

# WASTE TREATMENT PLANT PROJECT REQUEST FOR INTEREST

Requisition Number: 24590-QL-MRA-PS02-00018  
Submit Interest By: 26<sup>th</sup> August 2022  
Quality Level: **QL**  
Award Type: Firm Fixed Price

## ESTIMATED SCHEDULE

Issue Request for Proposal: 12/06/22F  
Award and Notice to Proceed: 4/14/23F

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.

## SCOPE OF WORK

Fabrication of carbon steel piping subassemblies (pipe spools) in accordance with The American Society of Mechanical Engineers (ASME) B31.3-1996, *Process Piping* code, other codes and standards, and project specific documents.

### Work Included

- Furnish shop pipe spool sheets, extended spool sheets, or detailed drawings when specifically required by the PO.
- Furnish materials as required by the PO including pipe, fittings, flanges, and welding materials required for fabrication.
- Fabricate pipe spools as follows:
  - Fabricate pipe spools including the installation of fittings, nozzles, thermowell connections, radiographic access holes and bosses, breather holes when required, and the preparation of field welding ends.
  - Install valves, valve actuators, and other piping components and specialty items supplied by the Buyer when required by the PO.
  - Supply and install integral structural attachments and supports as shown on piping isometric drawings, orthographic drawings, and (or) detailed support drawings.
- Perform post-weld heat treatment (PWHT) as required.
- Perform all required testing and examinations.
- Perform all required cleaning, coating (including Fusion Bonded Epoxy), lining, preservation, and shipping preparation.
- Chemically clean and (or) pickle piping where indicated on the piping isometric drawing and (or) the piping material class.
- Mark pipe spools with identification numbers in accordance with the identification numbers shown on the piping isometric drawings, orthographic drawings, or other instructions furnished by the Buyer.
- Apply color coding for material lay down purposes when required by the PO.
- Furnish all required submittals and documentation in accordance with requirements as shown on the G-321-E, *Engineering Document Requirements* and G-321-V, *Quality Verification Document Requirements* forms included in the PO.
- Package fabricated spools and associated materials, with packing lists, for delivery to the jobsite.
- When the SELLER does not procure materials from a QSC NCA-3800/4000 Material Supplier, then Commercial Grade Dedication (CGD) in accordance with ASME NQA-1 is required to be performed by the SELLER or SELLERs sub-tier supplier. In the event that CGD is required, all technical evaluations, acceptance criteria and methods of acceptance shall be approved by the BUYER prior to implementation of the SELLER.

- Material suppliers and manufacturers may be qualified based on verification that they possess a Quality System Certificate (NCA-3800) or N / NPT Certificate of Authorization per (NCA-4000) ASME Code Section III, with certain provisions (details to follow)

Note: The Buyer will supply valves to the Supplier for welding into the piping spools.

**QTY** – 300 LF (Current Estimate August 2022). NPS ½” -10”

**SCHEDULE** – First Planning Area delivery due last quarter 2023 (Planning Area scope detail to follow when needed)

**Equipment and Materials Required**

As required to perform scope above

**QUALITY ASSURANCE (QA) REQUIREMENTS**

Programmatic Quality Assurance (QA) requirements for subcontracts or purchase orders performed in the WTP Jobsite will be:

<input type="checkbox"/>	Non-Permanent or Temporary Work - Generally no QA program required
<input type="checkbox"/>	Commercial Quality - Based on DOE Order 414.1C
<input checked="" type="checkbox"/>	Nuclear Level Quality - Based on ASME NQA-1 2000

Bechtel may require, as an element of bidder pre-qualification, submission of a representative sample QA Program or Table of Contents copy. For Nuclear Level Quality subcontracts, the successful bidder's QA Program must be approved prior to award of the subcontract or purchase order.

**CODES**

- 49 CFR 393, *Transportation, Subpart I, Protection Against Shifting and Falling Cargo*, Code of Federal Regulations.
- ASME, 1995, *Boiler and Pressure Vessel Code*, as amended, American Society of Mechanical Engineers, New York, NY.
- ASME B31.3, 1996, *ASME Code for Pressure Piping*, “Process Piping,” American Society of Mechanical Engineers, New York, NY.
- ASME B31.3c, 1998, Addenda paragraph 245.2.3(c), *ASME Code for Pressure Piping*, “Process Piping,” American Society of Mechanical Engineers, New York, NY.
- IAPMO, 1996, *Uniform Plumbing Code 1997 Edition*, International Association of Plumbing and Mechanical Officials, Ontario, CA.

**STANDARDS**

- API 5L, 1992, *Specification for Line Pipe*, Fortieth Edition, as amended, American Petroleum Institute Publishing Services, Washington, DC.
- ASME B1.20.1, 1983, *Pipe Threads, General Purpose (Inch)*, as amended, American Society of Mechanical Engineers, New York, NY.
- ASME B16.5, 1988, *Pipe Flanges and Flanged Fittings NPS 1/2 Through NPS 24 Metric/Inches Standard*, as amended, American Society of Mechanical Engineers, New York, NY.
- ASME B16.9, 1986, *Factory-Made Wrought Buttwelding Fittings*, as amended, American Society of Mechanical Engineers, New York, NY.
- ASME B16.11, 1991, *Forged Fittings, Socket-Welded and Threaded*, as amended, American Society of Mechanical Engineers, New York, NY.
- ASME B16.25, 1986, *Buttwelding Ends*, as amended, American Society of Mechanical Engineers, New York, NY.
- ASME B16.28, 1986, *Wrought Steel Buttwelding Short Radius Elbows and Returns*, as amended, American Society of Mechanical Engineers, New York, NY.
- ASME B16.36, 1988, *Orifice Flanges*, as amended, American Society of Mechanical Engineers, New York, NY.
- ASME B16.47, 1990, *Large Diameter Steel Flanges NPS 26 through NPS 60*, as amended, American Society of Mechanical Engineers, New York, NY.

- ASME B16.48, 2015, *Steel Line Blanks*, as amended, American Society of Mechanical Engineers, New York, NY.
- ASME B36.10M, 1985, *Welded and Seamless Wrought Steel Pipe*, as amended, American Society of Mechanical Engineers, New York, NY.
- ASNT SNT-TC-1A, 2006, *Recommended Practice No. SNT-TC-1A Personnel Qualification and Certification in Nondestructive Testing*, The American Society for Nondestructive Testing, Columbus, OH.
- ASTM A36-93a, *Standard Specification for Carbon Structural Steel*, as amended, ASTM International, West Conshohocken, PA.
- ASTM A53-93a, *Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless*, as amended, ASTM International, West Conshohocken, PA.
- ASTM A105-93b, *Standard Specification for Carbon Steel Forgings for Piping Applications*, as amended, ASTM International, West Conshohocken, PA.
- ASTM A106-93, *Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service*, as amended, ASTM International, West Conshohocken, PA.
- ASTM A234-92a, *Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service*, as amended, ASTM International, West Conshohocken, PA.
- ASTM A333-91a, *Standard Specification for Standard Specification for Seamless and Welded Steel Pipe for Low-Temperature Service*, as amended, ASTM International, West Conshohocken, PA.
- ASTM A350-93, *Standard Specification for Carbon and Low-Alloy Steel Forgings, Requiring Notch Toughness Testing for Piping Components*, as amended, ASTM International, West Conshohocken, PA.
- ASTM A352-89, *Standard Specification for Steel Castings, Ferritic and Martensitic, for Pressure-Containing Parts, Suitable for Low-Temperature Service*, as amended, ASTM International, West Conshohocken, PA.
- ASTM A370-92, *Standard Test Methods and Definitions for Mechanical Testing of Steel Products*, as amended, ASTM International, West Conshohocken, PA.
- ASTM A420-92, *Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low-Temperature Service*, as amended, ASTM International, West Conshohocken, PA.
- ASTM E797-15, *Standard Practice for Measuring Thickness by Manual Ultrasonic Pulse-Echo Contact Method*, as amended, ASTM International, West Conshohocken, PA.
- EPRI 3002002982, 2014, *Plant Engineering: Guideline for the Acceptance of Commercial-Grade Items in Nuclear Safety-Related Applications Revision 1 to EPRI NP-5652 and TR-102260*, Electric Power Research Institute, Palo, Alto, CA.
- EPRI TR-017218, 1999, *Guideline for Sampling in the Commercial Grade Item Acceptance Process*, Electric Power Research Institute, Palo Alto, CA.
- MSS-SP-25-1978 (R1988), *Standard Marking System for Valves, Fittings, Flanges and Unions*, as amended, Manufacturers Standardization Society of the Valve and Fittings Industry, Inc., Vienna, VA.
- MSS-SP-79-1992, *Socket Welding Reducer Inserts*, as amended, Manufacturers Standardization Society of the Valve and Fittings Industry, Inc., Vienna, VA.
- MSS SP-83-1987, *Class 3000 Steel Pipe Unions Socket Welding and Threaded*, as amended, Manufacturers Standardization Society of the Valve and Fittings Industry, Inc., Vienna, VA.
- MSS SP-95-1986, *Swage(d) Nipples and Bull Plugs*, as amended, Manufacturers Standardization Society of the Valve and Fittings Industry, Inc., Vienna, VA.
- MSS SP-97-1987, *Integrally Reinforced Forged Branch Outlet Fittings - Socket Welding, Threaded and Buttwelding Ends*, as amended, Manufacturers Standardization Society of the Valve and Fittings Industry, Inc., Vienna, VA.
- PFI ES-3, 2009, *Fabricating Tolerance*, as amended, Pipe Fabrication Institute, New York, NY.
- PFI ES-5, 2013, *Cleaning of Fabricated Piping*, as amended, Pipe Fabrication Institute, New York, NY.
- PFI ES-7, 1962, *Minimum Length and Spacing for Welded Nozzles*, as amended, Pipe Fabrication Institute, New York, NY.
- PFI ES-24, 2015, *Pipe Bending Methods, Tolerances, Process, and Material Requirements*, as amended, Pipe Fabrication Institute, New York, NY.
- PFI ES-31, 1992, *Standard for Protection of Ends of Fabricated Piping Assemblies*, as amended, Pipe Fabrication Institute, New York, NY.
- SSPC-SP 10/NACE NO. 2-2007, *Near-White Metal Blast Cleaning*, Joint Surface Preparation Standard: The Society of Protective Coatings, Pittsburgh, PA and NACE International, Houston, TX.

## BIDDER REGISTRATION AND PRE-QUALIFICATION

The BNI Acquisition Services Subcontracts/Purchasing group is responsible for collection, evaluation, and internal publication of potential bidders' information for the purpose of pre-qualifying them to bid on any particular subcontract or purchase order.

As part of this process, BNI requires all potential offerors to register at the Supplier and Contractor Portal at: <https://www.Bechtel.com/supplier/>

If your company has registered previously, then only supplemental information should be sent to the Bechtel National, Inc. representative noted below.

Information to be provided by potential bidders must include:

- Dun and Bradstreet Number
- Company Name
- Company Address
- Contact Phone Number
- Contact Person
- Email Address
- Safety Data and Information
- Applicable Work Experience and Projects
- Size of Business (Small, Large)

#### **WTP BACKGROUND**

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

#### **CONTACT**

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