



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

March 1, 2018

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

SUBJECT: ANNUAL ASSESSMENT LETTER FOR ARKANSAS NUCLEAR ONE, UNITS 1  
AND 2 (REPORT 05000313/2017006 AND 05000368/2017006)

Dear Mr. Anderson:

The U.S. Nuclear Regulatory Commission (NRC) has completed its end-of-cycle performance assessment of Arkansas Nuclear One (ANO), Units 1 and 2, reviewing performance indicators (PIs), inspection results, and enforcement actions from January 1, 2017, through December 31, 2017. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility. The NRC concluded that overall performance at your facility preserved public health and safety.

The NRC determined the performance at ANO, Units 1 and 2, during the most recent quarter was within the Multiple/Repetitive Degraded Cornerstone Column, the second lowest performance category of the NRC's Reactor Oversight Process (ROP) Action Matrix. This conclusion was based on one inspection finding of substantial safety significance (i.e., Yellow) in the Initiating Events Cornerstone in each unit originating in the first quarter of 2014, one Yellow finding in the Mitigating Systems Cornerstone originating in the third quarter of 2014, and one inspection finding of low to moderate safety significance (i.e., White) in the Mitigating Systems Cornerstone originating in the fourth quarter of 2016.

On June 9, 2016, the NRC issued a supplemental inspection report (Inspection Report 05000313/2016007 and 05000368/2016007) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16161B279), which stated that the performance issues would remain open beyond the normal four quarters and would not be removed from consideration in the NRC's assessment program until the identified weaknesses were addressed and corrected. On May 17, 2016, Entergy Operations, Inc. (Entergy) notified the NRC by letter, "ANO Comprehensive Recovery Plan" (ADAMS Accession No. ML16139A059) of its plan to perform specific actions to resolve the causes for declining performance at ANO. On June 17, 2016, the NRC issued a Confirmatory Action Letter (CAL) (ADAMS Accession No. ML16169A193) which confirmed Entergy's commitments to take 161 specific actions included in the ANO Comprehensive Recovery Plan.

In the third quarter of 2016, the NRC began performing quarterly inspections to review actions in the CAL that you determined to be complete and effective in achieving the stated performance

improvements. Based on the results of these quarterly inspections, the NRC determined that 157 actions were complete and effective. Of the remaining four actions, three involve equipment upgrades, and are scheduled to be completed in April 2018; the fourth action involves high and medium energy line break pipe whip and jet impingement calculations.

Once you have informed the NRC that you have completed all of the actions documented in the CAL, and determined that the actions have been effective in addressing previously identified performance issues, the NRC will schedule an inspection to independently assess the effectiveness of your actions. The results of this inspection will be used to determine if the CAL can be closed, and if a change in the level of NRC oversight is warranted. The NRC will conduct a public meeting near the ANO site after the last CAL inspection to discuss the results of the NRC's assessment of ANO's performance and the effectiveness of Entergy's performance improvement actions.

On November 7, 2017, the NRC issued supplemental Inspection Report 05000368/2017016 (ADAMS Accession No. ML17311A115), concerning ANO's response to a White finding involving an emergency diesel generator failure in Unit 2. This report documented the NRC's conclusion that ANO failed to meet two of the objectives in Inspection Procedure 95001, "Supplemental Inspection Response to Action Matrix Column 2 Inputs." The NRC team concluded that Entergy did not ensure that the root and contributing causes for the significant performance issues were fully understood, and that Entergy's extent of condition and extent of cause reviews did not adequately determine whether vulnerabilities exist in other plant components and other work instructions similar to the significant performance issues identified as part of the White finding. This report stated that the White finding for Unit 2 would remain open and continue to be considered as an input to the NRC's assessment program until the identified weaknesses are addressed, corrected, and inspected by the NRC. On February 20, 2018, you notified the NRC of your readiness to resume the supplemental inspection to review the actions taken to address these weaknesses. Therefore, the NRC plans to resume the supplemental inspection in accordance with Inspection Procedure 95001 beginning on March 12, 2018.

The enclosed inspection plan lists the inspections scheduled through December 31, 2019. This updated inspection plan now includes planned security inspections which were formerly transmitted under separate correspondence. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last twelve months of the inspection plan are tentative and may be revised. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the

NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact Neil O'Keefe at (817) 200-1574 with any questions you have regarding this letter.

Sincerely,

*/RA/*

Kriss M. Kennedy  
Regional Administrator

Docket Nos. 50-313 and 50-368  
License Nos. DPR-51 and NPF-6

Enclosure:  
Arkansas Nuclear One Inspection Plan

# IP 22 Inspection Activity Plan Report

## Arkansas Nuclear One

01/01/2018 - 12/31/2019

Unit	Start	End	Activity	CAC	Title	Staff Count
<b>CAL CLOSURE INSPECTION QTR1</b>						6
1, 2	01/01/2018	03/31/2018	IP 92702	000238	Followup On Corrective Actions For Violations And Deviations	
<b>INITIAL EXAM U1</b>						4
1	01/28/2018	02/03/2018	OV	000956	VALIDATION OF INITIAL LICENSE EXAMINATION (OV)	
1	02/25/2018	03/03/2018	EXAD	000500	LICENSE EXAM ADMINISTRATION (EXAD)	
<b>95001 Re-Inspection EDG Bearing</b>						1
1, 2	02/26/2018	04/30/2018	IP 95001	000938	Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area	
<b>RAD SAFETY RFO 1,2</b>						2
1, 2	03/26/2018	03/30/2018	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	03/26/2018	03/30/2018	IP 71124.02	000726	Occupational ALARA Planning and Controls	
1, 2	03/26/2018	03/30/2018	IP 71151	000746	Performance Indicator Verification	
<b>CAL CLOSURE INSPECTION QTR2</b>						4
1, 2	04/01/2018	06/30/2018	IP 92702	000238	Followup On Corrective Actions For Violations And Deviations	
<b>SECURITY TEAM INSPECTION</b>						2
1, 2	04/02/2018	04/06/2018	IP 71130.04	000736	Equipment Performance, Testing, and Maintenance	
1, 2	04/02/2018	04/06/2018	IP 71130.07	000739	Security Training	
<b>INSERVICE INSPECTION 1R27</b>						1
1	04/04/2018	04/18/2018	IP 71111.08P	000702	Inservice Inspection Activities - PWR	
<b>POST-APPROVAL LICENSE RENEWAL (TEAM)</b>						4
2	05/21/2018	05/25/2018	IP 71003	000687	Post-Approval Site Inspection for License Renewal	
2	06/04/2018	06/08/2018	IP 71003	000687	Post-Approval Site Inspection for License Renewal	
<b>RAD SAFETY TEAM 5,6,7,8</b>						4
1, 2	06/11/2018	06/15/2018	IP 71124.05	000729	Radiation Monitoring Instrumentation	
1, 2	06/11/2018	06/15/2018	IP 71124.06	000730	Radioactive Gaseous and Liquid Effluent Treatment	
1, 2	06/11/2018	06/15/2018	IP 71124.07	000731	Radiological Environmental Monitoring Program	
1, 2	06/11/2018	06/15/2018	IP 71124.08	000732	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	

This report does not include INPO and OUTAGE activities.  
 This report shows only on-site and announced inspection procedures.

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<b>BRQ Unit 1</b>						2
1	07/08/2018	07/14/2018	IP 71111.11B	000704	Licensed Operator Requalification Program and Licensed Operator Performance - Biennial	
<b>BRQ Unit 2</b>						2
2	07/08/2018	07/14/2018	IP 71111.11B	000704	Licensed Operator Requalification Program and Licensed Operator Performance - Biennial	
<b>EP EXERCISE INSPECTION</b>						4
1, 2	07/16/2018	07/20/2018	IP 71114.01	000716	Exercise Evaluation	
1, 2	07/16/2018	07/20/2018	IP 71114.04	000719	Emergency Action Level and Emergency Plan Changes	
1, 2	07/16/2018	07/20/2018	IP 71151	001397	Performance Indicator Verification	
<b>CYBER SECURITY INSPECTION</b>						6
1, 2	07/23/2018	07/27/2018	IP 71130.10P	000741	Cyber Security	
1, 2	08/06/2018	08/10/2018	IP 71130.10P	000741	Cyber Security	
<b>ANO DESIGN BASES ASSURANCE TEAM</b>						7
1, 2	08/13/2018	08/31/2018	IP 71111.21M	000713	Design Bases Assurance Inspection (Teams)	
<b>INSERVICE INSPECTION 2R26</b>						1
2	09/24/2018	10/05/2018	IP 71111.08P	000702	Inservice Inspection Activities - PWR	
<b>SECURITY SOLO INSPECTION</b>						1
1, 2	11/05/2018	11/09/2018	IP 71130.02	000734	Access Control	
1, 2	11/05/2018	11/09/2018	IP 71151	001338	Performance Indicator Verification	
<b>FORCE-ON-FORCE PLANNING &amp; EXERCISE WEEK</b>						7
1, 2	11/26/2018	11/30/2018	IP 71130.03	000735	Contingency Response - Force-On-Force Testing	
1, 2	12/17/2018	12/21/2018	IP 71130.03	000735	Contingency Response - Force-On-Force Testing	
<b>TRIENNIAL FIRE PROTECTION INSPECTION</b>						4
1, 2	01/28/2019	02/01/2019	IP 71111.05XT	000697	Fire Protection - NFPA 805 (Triennial)	
1, 2	02/11/2019	02/15/2019	IP 71111.05XT	000697	Fire Protection - NFPA 805 (Triennial)	

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01/01/2018 - 12/31/2019

Unit	Start	End	Activity	CAC	Title	Staff Count
<b>TI 2515/194</b>						<b>2</b>
1, 2	03/18/2019	03/22/2019	TI 2515/194	000512	Inspection of the Licensee's Implementation of Industry Initiative Associated With the Open Phase Condition Design Vulnerabilities In Electric Power Systems (NRC Bulletin 2012-01)	
<b>INITIAL EXAM (UNIT 2)</b>						<b>8</b>
2	03/24/2019	03/30/2019	OV	000956	VALIDATION OF INITIAL LICENSE EXAMINATION (OV)	
2	04/21/2019	04/27/2019	EXAD	000500	LICENSE EXAM ADMINISTRATION (EXAD)	
<b>SECURITY TEAM INSPECTION</b>						<b>2</b>
1, 2	04/08/2019	04/12/2019	IP 71130.05	000737	Protective Strategy Evaluation	
<b>RP INSPECTION</b>						<b>2</b>
1, 2	05/06/2019	05/10/2019	IP 71124.02	000726	Occupational ALARA Planning and Controls	
1, 2	05/06/2019	05/10/2019	IP 71124.04	000729	Occupational Dose Assessment	
<b>BRQ (UNIT 1)</b>						<b>2</b>
1	07/07/2019	07/13/2019	IP 71111.11B	000704	Licensed Operator Requalification Program and Licensed Operator Performance - Biennial	
<b>BIENNIAL PI&amp;R INSPECTION</b>						<b>4</b>
1, 2	08/05/2019	08/09/2019	IP 71152B	000747	Problem Identification and Resolution	
1, 2	08/19/2019	08/23/2019	IP 71152B	000747	Problem Identification and Resolution	
<b>EP PROGRAM INSPECTION</b>						<b>1</b>
1, 2	08/26/2019	08/30/2019	IP 71114.02	000717	Alert and Notification System Testing	
1, 2	08/26/2019	08/30/2019	IP 71114.03	000718	Emergency Response Organization Staffing and Augmentation System	
1, 2	08/26/2019	08/30/2019	IP 71114.04	000719	Emergency Action Level and Emergency Plan Changes	
1, 2	08/26/2019	08/30/2019	IP 71114.05	000720	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1, 2	08/26/2019	08/30/2019	IP 71151	001397	Performance Indicator Verification	
<b>INSERVICE INSPECTION 1R18</b>						<b>1</b>
1	10/14/2019	10/25/2019	IP 71111.08P	000702	Inservice Inspection Activities - PWR	
<b>RP INSPECTION</b>						<b>2</b>
1, 2	10/21/2019	10/25/2019	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
1, 2	10/21/2019	10/25/2019	IP 71124.03	000727	In-Plant Airborne Radioactivity Control and Mitigation	

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<b>RP INSPECTION</b>						2
1, 2	10/21/2019	10/25/2019	IP 71151	000746	Performance Indicator Verification	
<b>ANO 10CFR50.59 INSPECTION</b>						3
1, 2	11/18/2019	11/22/2019	IP 71111.17T	000709	Evaluations of Changes, Tests, and Experiments	

ANNUAL ASSESSMENT LETTER FOR ARKANSAS NUCLEAR ONE, UNITS 1 AND 2  
 (REPORT 05000313/2017006 AND 05000368/2017006) DATED MARCH 1, 2018

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SUNSI Review      ADAMS:       Non-Publicly Available       Non-Sensitive      Keyword:  
 By: NHT/rdr       Yes     No       Publicly Available       Sensitive      NRC-002

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