewed Institute of Nuclear Power Operations reports that were issued during the inspection period.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
60855	Miscellaneous	0CAN052301	Annual Radiological Environmental Operating Report	05/09/2023
		Hi-storm Logs.pdf	Dry Cask Storage Tech Spec Vent Surveillances	0
		QA-20-2022-ANO-1	Quality Assurance Audit Report	0
	Procedures	3407.008	HI-STORM FW Response to Abnormal Conditions	0
		EN-DC-215	Fuel Selection for Holtec Dry Cask Storage	13
	Work Orders	52960559-01	HI-STORM Inlet/Outlet Screens Inspection on Dry Fuel Casks	02/22/2022
60856	Calculations	CALC-22-E-0009-01	Effects of Transporter Fires on HI-STORM FW and HI-TRAC VW at ANO	0
		CALC-22-E-0009-05	VCT Stability Analysis on Haul Path and ISFSI Pad for Multiple Nuclear Power Plants	0
		CALC-22-E-0009-07	Stability and Stress Analysis of the Loaded LPT for the ANO ISFSI	0
		CALC-22-E-0009-11	Cask Handling Weights at Arkansas Nuclear One	0
		CALC-22-E-0009-13	HI-STORM FW Version E1 Containing MPC-37CBS Dose Versus Distance from a Single Cask and Cask Array at the ANO ISFSI	0
		CALC-22-E-0009-29	Thermal Evaluation of HI-STORM FW Version E1 During a Flood Accident at ANO	1
		HI-2135869	Site-Specific Tornado Missile Analysis for HI-STORM FW System	15
	Engineering Changes	EC 91669	72.212 Evaluation Report	33
	Miscellaneous	HI-STORM FW Certificate of Compliance Amendment 5	CoC No. 1032 Amendment No. 5 for the HI-STORM Flood/Wind Multipurpose Canister Storage System	0
		HI-STORM FW FSAR	Hi-STORM FW Final Safety Analysis Report	8
	Procedures	EN-DC-223	Fuel Selection for Holtec HI-STORM FW MPC Storage	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			System	
		EN-LI-101	10 CFR 50.59 Evaluations	22
		EN-LI-102	Corrective Action Program	49
		EN-LI-112	10 CFR 72.48 Evaluations	16
	Work Orders	00588963-01	DFS Special Lift Devices Annual Inspection	05/31/2023
		52992024-01	L-3 Crane Annual Inspection	04/25/2023
71111.01	Corrective Action Documents	CR-ANO-	C-2022-03363, C-2022-03602, C-2023-00366, C-2023-03446	
	Procedures	OP-1104.039	Plant Heating and Cold Weather Operations	40
		OP-1608.010	Seasonal Shad Net Outside Intake Canal	6
	Work Orders	WO	53018366	
71111.04	Miscellaneous	ULD-1-SYS-16-1	ANO Unit 1 4.16 KV System	4
		ULD-2-SYS-17-1	ANO Unit 2 480 VAC Distribution System	4
	Procedures	OP-1107.001	Electrical System Operations	135
		OP-1107.002	ES Electrical System Operation	51
		OP-2107.001	Electrical System Operations	138
		OP-2107.002	ES Electrical System Operation	45
71111.05	Calculations	CALC-ANO2-FP-09-00019	ANO Unit 2 Code Compliance Report for NFPA 12A, “Halon 131 Fire Extinguishing Systems” for CPC Room	0
	Miscellaneous	FHA	Arkansas Nuclear One – Unit 1 and Unit 2 Fire Hazard Analysis	20
		PFP-U2	Unit 2 Prefire Plans	17
		ULD-0-SYS-09	ANO Fire Protection System	7
71111.11Q	Corrective Action Documents	CR-ANO-	1-2023-01604, 1-2023-01606	
	Miscellaneous		ANO-1 C31 335 EFPD RCP Shutdown Reactivity Plan	0
		SES-2-ECPE-2023-2	Arkansas Nuclear One, Unit 2, Crew Performance Evaluation Scenario	0
	Procedures	2106.007	Main Feedwater Pump and FWCS Operation	67
		2203.027	Loss of Main Feedwater Pump	19
		OP-1102.002	Plant Startup	119
		OP-1102.004	Power Operation	80
		OP-1102.008	Approach to Criticality	35

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		OP-1102.010	Plant Shutdown and Cooldown	90
		OP-1102.016	Power Reduction and Plant Shutdown	40
		OP-1304.125	Unit 1 RPS-A/CRD Breaker Trip Test	29
		OP-2102.004	Power Operation	76
		OP-2106.006	Emergency Feedwater System Operations	110
		OP-2106.007	Main Feedwater Pump and FWCS Operation	67
		OP-2106.009	Turbine Generator Operations	95
71111.12	Corrective Action Documents	CR-ANO-	1-2017-00241, 1-2018-00044, 1-2018-05311, 1-2019-01223,	
	Miscellaneous		Technical paper on Bussman fuse cap defects	0
			Untimely Corrective Actions to Resolve Deficiencies with Bussmann HKA Fuse Holder Cap	1
		ANO-QC-00091710	QC (quality control) Inspection Mouser Electronics	0
		PCN#: EE-PCN23007	BK-HKA fuse holder End of Life Notification	04/18/2023
	Procedures	EN-DC-306	Acceptance of Commercial-Grade Items/Services in Safety-Related Applications	10
		EN-DC-313	Procurement Engineering Process	22
	Work Orders	WO	492254, 494514, 514989	
71111.13	Corrective Action Documents	CR-ANO-	2-2023-02881	
	Procedures	1107.003	Inverter and 120V Vital AC Distribution	33
		OP-1107.003	Inverter and 120 V Vital AC Distribution	33
		OP-1412.216	Unit 1 Vital 120 VAC 10 kVA Inverter Inspection, Test, and Maintenance Instructions	31
		OP-2106.005	Isophase Bus Cooler Operations	24
	Work Orders	WO	52995421	
71111.15	Corrective Action Documents	CR-ANO-	2-2023-02697	
	Miscellaneous	0120-1	CPK Shell and Tube Heat Exchangers Installation, Operation, & Maintenance Manual	01/2020
		Vendor Manual	Xylem Installation, Operation, & Maintenance Manual 0120-	01/2020

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			1, "CPK Shell and Tube Heat Exchangers"	
	Procedures	OP-2104.036	Emergency Diesel Generator Operations	104
	Work Orders	WO	52953280-task 12, 52953288, 54068510	
71111.24	Corrective Action Documents	CR-ANO-	2-2022-01384, 2-2023-02951, C-2022-01425, C-2022-01554, C-2022-01946, C-2022-01976	
	Engineering Evaluations	ER-ANO-2002-1285	Service Water Boundary Valve Leakage Criteria	0
	Miscellaneous		Entergy Stroke Report ANO MOV 2CV-0716-1	12/06/2023
		CALC-V-2CV-0716-10	MOV Torque Switch Setpoints for 2CV-0716-1	6
		EN-DC-312	Motor Operated Valve (MOV) Test Data Review	9
		EN-MA-141	Limitorque Valve Operator Model SMB/SB/SBD-000 through 5 MOV and HBC Periodic Inspection	23
		EN-MA-148	Motor Operated Valve Diagnostics	12
		SEP-MOV-ANO-001	ANO Motor Operated Valve (MOV) Program	7
		TDA480.0020	Installation, Operation and Maintenance Manual for ARMCO Sluice Gates	1
		ULD-0-SYS-19	ANO Unit 1 and Unit 2 Alternate AC Generator System	2
	Procedures	OP-1104.002	Makeup & Purification System Operation	104
		OP-1104.005	Reactor Building Spray System Operation	92
		OP-1402.094	Unit 1 High Pressure Injection Valve Maintenance	7
		OP-2104.007	Control Room Emergency Air Conditioning and Ventilation	85
		OP-2104.037	Alternate AC Diesel Generator Operations	38
		OP-2305.034	Service Water Boundary Valve Leak Test	17
		OP-2403.073	Unit 2 ITT AH and NH Series 91 and 93 Actuators	9
		OP-2411.102	Unit 2 Sluice Gate and SW Bay Cleaning and Inspection	15
	Work Orders	WO	581183, 584331, 52954685, 52965585, 53003074, 53003672, 53003772, 53006540, 53006616, 53013030, 53038477, 54033183	
71114.06	Corrective Action Documents	CR-ANO-	C-2023-03684, C-2023-03685, C-2023-03686, C-2023-03687, C-2023-03693, C-2023-03711, C-2023-03712	
	Procedures	OP-1202.006	Tube Rupture	24

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		OP-1203.001	ICS Abnormal Operation	21
		OP-1203.019	High Activity in Reactor Coolant	21
		OP-1903.010	Emergency Action Level Classification	62
		OP-1903.011	Emergency Response/Notifications	63
71151	Corrective Action Documents	CR-ANO-	1-2023-00275, 1-2023-00401, 1-2023-00554, C-2023-01153, C-2023-01477	
	Miscellaneous		ANO Performance Indicator Report for 4Q22	01/04/2023
			ANO Performance Indicator Report for 1Q23	04/04/2023
			ANO Performance Indicator Report for 2Q23	07/05/2023
			ANO Performance Indicator Report for 3Q23	10/04/2023
		NEI 99-02	Regulatory Assessment Performance Indicator Guideline	7
		RIS 2000-08	Voluntary Submission of Performance Indicator Data	1
71152S	Calculations	CALC-ANO1-CS-00005	Engineering Evaluation Report per IWL-3300 for the 45th Year ANO Unit 1 Containment Building Tendon Surveillance and Concrete Inspection	0
		CALC-ANO2-CS-20-00004	Engineering Evaluation Report per IWL-3300 for the 40th Year ANO Unit 2 Containment Building Tendon Surveillance and Concrete Inspection	0
	Miscellaneous		Site Housekeeping Plan Meeting Notes	10/23/2023
	Procedures	EN-FAP-MP-008	Process Obsolete Items Identifed During the Procurement Process	5
		OP-1032.039	Obsolescence Program	1