



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

March 31, 2020

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

**SUBJECT: ARKANSAS NUCLEAR ONE, UNITS 1 AND 2 – NOTIFICATION OF NRC  
DESIGN BASES ASSURANCE INSPECTION (PROGRAMS)  
(05000313/2020011, 05000368/2020011) AND INITIAL REQUEST FOR  
INFORMATION**

Dear Mr. Dinelli:

On May 20, 2020, the U.S. Nuclear Regulatory Commission (NRC) will begin an onsite inspection at the Arkansas Nuclear One, Units 1 and 2. A three-person team will perform this inspection using NRC Inspection Procedure 71111.21N.02, "Design Bases Inspection (Programs)," Attachment 2, "Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements."

This inspection will evaluate the reliability, functional capability, and design basis of risk-significant power-operated valves as required by 10 CFR 50.55a and applicable 10 CFR Part 50, Appendix A and Appendix B, requirements, and as required by the Arkansas Nuclear One Operating License. Additionally, the team will perform an inspection of the documentation files to verify that the plant activities associated with safety-related motor-operated valves meet your commitments to Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance," and GL 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves." In conducting this inspection, the team will select power-operated valves used to prevent and mitigate the consequences of a design basis accident.

The inspection will include an information gathering site visit by the team leader and 2 weeks of onsite inspection by the team. The inspection will consist of three NRC inspectors. The current inspection schedule is as follows:

Onsite Information Gathering Visit: May 20, 2020 (Tentative)  
Preparation Week: June 1-5, 2020  
Onsite Weeks: June 8-12, 2020, and June 22-26, 2020

The purpose of the information gathering visit is to meet with members of your staff to become familiar with the power-operated valve activities at Arkansas Nuclear One. The lead inspector will request a meeting with your personnel to discuss the site power-operated valve procedures. Additionally, the lead inspector will request a discussion with your staff to become familiar with the regulations and standards applicable to power-operated valves at the site. Additional information and documentation needed to support the inspection will be identified during the inspection, including interviews with engineering managers and engineers.

In order to minimize the inspection impact on the site and to ensure a productive inspection, we have enclosed a request for information needed prior to the inspection. This information should be made available to the lead inspector prior to the May 20, 2020, visit. Since the inspection will be concentrated on safety-related and risk-significant power-operated valves, a list of such power-operated valves should be available to review during and following the information gathering visit to assist in our selection of appropriate power-operated valves to review.

Additional requests by inspectors will be made during the onsite weeks for specific documents needed to complete the review of specific power-operated valves and associated activities. It is important that all documentation is up-to-date and complete in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection. In order to facilitate the inspection, we request that a contact individual be assigned to each inspector to ensure information requests, questions, and concerns are addressed in a timely manner.

The lead inspector for this inspection is Gerond George. We understand that our licensing engineer contact for this inspection is Ms. N. Mosher. If there are any questions about the inspection or the requested materials, please contact the lead inspector by telephone at 817-200-1562 or by e-mail at [Gerond.George@nrc.gov](mailto:Gerond.George@nrc.gov).

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Sincerely,

**/RA/**

Vincent G. Gaddy, Chief  
Engineering Branch 1  
Division of Reactor Safety

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

Enclosure:  
Design Bases Assurance Inspection  
(Programs) Power-Operated Valve  
Request for Information  
Arkansas Nuclear One Valves of Interest

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ARKANSAS NUCLEAR ONE, UNITS 1 AND 2 – NOTIFICATION OF NRC DESIGN BASES  
 ASSURANCE INSPECTION (PROGRAMS) (05000313/2020011, 05000368/2020011) AND  
 INITIAL REQUEST FOR INFORMATION – MARCH 31, 2020

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**Initial Request for Information  
Design Bases Inspection (Programs), Power-Operated Valves  
ARKANSAS NUCLEAR ONE**

Inspection Report: 05000313/2020011 AND 05000368/2020011

EPID Number: I-2020-011-0015

Information Gathering Dates: May 20, 2020

Onsite Inspection Dates: June 8-12, 2020, and June 22-26, 2020

Inspection Procedure: IP 71111, Attachment 21N.02, "Design Bases Assurance Inspection (Programs)" Attachment 2, "Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements"

Lead Inspector: Gerond A. George, Senior Reactor Inspector

***I. Information Requested for Information Gathering Visit (due May 13, 2020)***

The following information should be provided to the lead inspector in hard copy or electronic format, to the attention of the lead inspector by May 13, 2020, to facilitate the reduction in the items to be selected for a final list of components. The inspection team will finalize the selected list during the prep week using the documents requested in this enclosure. The specific items selected from the lists shall be available and ready for review on the day indicated in this request. \*Please provide requested documentation electronically in "pdf" files, Excel, or other searchable formats, if possible. The information should contain descriptive names and be indexed and hyperlinked to facilitate ease of use. Information in "lists" should contain enough information to be easily understood by someone who has knowledge of pressurized water reactor technology. If requested documents are large and only hard copy formats are available, please inform the inspectors, and provide subject documentation during the first day of the onsite inspection.

1. Provide the valve characteristics for the valves listed in the attached list as described in Appendix C of NRC Inspection Procedure 71111.21N.02, "Design Bases Inspection (Programs)," Attachment 2, "Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements."
2. List of power-operated valves (POVs) important to safety for the Arkansas Nuclear One. The list should include (a) component identification number; (b) applicable plant system; (c) ASME *Boiler and Pressure Vessel Code* (BPV Code) Class; (d) safety-related or nonsafety-related classification; (e) valve type, size and manufacturer; and (f) actuator type, size, and manufacturer. If the NRC has granted a license amendment to categorize structures, systems, and component in accordance with 10 CFR 50.69, please provide the risk-informed safety category of the structure, system, or component.

Enclosure

3. Listing of the POVs sorted by risk importance, including external risk considerations.
4. Word-searchable updated final safety analysis report (UFSAR), License Conditions, Technical Specifications, and most recent Inservice Testing (IST) program plan. Specifically identify which UFSAR sections address environmental, seismic, and functional qualification of POVs.
5. NRC Safety Evaluation Report(s) associated with the IST program including relief and alternative requests submitted in accordance with 10 CFR 50.55a for POVs.
6. Identify the edition of the ASME *Operation and Maintenance of Nuclear Power Plants* (OM Code) that is the OM Code of record for the current 10-year IST Program interval, as well as any standards to which has been committed with respect to POV capability and testing.
7. List of systems, system numbers/designators and corresponding names.
8. List of site contacts that will be associated with the inspection.

**II. *Discussions Requested During the Information Gathering Visit (May 20, 2020)***

1. Interview with a representative to discuss site POV capability analyses, including plant drawings and assumptions. This includes analysis for accident conditions.
2. Interview with a representative to discuss POV maintenance elements as integrated into plant programs and procedures.
3. Interview with a representative to discuss maintaining the design-basis capability of POVs if they have entered a period of extended operation, if applicable.

**III. *Information Requested for Inspection Preparation (June 1, 2020)***

1. Documentation files, including test reports, for the electrical and mechanical components associated with the POVs selected by the lead inspector (10 specific valves will be identified and communicated to you prior to June 1, 2020).
2. References associated with the electrical and mechanical components document files.
3. Vendor manuals and technical sheets associated with the selected POVs.
4. Tours of the rooms in which the selected POVs are installed.

Inspector Contact Information:

Gerond A. George  
Senior Reactor Inspector  
817-200-1562  
[Gerond.George@nrc.gov](mailto:Gerond.George@nrc.gov)

Jonathan Braisted  
Reactor Inspector  
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Dustin Reinert  
Reactor Inspector  
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Mailing Address:

U.S. NRC, Region IV  
Attn: Gerond A. George  
1600 East Lamar Blvd.  
Arlington, TX 76011-4511

## Arkansas Nuclear One Valves of Interest

<b><u>No.</u></b>	<b><u>ACT</u></b>	<b><u>Valve Size</u></b>	<b><u>Valve Type</u></b>	<b><u>System Name</u></b>	<b><u>Utility ID</u></b>
1.	MOV	4"	Gate	"A" DH Loop Disch to MU Pump 36A Suction	CV-1276
2.	MOV	4"	Gate	"B" DH Loop Disch to MU Pump 36C Suction	CV-1277
3.	MOV	12"	Gate	RCS Suction MOV CV-1404 To LPI	CV-1404
4.	MOV	14"	Gate	LPI Suction MOV CV-1407 From BWST (a Suction HDR)	CV-1407
5.	AOV	6"	Butterfly	Decay Heat Cooler E-35B Bypass	CV-1432
6.	AOV	4"	Globe	Control AOV 2646 To SG A (from MDP)	CV-2646
7.	MOV			Common Feedwater MOV to SG-1	CV-2660A
8.	AOV	36"	Globe	Main Steam Isolation Valve CV-2691	CV-2691
9.	MOV	18"	Butterfly	B Discharge to Loop II SW	CV-3640
10.	MOV	18"	Butterfly	SWS Crossover MOV 3646	CV-3646
11.	MOV	6"	Gate	SWS Supply MOV CV-3806 To DGN 1 Cooling	CV-3806
12.	MOV	14"	Butterfly	SERVICE WATER SYSTEM	CV-3811
13.	MOV	18"	Butterfly	SW Return to Discharge Flume	CV-3824
14.	AOV	1.5"	Globe	SWS AOV CV-3840 To PMP P34A	CV-3840
15.	SOV	2"	Gate	RB Coolers VCC-2A/B SW Fill Bypass	SV-3812
16.	MOV	4"	Gate	Steam Supply MOV 2CV-0340-2	2CV-0340-2
17.	MOV	4"	Gate	EFW TDP Disch Line MOV 2CV-1026-2 To SG A	2CV-1026-2
18.	MOV	4"	Gate	EFW TDP Disch Line MOV 2CV-1037-1 To SG A	2CV-1037-1
19.	MOV	4"	Gate	EFW TDP Disch Line MOV 2CV-1039-1 To SG B	2CV-1039-1
20.	MOV			Common Feedwater MOV to SG-1	2CV-1070A
21.	MOV	42"	Gate	SERVICE WATER SYSTEM	2CV-1475-2
22.	MOV	14"	Gate	LPI/sdc Suct Line MOV 2CV-5084-1 From RCS Hot Leg 2	2CV-5084
23.	AOV	4"	Gate	LPI HTX Bypass MOV CV-5091	2CV-5091
24.	MOV	4"	Gate	HIGH PRESSURE SAFETY INJECTION	2CV-5103-1
25.	MOV	20"	Gate	Reactor Building Spray MOV 2CV5631-2	2CV-5631-2



<b><u>No.</u></b>	<b><u>ACT</u></b>	<b><u>Valve Size</u></b>	<b><u>Valve Type</u></b>	<b><u>System Name</u></b>	<b><u>Utility ID</u></b>
26.	MOV	24"	Gate	HPI Train A Outbd Sump Isol MOV 2CV-5649-1	2CV-5649
27.	MOV	24"	Gate	HPI Train A Outbd Sump Isol MOV 2CV-5650-2	2CV-5650-2
28.	AOV			Steam Supply AOV 2SV-0205	2SV-0205
29.	AOV			Bearing Oil Cooling AOV SV-0317	2SV-0317
30.	SOV	2"	Diaphragm	FUEL OIL SYSTEM	2SV-2822-2