

**HANFORD TANK WASTE TREATMENT
AND
IMMOBILIZATION PLANT**



**BIDDER REQUEST FOR INTEREST &
PRE-QUALIFICATION PACKAGE**

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May be exempt from public release under the Freedom of Information Act
(5 U.S.C. 552), exemption number and category: 4.

Commercial/Proprietary

Department of Energy Review required before public release

Name/Org: Jose Velasquez/ P&S Date: 12/28/2023

Guidance (if applicable): N/A

Requisition No. 24590-CM-MRA-MBF0-00001

**Pipe Insulation for High Radiation
Areas**

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BIDDER REQUEST FOR INTEREST & PREQUALIFICATION CRITERIA AND RESPONSE

1.0 Introduction

Bechtel National Inc., herein referred to as Contractor, intends to issue a Request for Proposal (RFP) for a **Plant Equipment** Purchase Order for the Hanford Waste Treatment and Immobilization Plant (WTP) project in Richland, WA. Companies must be pre-qualified by Contractor to be included on the bid list. To support the pre-qualification evaluation process, the prime potential bidder (1st tier subcontractor) must provide the requested information and respond to questions within this document. The Experience Statement should include relevant information for both the prime bidder and any planned lower-tier supplier or subcontractor. Additional supporting documentation such as brochures and company profiles may also be submitted.

***Please note that additional supporting documentation will be required as part of the formal RFP process.**

2.0 Project Description and Location

The Hanford Tank Waste Treatment and Immobilization Plant (WTP) is a complex of radioactive waste treatment processing facilities designed and constructed by Bechtel National, Inc. for the Department of Energy (DOE). The facility will process the Hanford Site tank waste and convert the waste into a stable glass form.

The Project site is located in the 200 East Area of the Hanford Reservation near Richland, Washington, along the Columbia River. The site elevation varies from 662 to 684 feet above mean sea level. Ambient temperature range is -23 degrees F minimum to 113 degrees F maximum, with relative humidity of 5% minimum to 100% maximum. The project design life is 40 years.

Information about the WTP Project can be found on <http://www.hanfordvitplant.com>.

3.0 Scope of Work

Award Type: **FIRM FIXED PRICE with Economic Price Adjustment**

Estimated RFP Date: **June 2026**

Services and labor required to design, fabricate, furnish, package, deliver, and provide documentation for a **Reflective Metal Insulation (RMI) thermal insulation system**. RMI is needed for hot piping that will be in service in high radiation areas that will be inaccessible after start of operations.

All pipes requiring insulation are austenitic stainless steel or a nickel-based alloy.

RMI and attached support hardware will be exposed to a high intensity gamma radiation field and will sustain a cumulative gamma exposure of approximately 10^{10} Rads during the required RMI 40-year design life. The RMI shall have no loss of function or performance after being sprayed with the following fluids (expected spray exposure is 1,000 hours cumulative over 40 years):

- Nitric Acid* at 5 molar at 212°F, or
- Sodium Hydroxide at 19 molar at 212°F, or
- Demineralized water at 212°F

*Note: a five and eight Molar Nitric Acid line is within rooms containing piping requiring RMI. The insulation will be subjected to the 5 or 8 Molar acid in the event of an acid pipeline failure.

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RMI shall not contain any organic materials as an essential constituent. Bronze, copper, lead, zinc, tin, antimony, cadmium, mercury, bismuth, other low melting point metals, their alloys, or materials containing such metals as their basic constituents or sulfur, and halogens shall not be used in direct contact with stainless steel.

For components that have a nuclear safety function, WTP intends to consider both Suppliers with NQA-1 2024 programs and Suppliers that have other QA programs (example: ISO 9001). For cases in which Supplier is not NQA-1 compliant, WTP will provide required testing, oversight, and source verification to demonstrate compliance with NQA-1 2024.

We encourage interested Suppliers to contact WTP (per website contact info/directions) to set up meetings with WTP engineering and procurement staff to ask questions, discuss areas that could be adjusted to simplify the procurement process, resulting in a fit for purpose specification that aligns with what the supply chain produces (buy what they make) and recommendations for how best to develop a mutually beneficial collaborative partnership.

3.1 Work to be included:

- No fabricated section of insulation shall weigh more than 65 pounds. Any buckles or fasteners shall be designed to stay closed under all operating conditions.
 - RMI and associated attachment supports shall be designed so the insulation will not detach from the piping when subjected to Seismic Category II (SC-II)
- RMI shall weigh less than or equal to 8 lbs/linear foot of pipe
- All insulation shall be fabricated to be self-draining and steam venting.
- The fit up of all sections shall be demonstrated to the contractor's representative prior to shipment to the WTP project. Manuals and Procedures controlling the fit up of the finished product shall also be provided.

3.2 Equipment and Materials Required:

RMI and the attached supports and assemblies shall be designed to minimize the use of special tooling to install the RMI. If special tooling is required for RMI installation, then **two** sets of the special tooling shall be supplied with the insulation system.

All insulation and materials must be compatible with austenitic stainless steel or a nickel-based alloy piping.

3.3 Codes and Standards:

Applicable Codes and Standards include, but are not limited to:

- ASME BPVC, Section IX – *Welding, Brazing, and Fusing Qualifications*
- ASME B 31.3, *Process Piping*
- ASME NQA-1-2022, Subpart 2.1, *Quality Assurance Requirements for Cleaning and Cleanliness Control of Fluid Systems and Associated Components for Nuclear Facilities*

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- ASTM C168 - *Standard Terminology Relating to Thermal Insulation*
- ASTM C335/C335M - *Standard Test Method for Steady-State Heat Transfer Properties of Pipe Insulation*
- ASTM C667 – *Standard Specification for Prefabricated Reflective Insulation Systems for Equipment and Pipe Operating at Temperatures Above Ambient Air*
- ASTM C680 - *Standard Practice for Estimate of the Heat Gain or Loss and the Surface Temperatures of Insulated Flat, Cylindrical, and Spherical Systems by Use of Computer Programs*
- AWS D1.1/D1.1M - *Structural Welding Code – Steel*
- AWS D1.3/D1.3M - *Structural Welding Code - Sheet Steel*
- AWS D1.6/D1.6M – *Structural Welding Code - Stainless Steel*
- AWS D9.1/D9.1M – *Sheet Metal Welding Code*

Please note that this solicitation may result in material procurements and proposals greater than \$10,000 and must comply with FAR 52.225-11 Buy American Act – Construction Materials Under Trade Agreements (SEP 2010). If you cannot comply or foresee any issues with compliance, please provide a detailed explanation.

If your company is **interested** in this solicitation, please **proceed to Section 4.0** and complete the below sections as requested. The BNI Acquisition Services Purchasing group is responsible for collection, evaluation, and internal publication of potential bidders' information for the purpose of pre-qualification for all solicitations.

4.0 Response Submittal

4.1 Submission Due Date: **3/31/2026 (or as extended)**

Submission Method: Submissions must be received no later than the due date to the Purchasing Representative, **Andrea Riste**, via email at adriste@bechtel.us. For questions, call (509) 430-9055.

5.0 Pre-Selection Criteria

5.1 Company Response

Prime Subcontractor Company Name:	
Address:	
Pre-qualification Contact Name:	
Phone Number:	
E-mail Address:	
DUNS No. (Dun & Bradstreet):	

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5.2 North American Industry Classification System Code (NAICS)

The NAICS (North American Industry Classification System code for this work is **332996**. The SBA size standard for this code is **550 employees**. For pre-qualification purposes, you are a small business if your company's employees do not exceed **550**.

Business Size Classification (according to U.S. Small Business Administration Criteria)	<input type="checkbox"/> Small
	<input type="checkbox"/> Small Disadvantaged Business
	<input type="checkbox"/> Woman Owned Small Business
	<input type="checkbox"/> HUBZone Business
	<input type="checkbox"/> Veteran-Owned Small Business Concern
	<input type="checkbox"/> Service-Disabled Veteran-Owned Small Business Concern.
	<input type="checkbox"/> N/A – Registered as a Large Business

5.3 Quality Assurance Requirements Program

Programmatic Quality Assurance (QA) requirements for this purchase orders will be in accordance with Supplier QA program, please mark as applicable:

	Commercial Quality - Based on DOE Order 414.1C
	Nuclear Level Quality - Based on ASME NQA-1 2022

A. Does your Company have a written Quality Assurance Program?

Yes No

B. Which QA standards does this program meet? _____

DOE/RW/0333P ASME NQA-1 ASME Section VIII ISO-9000 Other

C. If selected "other" above, please furnish a copy of your QA Program Table of Contents and a brief summary identifying each of the requirements listed below. The level of rigor applied to the elements shall be commensurate with the risks associated with the Work.

- A description of the organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing the Work.
- Personnel Training and Qualifications
- Quality Improvement
- Control of Documents and Records
- Work Processes
- Design
- Procurement
- Product Identification and Traceability
- Inspection and Acceptance Testing

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- Control of the Testing Equipment
- Control of Non-Conforming Product
- Corrective and Preventative Actions
- Handling, Storage and Shipping Procedures
- Management Assessment
- Independent Assessment

D. Your company has the option to submit their full Quality Assurance Plan with this interest.

5.4 Commercial Data

Potential bidders are required to register on the Bechtel Supplier and Contractor Portal: <https://www.Bechtel.com/supplier/> in order to be considered.

Date your company registered or updated its information on the Portal?

Date Updated: _____

A. Rough Order of Magnitude for Scope of Work (USD): \$ _____

B. Estimated Delivery Schedule:

- i. Engineering/Design: _____ weeks ARO
- ii. Material Procurement: _____ weeks ARO
- iii. Fabrication: _____ weeks ARO
- iv. Delivery: _____ weeks ARO

C. Are there long lead items to be aware of (if yes, please specify)?

D. Does your company have a suggested alternate offering/product that offers an improvement, is more cost effective, or offers shorter delivery (i.e. "buy what you make")?

No, we will supply an identical or similar product.

Yes, we have an alternate offering. If so, please provide.

E. What risks do you foresee with this procurement that BNI should be aware of and possibly help mitigate? _____

5.5 Technical Criteria

A. Question: Has your company previously provided a **RMI thermal insulation system** for the application (or similar application) described above?

Yes No

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- B. Direct Relevant Experience Documentation: Provide a reference list of example projects over the last ten years, on the included Experience Statement, that demonstrate direct relevant project experience to support a “yes” response. Example projects should be detailed as to both the technical scope of the project and your participation in the project.

Column completion notes for the below, Experience Statement, to be completed by the Prime contractor:

- A. Customer Name, Address, Contact Name and Phone No.- So that we may contact as a reference as needed.
- B. Work Description and Location- Describe work scope and location, and then indicate if prime or subcontract.
- C. Original/ Final Contract Value- Original award value and final closeout contract value.
- D. Commencement/ Completion Dates- Provide starting date and actual completion (or forecast if still in progress) by month/year format (e.g., Jan 2006/Sept 2007)

Customer Name, Address, Contact Name and Phone No.	Work Description and Location	Original/Final Contract Values	Commence/ Complete Dates

6.0 Pre-Qualification Document Checklist

Companies are encouraged to use this checklist to ensure their submittal is complete.

- Interest & Prequalification Criteria and Response Package (this document)

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COMPANY NAME: _____



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- QA Program Table of Contents and summary *or* a copy of QA Plan
- Additional supporting documentation such as brochures and company profiles.
- Direct Relevant Experience Documentation (included in this document or provided as attachment)

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