

10 CFR 50.55a

April 11, 2022

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

R. E. Ginna Nuclear Power Plant  
Renewed Facility Operating License Nos. DPR-18  
NRC Docket No. 50-244

Subject: Relief Request Associated with Inservice Testing of Refueling Water Storage Tank Outlet Valve


In accordance with 10 CFR 50.55a, "Codes and standards," paragraph (z)(2), Constellation Energy Generation, LLC (CEG) requests NRC approval of a proposed relief request associated with the Inservice Testing (IST) Program for the R. E. Ginna Nuclear Power Plant. This request is associated with the testing of the Refueling Water Storage Tank Outlet Valve (896B).

CEG requests your approval of this request by April 11, 2023.

There are no regulatory commitments contained in this letter.

If you have any questions, please contact Tom Loomis at 610-765-5510.

Respectfully,



---

David T. Gudger  
Sr. Manager - Licensing and Regulatory Affairs  
Constellation Energy Generation, LLC

Attachment: Relief Request VR-03 - Inservice Testing of Refueling Water Storage Tank Outlet Valve

cc: Regional Administrator - NRC Region I  
NRC Senior Resident Inspector - Ginna  
NRC Project Manager - Ginna

**ATTACHMENT**

**Relief Request VR-03 - Inservice Testing of Refueling Water Storage Tank Outlet Valve**

**Request for Relief VR-03  
Inservice Testing of Refueling Water Storage Tank Outlet Valve  
In Accordance with 10 CFR 50.55a(z)(2)**

**1. ASME Code Component(s) Affected**

Component ID	Description	Code Class	Category
896B	Refueling Water Storage Tank Outlet to Containment Spray and Safety Injection Pumps (See Figure A)	2	A

The Refueling Water Storage Tank Outlet Valve (Figure A) provides a suction supply flow path to the Containment Spray and Safety Injection pumps when open for the injection phase and isolates the Refueling Water Storage Tank during Safety Injection in the recirculation phase. When the Refueling Water Storage Tank inventory reaches a low level during the injection phase, the pumps' suction is realigned from the Refueling Water Storage Tank to the containment sump via the Residual Heat Removal system for recirculation. When this transition occurs 896A and 896B are closed, isolating the Refueling Water Storage Tank and preventing the release of radioactivity to the atmosphere via the Refueling Water Storage Tank atmospheric vent.

**2. Applicable Code Edition and Addenda**

American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) 2012 Edition with no Addenda.

**3. Applicable Code Requirement**

ISTC-3630, *Leakage Rate for Other Than Containment Isolation Valves*, ISTC-3630(b) states, in part, "Valve seat tests shall be made with the pressure differential in the same direction as when the valve is performing its function..."

**4. Reason for Request**

Pursuant to 10 CFR 50.55a, Codes and standards, paragraph (z)(2), an alternative to the requirement of ASME OM Code ISTC-3630(b) is proposed. The basis of the request is that compliance with the specified requirements results in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

When aligning leak testing in the accident direction 11 boundary valves must be used as a pressure barrier. Cumulative leakage from each of the 11 boundary valves can contribute to a false high leakage rate of 896B that must be investigated and resolved. This involves increased time to perform the testing and unnecessary radiation exposure to test personnel and results in a hardship without a compensating increase in the level of quality and safety.

## 10 CFR 50.55a Relief Request: VR-03

Revision 0  
(Page 2 of 3)

### 5. Proposed Alternative and Basis for Use

896B is an Active Motor Operated 10-inch Split Wedge Gate Valve. As such, this valve is included in Mandatory Appendix III and has been previously evaluated and tested in the GL 89-10/96-05 MOV program. The motor operated valve closes against minimal differential pressure and is required to be leak tight against a differential pressure of 158 psid. The gate valve design inherently has two sealing surfaces (upstream and downstream disc faces) with both designed to provide shutoff; however, only one face needs to seal to provide leakage integrity. When closed, the motor operator provides sufficient seating thrust with margin to wedge the disc into the seat and prevent the system pressure from unseating the valve. Based on the gate valve design and adequate seating force, leakage will be the same across the disc when pressurized in either direction; therefore, leak testing this valve in the reverse direction at the required differential test pressure is an acceptable alternative and will provide equivalent results in the same direction as when the valve is performing its function. This alternative to the Code-required testing direction of the Refueling Water Storage Tank Outlet Valve (896B) is proposed pursuant to 10 CFR 50.55a(z)(2).

896B has passed its IST leakage, position indication, stroke open/close, and diagnostic testing since 2008. A search of the corrective action database, covering the last 20 years resulted in no events where 896B malfunctioned or failed to perform any of its required active open/close functions.

### 6. Duration of Proposed Alternative

This request, upon approval, will be applied to the R. E. Ginna Nuclear Power Plant sixth 10-year IST interval, which began on January 1, 2020, and is scheduled to end on December 31, 2029.

### 7. Precedent

Letter from D. Wrona (U.S. Nuclear Regulatory Commission) to J. Gebbie (Indiana Michigan Power Company), "Donald C. Cook Nuclear Plant, Units 1 and 2 – Relief Request REL-002 Associated with Valve Seat Leakage Testing (CAC Nos. MF6546 AND MF6547)," dated March 4, 2016 (ML16054A572)

### 8. References

None

10 CFR 50.55a Relief Request: VR-03

Revision 0

(Page 3 of 3)

Figure A  
Refueling Water Storage Tank Outlet Valve Diagram (896B)

