STATEMENT OF WORK

Requisition #: 316397

Title: Immobilized Low-Activity Waste (ILAW) Pallets Fabrication

Revision Number: 0

Date: June 6, 2019

1.0 Objective

Fabricate forty-three (43) specialty pallets for Washington River Protection Solutions (WRPS) to support transportation of immobilized low-activity waste (ILAW) from the Hanford treatment facility to the disposal facility.

2.0 Background/Introduction

The Hanford Tank Waste Treatment and Immobilization Plant (WTP) will vitrify radioactive tank waste streams and place the molten glass in stainless steel containers. These ILAW glass containers will leave the WTP within a specialized system for transport to the Hanford Integrated Disposal Facility (IDF) for final placement and disposal. The transport system is comprised of standard commercial drop-deck trailers and three specialty-fabricated pallets, housing three ILAW glass containers. The pallets provide tie-down of the ILAW glass containers on the trailer through connection of the pallet to the trailer via standard industrial ISO container twistlocks. The pallets will be removable from the trailer to facilitate cooling of the ILAW glass container without committing the trailer to lengthy staging. The trailers will be transported using standard diesel truck cabs between the IDF and WTP facility over approximately 2 miles of paved road. The trailers will also be staged/moved within the WTP and IDF facilities over paved and gravel areas. Total weight of the trailer, three pallets, and three ILAW containers is approximately 80,000 pounds. Overall arrangement of the ILAW transporter system is shown in Figure 1. The ILAW Transportation System will also be used to transport non-radioactive test glass containers from the WTP to a commercial vendor for waste disposal, over public highways and roads.

The project has incorporated enhanced quality requirements to retain the pallets on the trailer in the event of a trailer roll-over accident. This has resulted in the requirements to use enhanced quality for procurement/fabrication of the pallet corners (which includes Tandemloc female twistlock connections), and the trailer mounting plates. It also results in enhanced quality for procurement of the mounting plate hardware, and Tandemlocs male twistlock connections.

3.0 Scope

Fabricate forty-three (43) pallets per attached drawings, specification, and data sheets, and fabricate/procure enhanced quality mounting plates, hardware, and twistlocks for installation on transporter trailers (by others, except as noted below). Provide fabrication plan in proposal and final fabrication documents. Details are noted below.

Delivery shall be to Hanford warehousing receiving in Richland, WA via ground transportation, where all items must be able to be unwrapped (if needed) and unloaded safely and without
damage by a forklift. The licensed government-furnished trailer shall be return shipped to the same location via being driven; the fabricator shall be responsible for all permitting of the shipments.

3.1 Fabrication Plan, to include:
   1. Approach for fabrication of pallets in compliance with the specified technical requirements.
   2. Proposed fabrication schedule for first article, first three pallets, and remaining pallets.

3.2 Fabricate and deliver pallets, mounting plates and hardware, and twistlocks:
   1. First Article - Single completed unpainted pallet, including four (4) mounting plate weldments and hardware used for first article inspection at subcontractors’ facility. First article not required to be delivered immediately.
   2. Twelve (12) enhanced quality mounting plate weldments and hardware, including twelve (12) Tandemloc male twistlocks, installed on government-furnished trailer, to support fit-up and factory testing.
   3. Three (3) completed pallets (first article and two (2) others for a total of three (3)), fourteen (14) enhanced quality mounting plate weldments and hardware (includes first article), fourteen (14) Tandemloc male twistlocks (includes first article), and completion documentation delivered no later than December 16, 2019.

3.3 Support the following minimum interfaces:
   1. Contract award kickoff meeting with statement of work review.
   2. Site visit for inspection and acceptance of first article as described in 3.1.1.
   3. A minimum of two (2) and maximum of five (5) site visits to conduct quality assurance surveillances, pre-shipment inspections, and final documentation set preparation. Subcontractor shall provide copies of quality assurance documentation to Buyer during surveillances and inspections.

3.4 Complete Factory Acceptance Testing of completed pallets
   1. Using forklift, test fit-up and twistlock lockdown of every pallet to ensure clean fit on all four corners and successful locking/unlocking operation of the twistlocks. Tests shall occur on each pallet on all three trailer locations, from both trailer sides, at both pallet label locations. This equates to 12 attachments and removals of a single pallet on the trailer. This totals 516 fit-up tests for all 43 pallets.
   2. Use a portable hand-held, battery operated (20-Volt) drill and attachment to demonstrate the opening and closing of every pallet lid five times without binding or damage.

3.5 Provide the following fabrication documentation, as identified in the attached ILAW Container Transport Pallet Data Sheet, DS-ILAW-EG-0001:
   1. Operation and maintenance information
   2. Recommended spare parts list

3.6 Provide the following fabrication documentation, as identified in the attached ILAW Container Transport Pallet Data Sheet, DS-ILAW-EG-0001 (See Attachment A):
   1. Fabrication, Inspection & Test Plan
   2. First Article Inspection Data
   3. Nonconformance Reporting
   4. Certified Weld Inspector
   5. Welding Procedures and Qualifications
6. Nondestructive Examination Process  
7. Certified Material Test Report  
8. Inspection and Test Report  
9. Certification of Calibration  
10. Control of Graded Fasteners  

4.0 Submittals

In support of the work scope established in Section 3.0 above, submittals are listed on the Master Submittal Register (MSR).

Submittals shall be provided using the Buyer’s Incoming Letter of Transmittal form provided by the Buyer’s Procurement Specialist. All transmittal subject headings shall contain, at a minimum, the subcontract number, submittal number, and submittal description.

Submittals shall be provided in electronic format unless available only as a hard copy. Electronic submittals shall be sent in accordance with instructions provided by the Procurement Specialist. Electronic formats must be non-password protected in one of the formats noted on the Procurement Website located and the following web address:
http://www.hanford.gov/toepmm/files.cfm/APPROVED_ELECTRONIC_RECORD_FOR_MATS.pdf

5.0 Acceptance Criteria

Subcontract work products shall meet applicable standards as referenced in 6.2 below. All deliverable documentation shall be complete, accurate, legible, and reproducible. Before delivery, design media and documents shall be reviewed by qualified Subcontractor personnel for technical adequacy and appropriate content. The Subcontractor shall attest, in writing, to the accuracy and completeness of the information contained in the final deliverables.

All pallets, mounting plates, and twistlocks, and their associated documentation, shall meet the requirements of the attached drawings, specification, and data sheets.

6.0 Configuration Management and Standards

6.1 Configuration Management Requirements

There are no specific Configuration Management requirements applicable to this SOW.

6.2 Applicable Standards

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>ASME B&amp;PVC, Section V (2017) Nondestructive Examination</td>
</tr>
</tbody>
</table>
7.0 ESH&Q Requirements

7.1 Quality Assurance Requirements

The Subcontractor’s program shall be submitted for review/approval against the requirements identified on site form A-6006-661, Quality Assurance Requirements dated May 23, 2019.

7.1.1 Supplier Quality Assurance Program

The Subcontractor's Quality Assurance Program shall be subject to review at all times, including prior to award.

7.1.2 Supplier Quality Assurance Program Changes

The Subcontractor shall, during the performance of this subcontract, submit proposed changes to their approved quality assurance program to the Buyer for review and concurrence prior to implementation.

7.1.3 Quality Assurance Oversight

WRPS personnel will co-ordinate with the supplier to conduct scheduled and periodic oversight of activities or products associated with this scope of work.

7.2 Price-Anderson Amendments Act Requirements

This 7.2 section and the General Provisions Article 2.11 entitled, Price-Anderson Amendments Act (PAAA), are both determined to be not applicable.

7.3 Special ESH&Q Requirements

Hanford Site access is not authorized for work to be completed under this SOW.

8.0 Verification/Hold Points

As part of the subcontract submittal process and unless otherwise specified, WRPS will review documents and designate all required reviews, inspections, witnessing, and notification points.

8.1 First Article Fabrication Inspection Expectations

Procure material and fabricate the first article in accordance with 3.2.1, prior to beginning fabrication of the remaining pallets. WRPS will conduct a inspection of the first assembled pallet to validate its construction against criteria, during and after its fabrication. The first article inspection comprises a 100% verification of materials, processes, and finished products. WRPS may conduct site visits to validate completeness of documentation prior to shipment.

8.2 Nonconformances

Nonconformance Reports (NCRs) generated by the Subcontractor, lower-tier Subcontractors and suppliers of items with the proposed disposition of “Use as is” or “Repair” shall be submitted for
approval to the Buyer Design Authority, Engineering, and Quality Assurance before the
Subcontractor initiates any remedial action on the nonconformance. Nonconformance reports
dispositioned “Reject” or “Rework” shall be submitted by the subcontractor upon completion and
closure of deficiency reports.

9.0 Reserved

10.0 Work Location/Potential Access Requirements

Access to Hanford site offices may occur for meetings. Access to non-radiological Hanford site
areas may occur (e.g., Hanford Cold Test Facility) for inspection of the existing ILAW
transportation system.

11.0 Training

Not applicable.

12.0 Qualifications

Experience with custom fabrication of components to specifications from various suppliers to
assemble, test and deliver. Experience with customized, large-scale projects demonstrating
mechanical contracting and fabrication services in the nuclear industry.

13.0 Special Requirements

Use of Government Vehicles

There is no anticipated need for any Subcontractor employees to use a Government-furnished
vehicle in the performance of this statement of work. The Subcontractor’s employees, therefore,
are specifically prohibited from driving any Government-furnished vehicles under the
performance of this statement of work unless this statement of work is formally so modified by
the parties and the employee(s) will present a valid driver’s license to the BTR for review.

Government Property

The Government shall furnish one ILAW Transporter trailer to be modified with new mounting
plates, hardware, and Tandemloc male twistlock fitting. The trailer shall then be used for all pallet
fit-up and factory acceptance testing. Any damage to the trailer shall be repaired by the fabricator
prior to return to WRPS, during or before final pallet shipment. The trailer shall not be used to
ship any pallets to WRPS.

The Government shall make available, and provide if needed, the wooden spun-head mold that
was used to fabricate the four prototype pallet heads. This mold is to be used at the discretion and
risk of the fabricator. The Government makes no warranty for its application through full
fabrication or its accuracy. If used, and in the event that it is damaged, there is no requirement for
its repair; any replacement is the responsibility of the fabricator. The original or replacement
spun-head mold will be required to be returned to the Government.

14.0 Reporting/Administration

The Subcontractor shall provide a monthly cost and schedule report to include:

- Accomplishments (including photos)
15.0 **Workplace Substance Abuse Program Requirements**

A Workplace Substance Abuse Program is not required for this SOW.
Attachment A – Example of Expected QA Documentation
In Accordance with Terms & Conditions and Data Sheets

Revision Number: 0

The following is a list of expected documentation submitted for each pallet included in the Statement of Work (SOW). This list is not inclusive and may include additional items for vendors to demonstrate compliance with the fabrication of the Pallets.

I. Certificate of Conformance - *(Signed document with certification that item meets all the requirements)*

II. Weld Documentation – *(Detailed documentation for each pallet fabricated to include all requirements and processes.)*
   a. Inspection Plan/Traveler
   b. Weld Map (Visual Inspection Reports)
   c. Weld Procedures
   d. Weld Procedure Qualifications
   e. Welder Qualification Records
   f. NDE Procedures
   g. NDE Qualifications
   h. Magnetic Particle Test Reports
   i. RT Reports (Shielding Seam Welds)
   j. Weld Repair Reports
   k. Dimensional Conformance Reports
   l. Load Test Reports
   m. Coatings
   n. Factory Acceptance Test

III. General Manufacturing Material Test Reports – *(Backup documentation and certification of materials used and applicable ASTM/ASME documentation)*
   a. Certified Material Test Reports
   b. Certificates of Compliance
   c. Welding Material Certificates
   d. Bolt Material Certificates of Conformance

IV. Non-Conformance Reports – *(Documentation of any applicable non-conformance reports and their resolution/disposition)*
   a. NCR(s) generated by the subcontractor with the proposed disposition of “Use as is” or “Repair” shall be submitted for approval to the Buyer before the subcontractor initiates any remedial action on the nonconformance.