



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

October 18, 2021

G T Powell, President and CEO
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, TX 77483

**SUBJECT: SOUTH TEXAS PROJECT – NOTIFICATION OF NRC DESIGN BASES
ASSURANCE INSPECTION (PROGRAMS) (05000498/2022011 AND
05000499/2022011) AND REQUEST FOR INFORMATION**

Dear Mr. Powell:

On November 29, 2021 the U.S. Nuclear Regulatory Commission (NRC) will begin an onsite inspection at the South Texas Project. A three-person team will perform this inspection using NRC Inspection Procedure 71111, Attachment 21N.02, "Design-Basis Capability of Power-Operated Valves Under 10 CFR 50.55a Requirements," dated October 9, 2020.

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 South Texas Project 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 two weeks of onsite inspection by the team. The inspection team will consist of three NRC inspectors. The current inspection schedule is as follows:

Onsite Information Gathering Visit: November 29 – December 2, 2021
Preparation Week: January 18 – 21, 2022
Onsite Weeks: January 24 - 27, 2022 and February 7 – 10, 2022

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 South Texas Project. 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.

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 during the November 29, 2021, 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 Mr. Wayne Sifre. We understand that our licensing contact for this inspection is Mr. A.J. Albaaj. If there are any questions about the inspection or the requested materials, please contact the lead inspector by telephone at 817-200-1193 or by e-mail at Wayne.Sifre@nrc.gov.

PAPERWORK REDUCTION ACT STATEMENT

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Sincerely,

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

Docket(s): 50-498; 50-499
License(s): NPF-76; NPF-80

Enclosures:
Request for Information and
Valves of Interest

cc w/ encl: Distribution via LISTSERV®

SOUTH TEXAS PROJECT UNITS 1 AND 2 – NOTIFICATION OF NRC DESIGN BASES
 ASSURANCE INSPECTION (PROGRAMS) (05000498/2022011 AND 05000499/2022011)
 AND REQUEST FOR INFORMATION – DATED OCTOBER 18, 2021

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SUNSI Review ADAMS: Non-Publicly Available Non-Sensitive Keyword:
 By: WCS Yes No Publicly Available Sensitive NRC-002

OFFICE	<i>DRS/EB1</i>	<i>DRS/EB1</i>			
NAME	<i>WSifre</i>	<i>VGaddy</i>			
SIGNATURE	WCS	VGG			
DATE	10/13/2021	10/18/2021			

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**Request for Information
Design-Basis Capability of Power-Operated Valves
South Texas Project**

Inspection Report: 05000498/2022011 and 05000499/2022011

EPID Number: I-2022-011-0007

Information Gathering Dates: November 29 – December 2, 2021

Onsite Inspection Dates: January 24 - 28 and February 7 – 11, 2022

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

Lead Inspector: Wayne C. Sifre, Senior Reactor Inspector

I. Information Requested for Information Gathering Visit (November 29, 2021)

The following information should be provided to the lead inspector in hard copy or electronic format, to the attention of the lead inspector by November 22, 2021, 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, Attachment 21N.02, "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 South Texas Project. 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.
3. List of POVs sorted by risk importance, including internal and external risk considerations.

- 4.
5. Word-searchable updated final safety analysis report (UFSAR), license conditions, technical specifications, and most recent inservice testing (IST) program plan (and bases document), including any standards that have been committed to with respect to POV capability and testing. Also, identify which UFSAR sections address environmental, seismic, and functional qualification of POVs.
6. Provide copies of the latest POV program level procedures or manuals.
7. 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.
8. Provide any responses to NRC Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance," (and its supplements) and GL 96-05, Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves."
9. Provide the most recently completed audit, self-assessment, or benchmark of POV programs at South Texas Project.
10. List of systems, system numbers/designators, and corresponding names.
11. List of site contacts that will be associated with the inspection.

II. Discussions Requested During the Information Gathering Visit

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 (January 17, 2022) *

1. Calculations and/or evaluations associated with the selected POVs, as applicable. For example, these may include those related to motor-operated valve (MOV) torque switch setpoint, MOV terminal (degraded) voltage, maximum expected differential and pressure, torque switch bypass settings, rate of loading, environmental and process conditions during normal/accident operation, seismic and weak-link analysis, and pressure locking and thermal binding, etc. (Ten specific valves will be identified and communicated to you prior to January 17, 2022.)
2. Environmental qualification files associated with the selected POVs, as applicable.
3. Vendor manuals and technical sheets associated with the selected POVs.

4. Provide results (i.e., completed work orders) from the last three performances of diagnostic (static and/or dynamic) testing and inservice testing (stroke time, leak rate, etc.) of the selected POVs.
5. Provide performance (or failure) trending data for the selected POVs.
6. List of modifications related to the selected POVs.
7. List of corrective action program documents, with a brief description, related to the selected POVs over the past five years.
8. List of preventive maintenance activities for the selected POVs (valve and actuator). Include the identification number, title and/or description, and frequency.
9. System training manuals and/or design basis documents associated with the selected POVs.
10. Piping and instrument diagrams for systems related to the selected POVs.
11. Tours of the rooms in which the selected POVs are installed. If the inspection will be performed remotely, multiple pictures of selected valve and valve location can be provided. The pictures must have an orientation reference, a size reference, pictures of the surrounding environment, and pictures of the nameplates of both valve and valve operator.

IV. Discussions Requested During the First Inspection Week (January 24,2022)

1. Brief presentation of POV programs at South Texas Project.
2. Interviews with representatives to discuss the design-basis capability of POVs based upon the team's review of gathered information.

** Please sort the Section III responses by each selected POV.*

Inspector Contact Information:

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Arlington, TX 76011-4511

**Valves of Interest
Design-Basis Capability of Power-Operated Valves
South Texas Project**

No.	ACT	Valve Size	Valve Type	System Name	Utility ID
1.	MOV	3	Gate	PRESSURIZER PORV PCV-0655A ISOLATION VALVE	1R141XRC0001A
2.	MOV	12	Gate	RHR PUMP 1C SUCTION	1R161XRH0061C
3.	MOV	4	Gate	CVCS LETDOWN ISOLATION	1R171XCV0465
4.	MOV	6	Gate	HI HEAD SAFETY INJECTION PUMP 1A DISCHARGE	2N121XSI0004A
5.	MOV	16	Gate	CONTAINMENT EMERGENCY SUMP 1A TO SI TRAIN A PUMPS SUCTION ORC ISOLATION	2N121XSI0016A
6.	MOV	12	Gate	SAFETY INJECTION ACCUMULATOR 1C OUTLET	2N121XSI0039C
7.	MOV	4	Gate	CVCS CHARGING ORC CONTAINMENT ISOLATION	2R171XCV0025
8.	MOV	4	Stop Check	STEAM GENERATOR 1C ORC AFW ISOLATION	2S141TAF0085
9.	MOV	4	Globe	STEAM GENERATOR 2D BLOWDOWN ORC ISOLATION VALVE	3S141XMS0514
10.	AOV	18	Butterfly	REACTOR CONTAINMENT BUILDING SUPPLEMENTARY PURGE SUPPLY ISOLATION	A1HCFV9776
11.	AOV	30	Gate	STEAM GENERATOR 1A MAIN STEAM ORC ISOLATION VALVE	A1MSFSV7414
12.	HOV	8	Globe	STEAM GENERATOR 1A MAIN STEAM OUTLET POWER OPERATED RELIEF VALVE	A1MSPV7411
13.	SOV	1	Globe	REACTOR VESSEL HEAD VENT ISOLATION VALVE	A1RCHV3658A
14.	AOV	4	Gate	STEAM GENERATOR 1B BLOWDOWN ORC ISOLATION VALVE	B1SBFV4152
15.	AOV	4	Globe	CVCS LETDOWN ORIFICE HEADER ISOLATION VALVE	C1CVFV0011
16.	MOV	6	Gate	HI HEAD SAFETY INJECTION PUMP 2A DISCHARGE TO LOOP 2A HOT LEG ISOLATION	2N122XSI0008A

No.	ACT	Valve Size	Valve Type	System Name	Utility ID
17.	MOV	8	Gate	LO HEAD SAFETY INJECTION PUMP 2B DISCHARGE	2N122XSI0018B
18.	MOV	8	Gate	LO HEAD SAFETY INJECTION TRAIN B TO LOOP 2B HOT LEG ISOLATION	2R162XRH0019B
19.	MOV	8	Gate	LO HEAD SAFETY INJECTION TRAIN C TO LOOP 2C COLD LEG ISOLATION	2R162XRH0031C
20.	MOV	4	Gate	CVCS NORMAL CHARGING TO RCS LOOP 2A COLD LEG	2R172XCV0003
21.	MOV	6	Gate	CVCS VOLUME CONTROL TANK OUTLET	2R172XCV0113A
22.	MOV	4	Stop Check	(OCIV) SG 2D AFW SUPPLY LINE ISOLATION	2S142TAF0019
23.	MOV	30	Butterfly	ECW PUMP 2C DISCHARGE	3R282TEW0151
24.	MOV	4	Globe	AF-MOV-7526 (AFW TRAIN D DISCHARGE MOV)	3S142ZAF7526
25.	AOV	4	Globe	A AFW CROSSOVER VALVE	A2AFFV7517
26.	AOV	30	Gate	STEAM GENERATOR 2A MAIN STEAM ORC ISOLATION VALVE	A2MSFSV7414
27.	SOV	6	Globe	PRESSURIZER POWER OPERATED RELIEF VALVE	A2RCPCV0655A
28.	AOV	4	Gate	STEAM GENERATOR 2D BLOWDOWN ORC ISOLATION VALVE	A2SBFV4150
29.	AOV	4	Globe	B AFW CROSSOVER VALVE	B2AFFV7516
30.	AOV	16	Butterfly	RHR HEAT EXCHANGER 2C CCW RETURN FLOW CONTROL VALVE OPERATOR	C2CCFV4565