



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

January 9, 2018

Mr. Richard L. Anderson, Vice President
Entergy Operations, Inc.
1448 S.R. 333
Russellville, AR 72802-0967

SUBJECT: ARKANSAS NUCLEAR ONE – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000313/2017015 AND
05000368/2017015

Dear Mr. Anderson:

On September 28, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution inspection at your Arkansas Nuclear One, Units 1 and 2 facility, and presented the preliminary results to you and other members of your staff. During that meeting, additional information was provided to the NRC team for consideration. Following our staff's review of this information, we presented the final results during a telephonic meeting held on November 9, 2017, with Mr. Lenard Blocker, Director, Recovery, Mr. Rod Penfield, Director, Regulatory and Performance Improvement, and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for corrective action programs. On June 17, 2016, the NRC issued a Confirmatory Action Letter following the licensee's entry into Column IV of the NRC's Reactor Oversight Process Action Matrix. The NRC completed an additional Problem Identification and Resolution inspection on October 6, 2016. This assessment focuses on performance following the last Problem Identification and Resolution inspection. The assessment of this biennial inspection focusses on the site's performance subsequent to the end of the additional Problem Identification and Resolution inspection completed on October 6, 2016.

In reviewing your corrective action program, the team assessed how well your staff identified problems at a low threshold, your staff's implementation of the station's process for prioritizing and evaluating these problems, and the effectiveness of corrective actions taken by the station to resolve these problems. The team also evaluated the station's processes for use of industry

Enclosure 2 transmitted herewith contains SUNSI. When separated from Enclosure 2, this transmittal document is decontrolled.

R. Anderson

2

and NRC operating experience information, and the effectiveness of the station's audits and self-assessments.

Based upon the inspection sample, the team determined that the corrective action program and your staff's implementation supports nuclear safety. The team concluded that your staff maintained a corrective action program in which individuals identified issues at an appropriately low threshold, evaluated and addressed these issues appropriately, timely, and in a matter commensurate with their safety significance, and that the corrective actions were effective in addressing the causes and extents of condition of problems.

Finally the team reviewed the station's programs to establish and maintain a safety-conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. The team found an environment had been established and maintained where employees felt free to raise safety concerns without fear of retaliation. Your employees were willing to raise nuclear safety concerns through at least one of the several means available.

NRC inspectors documented two findings of very low safety significance (Green) in this report. These findings involved violations of NRC requirements. These findings contain Security-Related Information and are documented in Enclosure 2 to this report. All deficiencies were promptly corrected or compensated for, and the plant was in compliance with applicable physical protection and security requirements within the scope of this inspection before the inspectors left the site. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations or significance of these non-cited violations 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; the Director, Office of Nuclear Security and Incident Response; and the NRC resident inspector at the Arkansas Nuclear One, Units 1 and 2 facility.

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 the Arkansas Nuclear One, Units 1 and 2 facility.

This letter, Enclosure 1, and your response to Enclosure 1 (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 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding." However, Enclosure 2 to this letter contains Security-Related Information, so this enclosure will not be made publically available in accordance with 10 CFR 2.390(d)(1). If you choose to provide a response to Enclosure 2 that contains Security-Related Information, please mark your entire response, "Security-Related Information–Withhold

R. Anderson

3

from public disclosure under 10 CFR 2.390,” in accordance with 10 CFR 2.390(d)(1) and follow the instructions for withholding in 10 CFR 2.390(b)(1). The NRC is waiving the affidavit requirements for your response in accordance with 10 CFR 2.390(b)(1)(ii).

Sincerely,

/RA/

Thomas R. Hipschman, Team Leader
Inspection Program and Assessment Team
Division of Reactor Safety

Dockets: 50-313; 50-368
Licenses: DPR-51; NPF-6

Enclosure:

1. NRC Inspection Report 05000313/2017015;
05000368/2017015 w/Attachments:
 1. Supplemental Information
 2. Information Request

cc w/enclosure:

Mr. Gregory D. Brown
Manager, Security
Entergy Operations, Inc.
Arkansas Nuclear One
1448 S.R. 333
Russellville, AR 72802

Nonpublic Enclosure:

2. NRC Inspection Report 05000313/2017015;
05000368/2017015 Security-Related
Supplement

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Dockets: 05000313; 05000368

Licenses: DPR-51; NPF-6

Report: 05000313/2017015; 05000368/2017015

Licensee: Entergy Operations, Inc.

Facility: Arkansas Nuclear One, Units 1 and 2

Location: Junction of Highway 64 West and Highway 333 South
Russellville, Arkansas

Dates: September 11 – November 9, 2017

Team Lead: H. Freeman, Senior Reactor Inspector

Inspectors: W. Cullum, Reactor Inspector
C. Henderson, Senior Resident Inspector
D. Holman, Senior Physical Security Inspector

Approved By: Thomas R. Hipschman, Team Leader
Inspection Program and Assessment Team
Division of Reactor Safety

Enclosure 1

SUMMARY

IR 05000313/2017015; 05000368/2017015; 09/11/2017 – 11/09/2017; Arkansas Nuclear One, Units 1 and 2; Problem Identification and Resolution (Biennial)

The inspection activities described in this report were performed onsite between September 11 and 28, 2017, by three inspectors from the Nuclear Regulatory Commission's Region IV office and the resident inspector at Arkansas Nuclear One. The report documents two finding(s) of very low safety significance (Green). These findings involved violations of Nuclear Regulatory Commission requirements. The significance of inspection findings is indicated by their color (Green, White, Yellow, or Red), which is determined using Inspection Manual Chapter 0609, "Significance Determination Process." Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects Within the Cross-Cutting Areas." Violations of Nuclear Regulatory Commission requirements are dispositioned in accordance with the Nuclear Regulatory Commission Enforcement Policy. The Nuclear Regulatory Commission's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Assessment of Problem Identification and Resolution

Based on its inspection sample, the team concluded that the licensee maintained a corrective action program in which individuals identified issues at an appropriately low threshold. Once entered into the corrective action program, the licensee evaluated and addressed these issues appropriately and timely, in a matter that was commensurate with their safety significance. The licensee's corrective actions were effective, addressing the causes and extents of condition of problems.

The licensee appropriately evaluated industry operating experience for relevance to the facility and entered applicable items in the corrective action program. The licensee incorporated industry and internal operating experience in its root cause and apparent cause evaluations. The licensee performed effective and self-critical nuclear oversight audits and self-assessments. The licensee maintained an effective process to ensure significant findings from these audits and self-assessments were addressed.

Overall, the licensee maintained a safety-conscious work environment in which personnel stated that they were willing to raise nuclear safety concerns without fear of retaliation. However, the team received a number of comments and responses to questions that indicated that a high workload and manpower shortages were concerns associated with the work environment; however, there were no comments or responses to indicate that this had impacted the staff's willingness to raise safety concerns.

Cornerstone: Security

Green. The Nuclear Regulatory Commission identified two examples of security-related issues which were determined to be of very low security significance (i.e., Green as determined by the physical protection significance determination process). All deficiencies were promptly corrected or compensated for, and the plant was in compliance with applicable physical protection and security requirements within the scope of this inspection. These examples are documented in Enclosure 2 of this report.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (71152)

The team based the following conclusions on a sample of corrective action documents that were open during the assessment period, which ranged from May 15, 2015, to the end of the on-site portion of this inspection on September 28, 2017.

.1 **Assessment of the Corrective Action Program Effectiveness**

a. Inspection Scope

The team reviewed approximately 130 condition reports (CRs), including associated root cause analyses and apparent cause evaluations, from nearly 13,000 that the licensee had initiated or closed within the corrective action program. The majority of these were lower-level CRs that did not require cause evaluations. The licensee also initiated almost 25,000 additional issues that were deemed to not meet the threshold of 10 CFR 50, Appendix B, Criteria XVI, "Condition Adverse to Quality," that were handled outside of the corrective action program. The licensee used a single entry system where all issues/concerns are entered into their tracking system and assigned a condition report number. These issues were screened to determine whether they represented conditions adverse to quality, and assigned a priority and method for disposition.

The inspection sample focused on higher-significance CRs that the licensee evaluated and took actions to address the cause of the condition. In performing its review, the team evaluated whether the licensee had properly identified, characterized, and entered issues into the corrective action program, and whether the licensee had appropriately evaluated and resolved the issues in accordance with established programs, processes, and procedures. The team also reviewed these programs, processes, and procedures to determine if any issues existed that may impair their effectiveness.

The team reviewed a sample of system health reports, operability determinations, self-assessments, and various other documents related to the licensee's corrective action program. The team evaluated the licensee's efforts in determining the scope of problems by reviewing selected logs, work orders, self-assessment results, audits, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The team reviewed daily CRs, attended the licensee's performance review group, and condition screening meetings to assess the reporting threshold, prioritization efforts, and to observe the corrective action program's interfaces with the operability assessment and work control processes. The team's review included an evaluation of whether the licensee considered the full extent of cause and extent of condition for problems, as well as a review of how the licensee assessed generic implications and previous occurrences of issues. The team assessed the timeliness and effectiveness of corrective actions, completed or planned, and looked for additional examples of problems similar to those the licensee had previously addressed. The team conducted interviews with plant personnel to identify other processes that may exist where problems may be identified and addressed outside the corrective action program.

The team reviewed corrective action documents that addressed past Nuclear Regulatory Commission identified violations to evaluate whether corrective actions addressed the issues described in the inspection reports. The team reviewed a sample of corrective actions closed to other corrective action documents to ensure that the ultimate corrective actions remained appropriate and timely. The team reviewed a sample of CRs where the licensee had changed the significance level after initial classification to determine whether the level changes were in accordance with station procedure and that the conditions were appropriately addressed.

The team considered risk insights from both the NRC's and Arkansas Nuclear One's risk models to focus the sample selection and plant tours on risk-significant systems and components. The team focused a portion of its sample on the 4160V and 480V vital vacuum breakers, which the team selected for a five-year in-depth review. The team conducted walkdowns of this system and other plant areas to assess whether licensee personnel identified problems at a low threshold and entered them into the corrective action program.

b. Assessments

1. Effectiveness of Problem Identification

During the 27-month inspection period, licensee staff generated approximately 13,000 condition reports. The team determined that most conditions that required generation of a condition report by Station Procedure EN-LI-102-ANO-RC, "Corrective Action Program," had been appropriately entered into the corrective action program. However, the team identified an example where the licensee had failed to properly identify conditions in accordance with procedures:

- The team identified where the licensee had failed to initiate condition reports for three degraded/nonconforming conditions associated with Unit 1 and Unit 2 safety-related 480 volt motor control centers, which prevented the licensee from being able to evaluate past operability impacts that the degraded/nonconforming conditions had on the associated systems. The licensee initiated condition reports for the identified conditions and determined that there were no past operability concerns caused by these conditions. The licensee entered these deficiencies into the corrective action program as Condition Reports CR-ANO-1-2017-02960 and CR-ANO-2-2017-05255. The team found that the degraded/nonconforming conditions were appropriately addressed within the work control process.

Overall, the team concluded that the licensee maintained a low threshold for the formal identification of problems and entry into the corrective action program for evaluation.

2. Effectiveness of Prioritization and Evaluation of Issues

The sample of CRs reviewed by the team focused primarily on issues screened by the licensee as having higher-level significance, including those that received cause evaluations, those classified as significant conditions adverse to quality, and those that required engineering evaluations. The team also reviewed a number of CRs

that included or should have included immediate operability determinations to assess the quality, timeliness, and prioritization of these determinations.

Overall, the team determined that the licensee's process for screening and prioritizing issues once they had been entered into the corrective action program supported nuclear safety. The licensee's operability determinations were consistent, accurately documented, and completed in accordance with procedures.

- The inspection team identified one example where the licensee's root cause evaluation did not meet the procedure requirements as defined in Procedure EN-LI-118-ANO-RC, "Cause Evaluation Process," which states that a root cause is, "The most basic cause(s) for a failure or condition that, if corrected or eliminated, will preclude repetition of the event or condition." The procedure requires that for the cause to be validated, it must ensure that: (a) the problem would not have occurred had the root cause(s) not been present; (b) elimination of the cause(s) will ensure the problem will not recur due to the same causal factors; and (c) elimination of the cause(s) will preclude repetition of the specific problem or of similar problems.

In root cause evaluation Condition Report CR-ANO-2-2015-02879, "Shutdown Cooling System Heat Exchanger 2E-35B Shell Leak," the licensee defined the problem statement as, "At the start of the 2R24 refueling outage, when the 2E-35B Shutdown Cooling Heat Exchanger was placed in service, a shell thru-wall leak was found which resulted in a declaration of inoperability and an outage delay." In the evaluation, the licensee documented the root cause to be, "The risk of failure of the Unit 2 Shutdown Cooling Heat Exchanger shells due to service water corrosion was not recognized by Station Personnel." The team concluded that the identified root cause did not to meet the procedural definition of "root cause."

However, based upon discussion with licensee personnel and reviews of other condition reports, the team concluded that the licensee had identified the causes(s) and taken corrective actions (which included replacement of the heat exchangers with ones made from a more corrosion resistant material, revising and establishing preventive maintenance to thoroughly exam the heat exchangers, establishing and implementing a method to provide chemical treatment, and biocide treatment of service water components).

3. Effectiveness of Corrective Actions

Overall, the team concluded that the licensee identified effective corrective actions for the problems evaluated in the corrective action program. The licensee implemented these corrective actions in a timely manner, commensurate with their safety significance, and reviewed the effectiveness of the corrective actions appropriately.

.2 Assessment of the Use of Operating Experience

a. Inspection Scope

The team examined the licensee's program for reviewing industry operating experience, including reviewing the governing procedures. The team reviewed a sample of four industry operating experience communications and the associated site evaluations to assess whether the licensee had appropriately received the communications for relevance to the facility. The team reviewed assigned actions to determine whether they were appropriate. The team also reviewed a list of operating experience that was deemed to be not applicable to the site.

b. Assessment

Overall, the team determined that the licensee appropriately evaluated industry operating experience for its relevance to the facility. The licensee appropriately evaluated industry operating experience when performing root cause analysis and apparent cause evaluations. Operating experience information was incorporated into plant procedures and processes as appropriate.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The team reviewed three licensee self-assessments and one Quality Assurance audit report to assess whether the licensee was regularly identifying performance trends, and effectively addressing them. The team also reviewed audit reports to assess the effectiveness of assessments in specific areas. The specific self-assessment documents and audits reviewed are listed in Attachment 1.

b. Assessment

Overall, the team concluded that the licensee had an effective self-assessment and audit process. The team determined that self-assessments were self-critical and thorough enough to identify deficiencies. The team found that the Quality Assurance audit was thorough and a critical review of the licensee's corrective action program. The team found that the self-assessments and audits were consistent with the team's observations and findings.

.4 Assessment of Safety-Conscious Work Environment

a. Inspection Scope

The team interviewed 50 individuals in 6 focus groups. The purposes of these interviews were: (1) to evaluate the willingness of licensee staff to raise nuclear safety issues, either by initiating a condition report or by another method; (2) to evaluate the perceived effectiveness of the corrective action program at resolving identified problems; and (3) to evaluate the licensee's safety-conscious work environment. The focus group participants included personnel from health physics, mechanical maintenance, electrical maintenance, instrumentation and controls, work week planning, scheduling, and

supervision. At the team's request, the licensee's regulatory affairs staff selected the participants randomly from these work groups, based partially on availability. To supplement these focus group discussions, the team interviewed the Employee Concerns Program manager to assess their perception of the site employees' willingness to raise nuclear safety concerns. The team reviewed the Employee Concerns Program case log and select case files. The team also reviewed the minutes from the licensee's most recent safety culture monitoring panel meetings.

b. Assessment

All individuals indicated that they felt free to raise safety concerns without fear of retaliation. Individuals were not aware of any examples where individuals had received adverse actions for raising a nuclear safety concern. However, two individuals indicated that contractors may be unwilling to report Occupational Safety and Health Administration types of issues or injury claims. These individuals did not know of any situation where contractors were unwilling to raise safety concerns that affected safe operation of the nuclear plant. Most all individuals in the focus groups expressed that they felt the safety conscious work environment had generally improved within the last couple of years because of management's emphasis (over the past two refueling outages) of a commitment to fixing equipment correctly over adhering to the outage schedule.

Additionally, two individuals indicated anecdotally that some supervisors may have been unwilling to raise concerns over scheduling non-routine maintenance activities during off-normal hours. Interviews with supervisors did not confirm any hesitancy related to this.

The most frequent concern expressed by all groups was associated with workload/manning. Specifically, recent resignations and long-term absences within mechanical maintenance may be attributed to workload and pressure. This situation caused the organization to be short four (out of six) supervisors, and thereby increasing the workload and pressure on those remaining. None of the individuals (including supervisors) indicated that the workload and pressure has influenced their willingness to raise safety concerns. The licensee was aware of the pressures caused by the manpower shortages, and were taking actions to help improve the situation by hiring additional staff and other actions.

.5 Findings

Two findings of very low safety significance (Green) are documented in Enclosure 2 to this report. These findings involved Security-Related Information and are violations of NRC requirements. All deficiencies were promptly corrected or compensated for, and the plant was in compliance with applicable physical protection and security requirements within the scope of this inspection before the inspectors left the site. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the Enforcement Policy.

40A6 Meetings, Including Exit

Exit Meeting Summary

On September 28, 2017, the inspectors presented the inspection results to Mr. R. Anderson, Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

On November 9, 2017, the inspectors conducted a telephonic meeting with Mr. L. Blocker, Director, Recovery, Mr. R. Penfield, Director, Regulatory and Performance Improvement, and other members of the licensee staff and recharacterized two of the issues that had been previously presented as potential findings during the on-site exit meeting held on September 28, 2017.

40A7 Licensee-Identified Violations

- None.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

R. Anderson	Site Vice President
L. Blocker	Director, Recovery
G. Brown	Manager, Security
P. Butler	Manager, Design Engineering
B. Daiber	Engineering Programs and Components Manager
B. Davis	Director, Engineering
D. Edgell	Manager, Recovery
B. Egnaw	Regulatory Assurance
C. Garbe	Manager, Performance Improvement, Corrective Actions and Assurance
M. Gohman	Unit 1, Operations
J. Grove	Superintendent, Technical Support, Maintenance
J. Kirkpatrick	General Manager, Plant Operations
M. Hall	Regulatory Assurance
K. Hodges	System Engineer
L. Marvin	Coordinator, Employee Concerns Program
N. Mosher	Regulatory Assurance
E. Nicholson	Manager, Performance Improvement
R. Penfield	Director, Regulatory Assurance and Performance Improvement
B. Pace	Senior Manager, Production
S. Pyle	Manager, Regulatory Assurance
T. Sherrill	Manager, Emergency Preparedness
B. Short	Regulatory Assurance
M. Skartvedt	Manager, System and Components
J. Toben	Senior Manager, Project Management

NRC Personnel

J. Clark	Deputy Director, Division of Reactor Projects
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LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

See Attachment 2

LIST OF DOCUMENTS REVIEWED

<u>Procedure Number</u>	<u>Title</u>	<u>Revision</u>
EN-LI-102	Corrective Action Program	29, 30
OP-1416.038	Siemens Vacuum Circuit Breaker Preventive Maintenance	13, 14, 17
EN-LI-118-ANO-RC	Cause Evaluation Process	0, 2
EN-LI-102-ANO-RC	Corrective Action Program	0, 1
COPD-001	Operations Expectations and Standards	75
OP-1107.001	Electrical System Operations	113, 114
OP-1304.125	Unit 1 RPS-A/CRD Breaker Trip Test	26
OP-1203.020	Load Rejection	11
OP-1304.124	Unit 1 Control Rod Drive Electronic Trip Test	9
OP-2402.003	2SI-13A, B, C, and D Maintenance	15
OP-1304.037	Unit 1 Reactor Protection System Channel A Test	79
EN-MA-101-02	Control of Material Outside Facility Warehouse	7
EN-FAP-LI-001	Performance Improvement Review Group Process	9
EN-LI-121-ANO-RC	Trending and Performance Review Process	6
OP-1104.002	Plant Startup	105, 106
EN-WM-105-ANO-RC	Planning	3
EN-WM-100	Work Request Generation, Screening and Classification	13
EN-WM-105	Planning	19
EN-WM-107	Post-Maintenance Testing	5
EN-DC-206	Maintenance Rule Monitoring	6
EN-OP-104	Operability Determination Process	12
OP-1304.041	Unit 1 Reactor Protection System Channel A Calibration	51
OP-1304.037	Unit 1 Reactor Protection System Channel A Testing	79
OP-1412.054	Unit 1 AC MCCs	34
OP-2412.074	Unit 2 AC MCCs	23

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<u>Miscellaneous Documents Number</u>	<u>Title</u>	<u>Revision/Date</u>
TEAR-2015-116		
STM 1-02	Control Rod Drive System	15
ULD-1-SYS-36	Control Rod Drive System	3
	Performance Review Meeting Report ANO/Production	July 2017
	Performance Review Meeting Report ANO/Production	March 2017
EC 58907	ANO-2 2SI-3B Check Valve Replacement	0
LO-ALO-2016-00006	Self-Assessment: Protected Equipment Process (EN-OP-119)	August 23, 2016
LO-ALO-2016-00030	Self-Assessment: Planning Quality/Productivity	September 22, 2016
LO-ALO-2015-00107	Self-Assessment: 10 CFR Part 37 Materials Security Review	January 15, 2016
QA-3-2017-ANO-1	Quality Assurance Audit Report: Corrective Action Program	June 22, 2017
OE-NOE-2016-00066 CA-1	WANO AFI PM.1-1 Project Management: Specialty supplemental workers incorrectly assemble some critical plant equipment	
OE-NOE-2016-00056 CA-13	CR-WF3-2015-8434-ACE - Quality Assurance Finding on FME	
OE-NOE-2017-00086 CA-11	IER L3-17-3 - Unanticipated Feedwater Pressure Transients Result in Unplanned Unit Shutdown	
OE-NOE-2016-00239-CA00012	CR-CNS-2016-04104 - OSHA Recordable Injury Requiring Medical Attention Beyond First Aid	

Condition Reports

1-2013-00554	1-2013-02260	1-2014-01420	1-2014-01497
1-2015-04178	1-2015-04178	1-2016-00041	1-2016-00673
1-2016-01232	1-2016-01235	1-2016-02848	1-2016-03225
1-2016-03646	1-2016-04283	1-2016-05244	1-2016-05551
1-2016-05551	1-2017-00502	1-2017-00662	1-2017-00965
1-2017-01230	1-2017-01236	1-2017-01257	1-2017-01265
1-2017-01283	1-2017-01284	1-2017-01323	1-2017-01351
1-2017-01396	1-2017-01481	1-2017-01751	1-2017-01764
1-2017-01771	1-2017-01771	1-2017-01859	1-2017-01973
1-2017-02105	1-2017-02560	1-2017-02743	1-2017-02883

~~OFFICIAL USE ONLY – SECURITY-RELATED INFORMATION~~

Condition Reports

1-2017-02960	2-2009-01325	2-2011-03743	2-2012-01037
2-2015-00362	2-2015-00581	2-2015-00902	2-2015-01390
2-2015-02879	2-2015-04692	2-2015-04698	2-2015-05093
2-2015-05124	2-2016-00411	2-2016-00550	2-2016-00550
2-2016-00587	2-2016-00671	2-2016-02355	2-2016-02946
2-2016-03307	2-2016-03984	2-2017-00128	2-2017-00600
2-2017-02902	2-2017-03168	2-2017-03236	2-2017-03239
2-2017-03337	2-2017-03469	2-2017-03488	2-2017-03567
2-2017-03600	2-2017-05208	2-2017-05255	C-2001-00145
C-2014-02318	C-2015-00850	C-2015-00854	C-2015-00859
C-2015-00924	C-2015-01805	C-2015-03033	C-2015-03594
C-2015-03807	C-2015-04570	C-2016-00482	C-2016-00614
C-2016-00614	C-2016-00704	C-2016-01013	C-2016-01110
C-2016-01337	C-2016-01686	C-2016-01686	C-2016-02208
C-2016-02613	C-2016-03100	C-2017-00113	C-2017-00417
C-2017-00417	C-2017-00449	C-2017-00853	C-2017-00870
C-2017-03385	C-2017-03699	C-2017-03724	

Work Orders

345121	402241	419238	420062
425718	425770	426418	430338
435047	449643	471494	474152
477395	477550	481199	50235594
50235622	52719281	52719281	52719282
52719282	52719283		

Information Request
Biennial Problem Identification and Resolution Inspection Arkansas Nuclear One
July 11, 2017

Inspection Report: 05000313/2017015; 05000368/2017015
On-site Inspection Dates: September 11-16 and September 25-29, 2017
Assessment Period: May 15, 2015, through September 29, 2017

This inspection will cover the period from May 15, 2015, through September 29, 2017. The scope of this request is information associated with activities during this inspection period unless otherwise specified. To the extent possible, the requested information should be provided electronically in word-searchable Adobe PDF (preferred) or Microsoft Office format. Any sensitive information should be provided in hard copy during the team's first week on site; do not provide any sensitive or proprietary information electronically.

Lists of documents ("summary lists") should be provided in Microsoft Excel or a similar sortable format. Please be prepared to provide any significant updates to this information during the team's first week of on-site inspection. As used in this request, "corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable to Arkansas Nuclear One.

Please provide the following information no later than August 28, 2017:

1. Document Lists

Note: For these summary lists, please include the document/reference number, the document title, initiation date, current status, and long-text description of the issue.

- a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period
- b. Summary list of all corrective action documents related to conditions adverse to quality that were opened or closed during the period
- c. Summary lists of all corrective action documents that were upgraded or downgraded in priority/significance during the period (these may be limited to those downgraded from, or upgraded to, apparent-cause level or higher)
- d. Summary list of all corrective action documents initiated during the period that "roll up" multiple similar or related issues, or that identify a trend
- e. Summary lists of operator workarounds, operator burdens, temporary modifications, and control room deficiencies (1) currently open and (2) that were evaluated and/or closed during the period
- f. Summary list of safety system deficiencies that required prompt operability determinations (or other engineering evaluations) to provide reasonable assurance of operability

Attachment 2

- g. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent) (sensitive information should be made available during the team's first week on site—do not provide electronically)

2. Full Documents with Attachments

Note: Please include a summary list or index if document titles are not descriptive.

- a. Root Cause Evaluations completed during the period; include a list of any planned or in progress
- b. Apparent Cause Evaluations completed during the period
- c. Quality Assurance audits performed during the period
- d. Audits/surveillances performed during the period on the Corrective Action Program, of individual corrective actions, or of cause evaluations
- e. Functional area self-assessments and non-NRC third-party assessments (e.g., peer assessments performed as part of routine or focused station self- and independent assessment activities; do not include INPO assessments) that were performed or completed during the period; include a list of those that are currently in progress
- f. Any assessments of the safety-conscious work environment
- g. Corrective action documents generated during the period associated with the following:
 - i. NRC findings and/or violations
 - ii. Licensee Event Reports issued by Arkansas Nuclear One
- h. Corrective action documents generated for the following, if they were determined to be applicable to Arkansas Nuclear One (for those that were evaluated but determined not to be applicable, provide a summary list):
 - i. NRC Information Notices, Bulletins, and Generic Letters issued or evaluated during the period
 - ii. Part 21 reports issued or evaluated during the period
 - iii. Vendor safety information letters (or equivalent) issued or evaluated during the period
 - iv. Other external events and/or Operating Experience evaluated for applicability during the period
- i. Corrective action documents generated for the following:

- i. Emergency planning drills and tabletop exercises performed during the period
- ii. Maintenance preventable functional failures that occurred or were evaluated during the period
- iii. Action items generated or addressed by offsite review committees during the period
- iv. Findings, violations, and comments/observations documented in the 2015 NRC PI&R inspection report

3. Logs and Reports

- a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization (if this information is fully included in item 3.b, it need not be provided separately)
- b. Current system health reports, Management Review Meeting package, or similar information; provide past reports as necessary to include ≥ 12 months of metric/trending data
- c. Radiation protection event logs during the period
- d. Security event logs and security incidents during the period (sensitive information should be made available during the team's first week on site—do not provide electronically)
- e. List of training deficiencies, requests for training improvements, and simulator deficiencies for the period

Note: For items 3.c and 3.d, if there is no log or report maintained separate from the corrective action program, please provide a summary list of corrective action program items for the category described.

4. Procedures

Note: For these procedures, please include all revisions that were in effect at any time during the period.

- a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, apparent and root cause evaluation/determination procedures, and any other procedures that implement the corrective action program at Arkansas Nuclear One
- b. Quality Assurance program procedures (specific audit procedures are not necessary)
- c. Employee Concerns Program (or equivalent) procedures

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- d. Procedures that implement/maintain a Safety Conscious Work Environment
 - e. Conduct of Operations procedure (or equivalent) and any other procedures or policies governing control room conduct, operator burdens and workarounds, etc.
 - f. Operating Experience (OE) program procedures and any other procedures or guidance documents that describe the site's use of OE information
5. Other
- a. List of risk-significant components and systems, ranked by risk worth
 - b. List of structures, systems, and components and/or functions that were in maintenance rule (a)(1) status at any time during the inspection period; include dates and results of expert panel reviews and dates of status changes
 - c. Organization charts for plant staff and long-term/permanent contractors
 - d. Electronic copies of the UFSAR (or equivalent), technical specifications, and technical specification bases, if available
 - e. Table showing the number of corrective action documents (or equivalent) initiated during each month of the inspection period, by screened significance
 - f. For each day the team is on site,
 - i. Planned work/maintenance schedule for the station
 - ii. Schedule of management or corrective action review meetings (e.g. operations focus meetings, condition report screening meetings, CARBs, MRMs, challenge meetings for cause evaluations, etc.)
 - iii. Agendas for these meetings

Note: The items listed in 5.f may be provided on a weekly or daily basis after the team arrives on site.

All requested documents should be provided electronically where possible. Regardless of whether they are uploaded to an internet-based file library (e.g., Certrec's IMS), please provide copies on CD or DVD. One copy of the CD or DVD should be provided to the resident inspector at Arkansas Nuclear One; three additional copies should be provided to the team lead, to arrive no later than August 28, 2017:

U.S. NRC Region IV
Attn: Harry Freeman
1600 E. Lamar
Arlington, TX 76011

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ARKANSAS NUCLEAR ONE – NRC PROBLEM IDENTIFICATION AND RESOLUTION
INSPECTION REPORT 05000313/2017015 AND 05000368/2017015 – JANUARY 9, 2018

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ADAMS ACCESSION NUMBER: ML18009A846

Entire Report: ADAMS: ☒ Non-Publicly Available ☐ Non-Sensitive Keyword:
☒ SUNSI Review By: HAF ☒ Yes ☐ No ☐ Publicly Available ☒ Sensitive MD 3.4 A.3

ADAMS ACCESSION NUMBER: ML18009A878

Cover Letter W/ Encl 1 Only: ADAMS: ☐ Non-Publicly Available ☒ Non-Sensitive Keyword:
☒ SUNSI Review By: HAF ☒ Yes ☐ No ☒ Publicly Available ☐ Sensitive NRC-002

OFFICE	DRS/IPAT	DRS/EB1	DRS/PSB1	DRP/PBE
NAME	HFreeman	WCullum	DHolman	CHenderson
SIGNATURE	/RA/	/RA/	/RA/	/RA/E
DATE	12/15/2017	12/13/2017	12/14/2017	12/13/2017
OFFICE	C:PSB1	DRP/PBE	DRP	DRS/IPAT
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