Expression of Interest
Cooling System Check Valve Replacement

1. INTRODUCTION

Battelle Energy Alliance, LLC (BEA) Management and Operating Contractor of the U.S. Department of Energy (DOE) owned Idaho National Laboratory (INL), is seeking an Expression of Interest (EOI) from qualified vendors capable of providing tilting-disc style, 20-inch, 300-lb check valves for use at the Advanced Test Reactor (ATR). These valves are critical safety-related components used on the discharge side of high-capacity pumps and support safe operation of ATR.

2. BACKGROUND

INL is a U.S. Department of Energy (DOE) national laboratory dedicated to nuclear energy, national security, and clean energy innovation. The existing ATR check valves are original components with aging hydraulic dashpot systems. They have undergone numerous repairs, lack available spare parts, and are experiencing increased failure rates, warranting full replacement to maintain reliable reactor operation. The new valves must meet stringent design, operational, environmental, and safety requirements defined in INL Specification SPC-71414 (Rev. 0).

3. SCOPE OF WORK

Responding vendors must be capable of designing, manufacturing, testing, and delivering a quantity of four 20-inch, 300-lb tilting-disc check valves - complete with all components required for safe and reliable operation. Each valve assembly shall include:

- A 20” nominal, ASME B16.5 raised-face flanged, tilting-disc check valve constructed of ASTM A182 F304 or ASTM A351 CF8 stainless steel, with hard-surfaced or nitride wear areas.
- The check valve shall be designed and manufactured in accordance with the 2021 (or alternate year approved) ASME Boiler and Pressure Vessel Code Section III, Division 1, Class 1.
- An integrated hydraulic dashpot/dampening mechanism designed to achieve the specified closure timing.
- A position indicator assembly capable of transmitting valve position through standard industrial electrical signals.
- Valve configuration, dimensions, and functional characteristics consistent with INL Drawing 449559 or approved equal.
- Performance capability to operate within the limits for flow rate, pressure, temperature, closing time, pressure drop, disc stability, and leakage specified in INL Specification SPC-71414 (Rev. 0).

- Material compatibility with specified chemistry and radiation environment.
- Required testing and inspection, including hydrostatic pressure testing, nondestructive examination, and full operational testing for closure time, leakage, disc stability, and differential pressure.
- Complete vendor documentation, including dimensional outline and cross-section drawings, recommended spare parts list, and certificates of conformance.

4. PROCESS

This EOI is the first step in identifying interested and qualified vendors for future solicitation. Responses may be used to inform the development of a formal solicitation list. Selected vendors may be invited to participate in a Request for Proposal (RFP) process for award consideration.

5. SUBMITTAL REQUIREMENTS

Interested vendors should submit an Expression of Interest that includes the following:

- Company name and point of contact
- Description of capabilities for design and manufacturing of nuclear-grade check valves
- Demonstrated experience with large-diameter tilting disc valves, dashpot systems, and ASME Section III equipment
- Certifications, quality program documentation, and nuclear safety compliance
- Test capabilities for hydrostatic, nondestructive, and performance testing
- Lead times and production capacity
- Ability to supply all required drawings, documentation, and conformance certificates
- NAICS and business size classification
- Any proposed equivalent designs (if not identical to INL drawing references)
- Confirmation of ability to comply with INL data control requirements (RD-5003, Forms 431.13 & 431.14)
- High level cost estimation for delivery of four check valves

Deadline for submission: July 9, 2026
Submit to: Chase.Egbert@inl.gov

Only select respondents, as determined by BEA, will receive an invitation to participate in the anticipated RFP solicitation.

6. **PROPRIETARY INFORMATION**
   Because information received in response to this EOI may be business sensitive or proprietary to the responding party, respondents must mark information in their responses accordingly.

7. **Attachments**
   The final solicitation package will require vendors to review and incorporate applicable INL drawings referenced in SPC-71414, including but not limited to:
   - DWG 440265
   - DWG 449559
   - DWG 035864
   - DWG 035865
   - DWG 035866

8. **Export-Controlled Information**
   Certain documents associated with this EOI, including INL Specification SPC-71414 (Rev. 0) and referenced drawings, contain Official Use Only (OUO) information subject to U.S. export control regulations. Access to these materials is restricted to individuals who are verified U.S. citizens or U.S. lawful permanent residents (Green Card holders). Vendors who wish to obtain the OUO-controlled specifications and drawings must contact Chase Egbert at Chase.Egbert@inl.gov to confirm eligibility prior to the release of any controlled information. Verification of citizenship or lawful permanent residency is required before access will be granted.

   Vendors may still submit an EOI response without accessing these OUO documents; however, obtaining and reviewing the controlled specification and drawings may help respondents fully understand the technical scope and requirements of the requested valves.