RFP No. 24590-QL-MRA-PS02-00020

Dual-Contained Pipe Spools

Pre-solicitation meeting

July 2025

WTCC
WASTE TREATMENT COMPLETION COMPANY

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Agenda

- ❑ Culture Share – Andrea Riste
- ❑ Introductions – All
- ❑ Project Background
- ❑ Commercial – BAA, HSSA
- ❑ Engineering
- ❑ Commercial Grade Dedication
- ❑ Questions & Answers - All

Culture Share

Effective collaboration: individuals or teams working together seamlessly to achieve a common goal.

Key Elements include:

- Clear goals and objectives
- Open and honest communication
- Mutual respect
- Effective Tools and processes
- CONTINUOUS EVALUATION

Manhattan Project

Purpose: Secret U.S. project (1942–1946) to develop the World War II atomic bombs.

Key Sites:
Los Alamos, NM: Bomb design & assembly
Oak Ridge, TN: Uranium enrichment
Richland, WA (Hanford Site): Plutonium production

Hanford Site:

- Built in Richland, Washington for its isolated location & water access.
- Home to B Reactor – world's first large-scale plutonium reactor.
- Produced plutonium for the Trinity Test and "Fat Man" bomb (Nagasaki).
- Massive, secretive workforce; major post-war nuclear contamination site.

Impact: Contributed to the ending of WWII, launched the atomic age, and triggered the Cold War arms race.

Waste Treatment and Immobilization Plant (VIT Plant) History

Lead Contractor: Bechtel National, Inc.

Location: Richland, WA

Project Inception: Bechtel was contracted by DOE for the Waste Treatment Plant Project in 2000

Project Goal: Safely process and immobilize 56 million gallons of radioactive waste stored in aging underground storage tanks through a process called vitrification.

- **Vitrification:** Mixing waste with glass-forming materials in high-temperature melters to create molten glass. When cooled, the liquid waste will solidify into glass logs and can be disposed of safely.

Facilities:

- Pretreatment
- High-Level Waste (HLW)
- Direct Feed Low-Activity Waste (DFLAW)

Journey to Commissioning

What is Commissioning?

- A phased testing process ensuring WTP systems operate safely and efficiently—starting with non-radioactive materials and progressing to low-level radioactive waste.

Why It Matters:

- Confirms readiness, ensures safe operations, and sets the stage for long-term plant success.

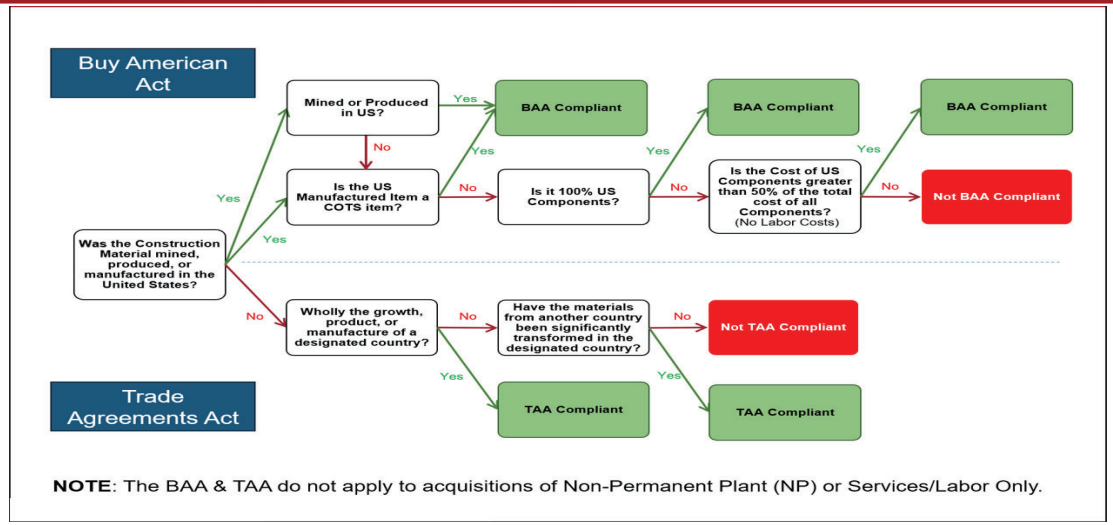
Recent Progress:

- DOE authorized **hot commissioning** after all pre-starts were completed. We're now executing our Startup Plan and final regulatory steps, including dual melter operations.

Commercial Highlights

Buy American Act
FAR 52.225-11 Buy American Act –
Construction Materials under Trade Agreements

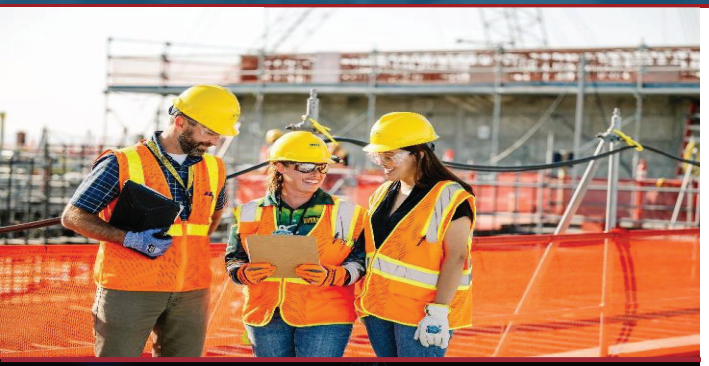
SELLER agrees to complete and submit to BUYER
the provided Buy American Act and Trade Agreements Act –
Material Conformance Statement form
(Part 3 Commercial Requirements Attachment D),
prior to shipment of any
construction materials to the WTP jobsite.

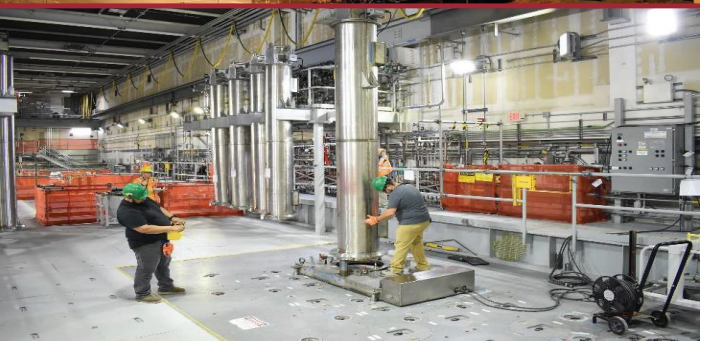


Hanford Site Stabilization Agreement (spool pipe, pipe fabrications and/or fabricated items that become part of a piping system):

Part 3- Commercial Requirements, 9.1 Compliance with Labor Agreements

SELLER shall comply with the Prime Contract's labor provisions applicable to the work performed at off-site fabrication facilities, including but not limited to the Hanford Site Stabilization Agreement (HSSA), and incorporated local, and national agreements, and union label requirements.





Specification Simplification Improvement Effort

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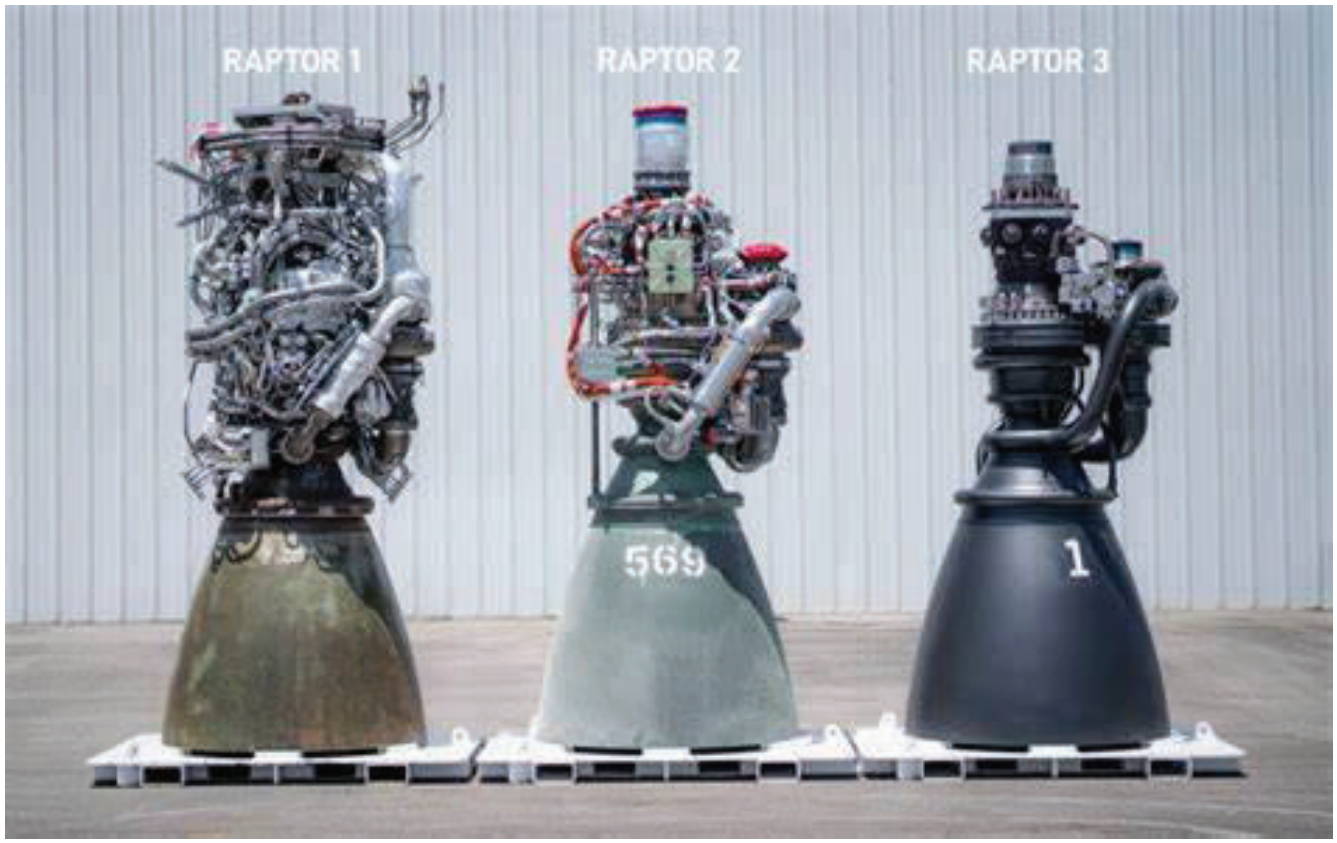
What is Specification Optimization ?



Fit For Purpose Specifications

- We recently completed a Six-Sigma effort to provide recommendations to have fit for purpose specifications, e.g. simplified and buy what they make
- CM HVAC pilot specification simplification effort resulted in;
  - A reduction of 14 of 18 referenced specifications
  - Tailoring of 2 of the 4 specifications as appendices in the parent HVAC specification
  - 2 of 4 general specifications used in entirety as they were 100% applicable to the scope
  - Overall reduction of 500 + pages from the Material Requisition
  - Overall reduction of ~ 60 submittals
- We are in the process of simplification with the dual contained pipe specification
  - This meeting is an effort to partner with the supply chain and get common understanding of simplification and “buy what they make” to the extent practicable
  - This MR will be build to print to industry standard practices

Scope

- Dual Contained Pipe Fabrication
  - Specifications and Piping Isometrics will be provided – Build to Print
  - 9,600 ft with HDPE Wrap. 2,500 ft with no insulation (current estimate, likely to increase)
  - SS/AL-6XN Core and SS/CS Jacket
  - Biggest size: 3” Core with 6” Jacket
- Work to include
  - Purchase of piping bulk material (Material Traceability required)
  - Welding (Standard Welding, weld repair, post weld heat treatment, NDE of welds)
  - Coating (Fusion Bonded Epoxy, FBE) and Insulation (High Density Polyethylene, HDPE Jacketing)
  - Material Testing & Inspection (Hydrostatic/Pneumatic testing of spools, CGD testing)
  - Pipe Supports (Supports between inner and outer pipe, stanchions on outer pipe). Pipe Support drawings will be provided
- Codes/Standards
  - ASME B31.3 – Current version
  - ASNT-SNT-TC-1A
  - ASME B16.9, MSS SP-95 and MSS SP-97

Scope

Nondestructive Examinations (NDE) Summary of Shop Welds

SEE SECTION 6.3 FOR APPLICABLE SHOP WELD NDE, INSPECTION, AND ACCEPTANCE CRITERIA REQUIREMENTS. Type of Weld	Dual Containment Piping[1]	
	Inner Piping	Jacket Piping
All Girth and Miter Welds	100% VT 100% RT or 100% UT	100% VT 5% RT or 5% UT
Outer Pipe Shop Performed Longitudinal/Clam Shell Welds for Dual Contained Piping	N/A	100% VT 5% RT or 5% UT
All Pipe and Integral Attachment Fillet Shop Welds – including thermowell socket welds, integral support weld, non-pressure & non load bearing piping attachment welds	100% VT 100% PT	100% VT
All integrally reinforced forged branch fittings welded to main piping run. If weld is chosen as part of 5% RT population and RT will not produce an interpretable radiograph, In-Process Examination and liquid penetrant examination of the exterior of both the root and final pass is acceptable. Footnote: The circumferential weld that connects an integrally reinforced forged branch fitting to the branch pipe run shall be examined as a girth weld.	100% VT 100% PT	100% VT

Legend: VT = Visual Examination per ASME B31.3 para 344.2
RT = Radiographic Examination per ASME B31.3 para 344.5
UT = Ultrasonic Examination per ASME B31.3 para 344.6
PT = Liquid Penetrant Examination per ASME B31.3 para 344.4

[1]Includes embedded piping, if applicable

Lessons Learned

- Previous Issues
  - Coating (Fusion Bonded Epoxy, FBE)
    - Using correct voltage relative to thickness of coating for Holiday testing
  - Insulation (High Density Polyethylene, HDPE)
    - Temperature Control (glue melting and wrap falling off in the heat, wrap becoming rigid in cold temperatures)
    - Water-tight seal
    - Storage of Spools prior to installation
- Path Forward
  - All previous specifications are actively being revised and optimized
  - Bringing in Suppliers in earlier in process for input
  - Supplier Quality Oversight for Coatings/Insulations, Welding, and Material Traceability
  - Subject Matter Experts available for questions or concerns

Commercial Grade Dedication - VCGD

- Supplier must be audited or surveyed by WTP project to the requirements of the procurement
- Items that contribute to the pressure boundary have a confinement function
- Items identified in the pressure boundary require the following:
  - Coupons from each pipe to be cut and sent to accredited ISO17025 laboratory for full chemical and mechanical properties
  - Weld rod material to be sampled and sent to ISO17025 laboratory for full chemical properties

Open Q&A

1. WTP is interested in minimizing actions that delay completion and shipment of items/equipment:
   a. If you have worked with Bechtel or WTP project previously, were there things that impacted planned delivery that were not expected?
   b. If you have not worked with Bechtel or WTP before, what are some examples of things that impacted planned delivery that were not expected?
   c. Do you have indoor storage for spools in progress not ready for shipment?

2. Bechtel (WTP) may need to take delivery of partial number of spools with a pause before the balance of spools are needed. WTP is interested in potential for storage or delayed fabrication to allow site construction:
   a. Do you have space for indoor storage of spools if the best course of action is to fabricate all and store until WTP construction activities open the locations for the balance of spools?
   b. Would you prefer to fabricate a portion of spools, pause on balance and fabricate the balance to avoid need to store spools?