High Level Waste (HLW) – Fire Protection System

31 2023
51, 2025
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ESTIMATED SCHEDULE

Issue Request for Proposal:	Q4-2023
Award and Notice to Proceed:	Q1-2024

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. (BNI) 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

SUBCONTRACTOR'S work shall include, but not be limited to, the evaluation, engineering, design, procurement, fabrication, and installation of all fire protection materials, piping, supports, hangers, couplings, in-line components, pre-action controls (limited to the pre-action control panel), testing, technical support services, documentation, and all other work necessary to provide a complete and operable fire suppression system for the HLW facility.

SUBCONTRACTOR shall provide all labor, materials, equipment, tools, transportation, and supplies necessary to perform the design, fabrication, and installation of the fire suppression system.

EQUIPMENT AND MATERIALS REQUIRED

- Provide all equipment and labor necessary for lifting and transporting materials from the jobsite lay down areas to the location to the points of installation.
- Provide all equipment, services, labor, and tools to inspect installed pipe and in-line components (borescope).
- Provide all necessary materials, services, labor, and tools for fabrication of pipe, in-line components, and supports/hangers.
- Provide consumables, equipment, supervision, technical support, quality control, and all incidentals necessary to fabricate the fire protection system.

QUALITY ASSURANCE (QA) REQUIREMENTS

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

X

Non-Permanent or Temporary Work - Generally no QA program required

Commercial Quality - Based on DOE Order 414.1C Nuclear Level Quality - Based on ASME NQA-1 2000

BNI may require, as an element of bidder pre-qualification, submission of a representative sample QA Program or Table of Contents copy.

CODES AND STANDARDS

- ASTM A53, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-coated, Welded and Seamless
- ASTM A182, Standard Specification for Forged or Rolled Alloy and Stainless-Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High Temperature Service

- ASTM A312/A312M, Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless-Steel Pipes
- ASTM A403/A403M, Standard Specification for Wrought Austenitic Stainless Steel Pipe Fittings
- ASTM A795/A795M, Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use
- ASME B16.3, Malleable Iron Threaded Fittings: Classes 150 and 300
- ASME B16.4, Gray Iron Threaded Fittings: Classes 125 and 250
- ASME B16.5, Pipe Flanges and Flanged Fittings: NPS 1/2 Through NPS 24 Metric/Inch Standard
- ASME B16.42, Ductile Iron Pipe Flanges and Flanged Fittings: Classes 150 and 300
- NFPA 13 (2022), Standard for the Installation of Sprinkler Systems and Errata
- NFPA 14 (2019), Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems and Errata
- NFPA 70 (2023), National Electrical Code and Errata
- NFPA 72 (2022), National Fire Alarm Code and Errata
- NFPA 75 (2020), Standard for the Protection of Electronic Computer/Data Processing Equipment and Errata
- AWS B2.1/B2.1M, Specification for Welding Procedure and Performance Qualification
- IBC (2021), International Building Code (IFC)
- IFC (2000), International Fire Code (IFC)
- FM, Approval Guide
- FM Data Sheet 2-8 (2017), Earthquake Protection for Water-Based Fire Protection Systems
- WAC Chapter 212-80, Fire Protection Sprinkler System Contractors
- UBC (1997), Uniform Building Code (seismic applications only)

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-qualification for bidding on any particular subcontract.

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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