COMPANY NAME: _____

BIDDER PREQUALIFICATION CRITERIA AND RESPONSE

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-QL-MRA-FH00-00TBD

HLW Canister Grapples and Load Cells

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COMPANY NAME: _____

BIDDER 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 Material 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.

***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 Purchase Order with Economic Price Adjustment
Estimated RFP Date: ***March 2026***

Fabrication and testing of HLW Canister Grapples and Load Cells

Work to be included:

1. Work performed per ASME B30.20 – current version
2. Fabricate one Test HLW Canister Grapple from provided detailed design drawings (native drawing files available). HLW Canister is assigned quality classification Q due to having WAI Performance Attributes.
3. Perform verification and validation testing of design. Note that design changes and retesting may be required.
4. Evaluate and issue Report.
5. Fabricate eight (8) HLW Canister Grapples
6. Perform Factory Acceptance Testing (FAT) on Canister Grapples
7. Design, fabricate, assemble and test two (2) load cells depicted in provided Design Proposal Drawing.
8. Provide required documentation.
9. Minor coatings required on position indicators as depicted on drawings.
10. Welding per AWS D1.6 & AWS D14.0.
11. Material Inspections

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a) All measuring and testing equipment utilized shall be calibrated and within calibration date by an accredited ISO/IEC 17025 laboratory.

12. See section 8.0 below for details regarding:
    a) Required Equipment / Service
    b) Equipment Classifications
    c) Required Equipment for testing
    d) HLW Canister Grapple Detail Drawings (Build to Print)
    e) Load Cell Design Proposal Drawing
    f) HLW Canister Configurations
    g) Testing Sample Guidance

Equipment and Materials Required

Supplier shall provide all equipment and materials necessary to accomplish work in section above.

Codes

- ASME B30.20
- AWS D1.6 & AWS D14.0

Standards

- Various ASME and ASTMs for fasteners and materials
- ASNT SNT-TC-1A, *Recommended Practice No. SNT-TC-1A Personnel Qualification and Certification in Nondestructive Testing*

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: **May 18, 2025**

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.

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COMPANY NAME: _____

BIDDER PREQUALIFICATION CRITERIA AND RESPONSE

5.0 Pre-Qualification Document Checklist

Companies are encouraged to use this checklist to ensure their submittals are complete.

☐ Pre-Selection Criteria and Response (section 6.0)

☐ QA Program Table of Contents and summary *or* copy of QA Plan (section 7.0)

☐ Description of directly relevant experience (section 8.0)

6.0 Pre-Selection Criteria

6.1 Company Response

Prime Subcontractor Company Name: _____

Address: _____

_____

_____

Pre-qualification Contact Name: _____

Phone Number: _____

E-mail Address: _____

DUNS No. (Dun & Bradstreet): _____

6.2 North American Industry Classification System Code (NAICS)

The NAICS (North American Industry Classification System code for this work is **332439**. The SBA size standard for this code is 600 employees. For pre-qualification purposes, you are a small business if your company's number of employees does not exceed 600 employees.

Business Size Classification (according to U.S. Small Business Administration Criteria)

☐ Small
☐ Small Disadvantaged Business
☐ Woman Owned Small Business
☐ HUBZone Business
☐ Veteran-Owned Small Business Concern
☐ Service-Disabled Veteran-Owned Small Business Concern

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☐ N/A – Registered as a Large Business

6.3 Commercial Data

Potential bidders are required to register on the Bechtel Supplier and Contractor Portal: https://www.Bechtel.com/supplier/ 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. Test:_____ weeks ARO
v. Delivery: _____ weeks ARO

C. 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, 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 describe below or provide as an attachment.

_____
_____
_____

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

_____
_____
_____

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7.0 Quality Assurance Program

Programmatic Quality Assurance (QA) requirements for this purchase order 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. The potential bidder has the option to submit their full Quality Assurance Plan (QAP) with this Request for Interest.

8.0 Technical Criteria

A. Required Equipment / Service

No.	Component Tag Number (CTN) 24590-HLW-FH-	Description	HLW Room
1	N/A	HLW Grapple for Design Validation Testing	N/A
2	N/A	Perform Design Validation Testing & Inspections	N/A
3	HDH-TOOL-00001	CANISTER DECONTAMINATION CAVE CANISTER GRAPPLE (CLEAN)	H-0133
4	HDH-TOOL-00004	CANISTER DECONTAMINATION CAVE CANISTER GRAPPLE (DIRTY)	H-0133
5	HEH-TOOL-00001	CANISTER GRAPPLE CANISTER STORAGE CAVE	H-0132
6	HPH-TOOL-00001	THREE JAW GRAPPLE, CANISTER HANDLING CAVE, LOWER CRANE	H-0136
7	HPH-TOOL-00018	SPARE	NA
8	HRH-TOOL-00002	CANISTER IMPORT TRUCK BAY	H-0135A
9	HSH-TOOL-00004	MELTER CAVE	H-0117
10	HPH-TOOL-00017	THREE JAW GRAPPLE, CANISTER HANDLING CAVE, UPPER CRANE	H-0136
11	N/A	Test Canister & Lids for testing	N/A
12	HEH-MHAN-00013	Export Canister Grapple Load Cell	H-0132
13	HEH-MHAN-00014	Export Canister Grapple Load Cell	H-0132

B. Equipment Classifications

Description	Safety Classification	Quality Classification	Seismic Category	WAI Designation
All HLW Grapples	Non-safety	Q[1]	SC-III	WAI-Performance WAI-Passive

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Load Cells	Non-Safety	CM	SC-III	WAI-Passive
Notes: 1) WAI-Performance assigns Q quality classification.				

C. Required Equipment for Testing

No.	Description
11	Empty Test Canister Partially filled Test Canister Filled Test Canister @ 10,000 lbs Load Test Canister @ 12,500 lbs
11	Test Canister primary Lid installed on canister
11	Test Canister Secondary Lid installed on canister
11	Cask Test Canister

D. HLW Canister Grapple Design Drawings (Built to Print)

Document Number	Title
24590-HLW-MX-30-00011001	HLW VITRIFICATION SYSTEM FABRICATION DRAWING GRAPPLE ASSEMBLY
24590-HLW-MX-30-00011002	HLW VITRIFICATION SYSTEM FABRICATION DRAWING GRAPPLE ASSEMBLY DETAILS
24590-HLW-MX-30-00011003	HLW VITRIFICATION SYSTEM FABRICATION DRAWING GRAPPLE ASSEMBLY OPERATION MODES
24590-HLW-MX-30-00011004	HLW VITRIFICATION SYSTEM FABRICATION DRAWING GRAPPLE ASSEMBLY CANISTER INTERACTION
24590-HLW-MX-30-00012001	HLW VITRIFICATION SYSTEM FABRICATION DRAWING GRAPPLE BASE ASSEMBLY
24590-HLW-MX-30-00016003	HLW VITRIFICATION SYSTEM FABRICATION DRAWING CANISTER POSITION INDICATOR TOP DETAIL
24590-HLW-MX-30-00018001	HLW VITRIFICATION SYSTEM FABRICATION DRAWING CAM FOLLOWER ASSEMBLY
24590-HLW-MX-30-00020001	HLW VITRIFICATION SYSTEM FABRICATION DRAWING LIFTING SHACKLE ASSEMBLY
24590-HLW-MX-30-00022001	HLW VITRIFICATION SYSTEM FABRICATION DRAWING STATUS INDICATOR ASSEMBLY
24590-HLW-MX-30-00022007	HLW VITRIFICATION SYSTEM FABRICATION DRAWING STATUS INDICATOR ASSEMBLY GEAR BODY BOTTOM PLATE DETAILS
24590-HLW-MX-30-00023003	HLW VITRIFICATION SYSTEM FABRICATION DRAWING LIFTING ARM POSITION INDICATOR TOP DETAIL
24590-HLW-MX-30-00028001	HLW VITRIFICATION SYSTEM FABRICATION DRAWING GRAPPLE LABEL

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E. Load Cell Design Proposal Drawing

Document Number	Title
24590-HLW-M0-HEH-00031001	HLW VITRIFICATION SYSTEM HEH DESIGN PROPOSAL DRAWING CANISTER GRAPPLE LOAD CELL ASSEMBLY

F. HLW Canister Configurations

Configuration	Details
Empty	1518 lbs
Partially Filled	1518 lbs < Partial Filled < 9260 lbs
Filled	~9000 lbs, Max Weight 9260 lbs
No Lid	N/A
Primary Lid	12 lbs 3/16 in thick 0.053 inch above flange (0.178-0.125)
Secondary Lid	12.5 lbs 3/16 in thick 0.440 inch above flange
Rated Capacity	HLW Canister Grapple SWL conservatively set at 10,000 lbs

G. Testing (sample for Request for Interest reference only)

1.0 General Testing Requirements

1.1 SELLER shall submit an inspection and test plan, as per the Material Requisition (MR), for BUYER review which summarizes the manufacturing sequences, including SELLER and BUYER hold and witness points for inspection as indicated in the MR and the material acceptance plan, for each test to be performed. Procedure shall include pass/fail criteria for each test.

1.2 SELLER shall submit testing results for each test described below. Documentation shall include results of each trial performed.

1.3 SELLER shall source all materials and equipment required for performing all testing.

2.0 Design Validation Testing Performed on one (1) HLW Grapple

2.1 This is recommended after first HLW Grapple is fabricated.

2.2 The SELLER shall submit a design validation test procedure including pass/fail criteria to the BUYER for approval 8 weeks prior to acceptance testing.

2.3 The SELLER shall notify the BUYER at least three weeks prior to the tests so that the BUYER may witness.

2.4 The SELLER shall perform code required static load test in accordance with ASME B30.20, Section 1.3.9.2, 125% of 10,000 lbs Safe Working Load (SWL) + 5%/-0% held above floor for 15 minutes.

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2.5 The SELLER for one HLW Grapple shall demonstrate the ability of the HLW Grapple to withstand one impact of a transported load at a travel speed of 60 ft/min (simulating hitting a wall or an object). without releasing test load. The impact object shall remain stationary and intact throughout the test. The Grapple shall be capable of release with the double set down feature after the impact test is complete.

2.6 The SELLER for one HLW grapple shall demonstrate the ability of the HLW Grapple can be remotely engaged and disengaged with a canister, within a right circular cylinder cavity of 62.5 cm. Does not apply to manual release pins.

2.7 The SELLER for one HLW Grapple shall demonstrate the absolute reliability of the design by performing 500 cycles under SWL. One cycle shall consist of:

A. Engaging the HLW Grapple on test Canister
B. Lifting the test load
C. Lowering the test load

D. Raising Test Load
E. Lowering the test load
F. Disengaging the test load Raising HLW Grapple from Canister

Testing shall be performed using an un-lidded Test Canister, Test canister with primary lid and test canister with secondary lid.

2.8 The SELLER for one HLW grapple shall demonstrate the ability of maintaining its engagement even if the load is laid on its side and the tension on the bail is relieved. The Seller shall lower the test Canister onto its side, obtaining slack rope, and raising again confirming HLW Grapple capable of lifting the load when the hook is raised.

2.9 After each of the Design Validation Test above:

A. HLW Grapple operability of all motions of mechanisms, including emergency release, shall be verified.
B. Test load canister shall be visually inspected for deformation, cracks and other defects or damage.
C. HLW Grapple shall be visually inspected for deformation, cracks, or other defects.
D. Welds in load bearing members shall be dye-penetrant inspected.
E. No cracks, deformation, wear or other damage to load bearing or moving parts is allowed, and no stiffness or binding in any mechanism is allowed.

Any damage or degradation of function of the HLW Grapple shall be documented in SDDR for buyer resolution.

3.0 Factory Acceptance Testing (FAT)

3.1 The SELLER shall submit a factory acceptance test procedure including pass/fail criteria to the BUYER for approval 8 weeks prior to factory acceptance testing.

3.2 The SELLER shall notify the BUYER at least three weeks prior to the factory acceptance tests so that the BUYER may witness.

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3.3 Each Grapple shall be tested at the 10,000 lb SWL. Test shall include 20 complete cycles simulating actual operating conditions and consisting of:

A. Lowering the Grapple onto the designated load.
B. Engaging the load.
C. Lifting the load.
D. Moving the load to new location (total travel distance = 150 feet, achievable by an accrual of smaller consecutive runs)
E. Setting down the load twice to disengage the Grapple from the load.
F. Lifting the Grapple and moving it to its starting position

3.4 Each Grapple shall perform Code Required static load test in accordance with ASME B30.20 Section 1.3.9.2: 125% of 10,000 lb SWL + 5%/-0% held above floor for 15 minutes.

3.5 After completion of FAT above:

A. HLW Grapple operability of all motions of mechanisms, including emergency release, shall be verified.
B. Test load canister shall be visually inspected for deformation, cracks and other defects or damage.
C. HLW Grapple shall be visually inspected for deformation, cracks, or other defects.
D. Welds in load bearing members shall be dye-penetrant inspected.
E. No cracks, deformation, wear or other damage to load bearing or moving parts is allowed, and no stiffness or binding in any mechanism is allowed.

Any damage or degradation of function of the HLW Grapple shall be documented in SDDR for buyer resolution.

3.6 Dimensional and surface finish inspection.

3.7 Documentation of all post FAT Nondestructive Examination (NDE) shall be submitted to the BUYER.

4.0 Final Inspection

4.1 The SELLER shall submit final inspection procedure for BUYER review and permission to proceed. The inspection shall be performed after completion of all fabrication, cleaning and testing, and just prior to final packaging, and include, at a minimum, the following inspections: dimensional, surface, and cleaning.

4.2 The SELLER shall inspect all surfaces for contamination. Visible evidence of contamination is not acceptable.

4.3 The SELLER shall prepare a final inspection report for each item, which documents the results of the final inspection. The Seller shall include the final inspection report in the documentation package for each piece per the requirements of the MR.

H. Direct Relevant Experience Documentation: Provide a reference list of example projects over the last ten years that demonstrate direct relevant project experience to support the

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fabrication and testing of HLW Canister Grapples and Load Cells. 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 Experience Statement Table 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 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 2016/Sept 2017)

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

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