STATEMENT OF WORK

Requisition #: 00295568

Title: SST Retrieval Ventilation System Reliability Improvement

Revision Number: 0

Date: November 17, 2016

1.0 Objective

Washington River Protection Solutions, LLC (WRPS) requires a specialist Subcontractor to assist the organization in improving the reliability of Tank Operations Contract (TOC) process plant and equipment. The short term objective is to identify a structured approach to assessing TOC equipment reliability and to pilot the approach on a critical TOC system. The structured approach criteria should be primarily based on the ability to facilitate the recommendation of optimum maintenance and asset management plans. These results of the pilot will be used to develop a more systematic approach to equipment reliability for Single Shell Tank (SST) and Double Shell Tank (DST) ventilation and retrieval systems.

2.0 Background/Introduction

As a prime contractor to the U.S. Department of Energy, WRPS is responsible for implementing design and Operations and Maintenance (O&M) practices that efficiently complete River Protection Project (RPP) program work, including retrieval of waste from SSTs. Part of this process involves identifying ways to improve equipment availability and reliability.

Ventilation equipment availability during C-Farm retrieval and previous retrievals has not met expectations. Improvements in ventilation equipment availability/reliability is necessary in order to meet future retrieval objectives. WRPS has determined that a comprehensive structured analysis of SST and DST ventilation system performance and maintenance as well as design and O&M practices is desired in order to determine needed improvements; these products are project deliverables.

3.0 Scope

The Subcontractor is to provide the following services:

- Assess the current state of available SST/DST ventilation system performance and reliability data, as well as results of previous efforts to improve system reliability
- Recommend a preferred structured approach to assessing system performance and improving reliability (NOTE: WRPS is familiar with and nominally prefers Reliability Centered Maintenance (RCM) as a possible structured approach, however, WRPS is open to alternatives with appropriate justification)
• Use the preferred structured approach to assess a selected ventilation system (Pilot)
• Provide recommendations on improved asset management (including maintenance interventions and optimized maintenance plans) as well as spare parts management that will improve ventilation system availability
• Provide a template of a best-practice for the chosen structured program

The Subcontractor will perform the required scope of the assessment in phases as outlined below.

**Phase 1: Discovery, Gap Analysis and Preferred Approach Selection**

The Subcontractor will meet with key engineering, operations and maintenance personnel to examine typical plant equipment and the operating and maintenance environment. No hands-on field work activities will be performed. Phase 1 will also confirm the ventilation system or systems to be assessed in Phases 2 and 3.

WRPS will compile pertinent ventilation systems documentation, and make files available for review to the Subcontractor on a secured server. The Subcontractor will research, review, and otherwise assess the documentation and complete a Gap Analysis against the information required to support their preferred structured approach. Results from this evaluation will provide the basis for Phase 2 data gathering and / or additional site investigation and other activities to close any data gaps.

The Subcontractor shall also recommend a preferred structured approach (e.g. RCM) to be used in the next phases. Phase One deliverables include an evaluation to assess the adequacy and completeness of documents using a Reliability, Availability, and Maintainability (RAM) approach to analyze retrieval systems relative to the vendor’s anticipated approach.

Phase 1 Deliverables are to include:
1. A report summarizing the following:
   a) Initial findings and Gap Analysis
   b) Recommended structured approach for assessing and improving system performance, including methodology and basis
   c) Key Phase 2 activities including any preparation activities, training of key staff, and other required actions relevant for successful program implementation
   d) WRPS support requirements
2. Costed proposal for Phase 2.
3. A presentation to WRPS personnel on findings and the proposal for Phase 2 of the project (written submittal and oral presentation).
4. An evaluation of the adequacy, accuracy, and completeness of the following documents prepared for AX retrieval ventilation system design:
   • RPP-RPT-58298 – Retrieval Technology Benchmark
Phase 2: Data Gathering and Assessment Preparations

The Subcontractor shall visit the TOC site to gather additional data and perform other activities as proposed to fill the knowledge/data gaps identified in Phase 1. Time on site can be used to gather data, contact any key engineering, operations, and maintenance personnel, examine ventilation equipment and the operating environment, and discuss observations.

Phase 2 will also include any activities needed to prepare for the execution of the preferred structured approach in Phase 3. These activities could include planning, logistics and any required WRPS team training on the fundamentals of the preferred structured approach.

The output of Phase 2 will include the deliverables below and completion of Phase 3 preparation activities.

Phase 2 Deliverables are to include:

1. Findings, observations and recommendations from the Data Gathering and Assessment Preparation activities.
2. Costed proposal for the scope of Phase 3. The proposal should identify the timescales anticipated and the WRPS resources required to accomplish the scope of Phase 3.
3. A presentation to WRPS personnel on the output of Phase 2 and the proposal for Phase 3 of the project.

Phase 3: Structured Program Report

The scope of Phase 3 of the contract includes leading the structured analysis proposed in Phase 1 and 2 on the selected system.

Phase 3 Deliverables are to include:

1. An Assessment Report that includes the following:
   a. Vulnerability analysis for the SST retrieval operation in the AX farm due to ventilation equipment downtime.
   b. Recommendations for changes/improvements to:
      - Asset management planning
      - Operations and maintenance practices (including equipment analysis and any maintenance practice classification and application)
      - Spare parts management
   c. Recommendations for changes/improvements to the design of current and future ventilation systems
d. Prioritized ancillary recommendations on ways to improve overall ventilation system reliability cost/value for the system

2. Structured approach best practice example or template (incorporating RAM analysis).

The Subcontractor shall submit timescales for each Phase and a proposed schedule with their bid. Note that WRPS works on a four days/week, ten hour/day work schedule (Monday – Thursday from 6 a.m. to 4:30 p.m.). The final schedule will be agreed among the Subcontractor and WRPS following contract award.

The Subcontractor shall allow for 2 weeks advanced notice of any required Hanford site visits to allow time for visitor’s passes and/or site access and escorts.

The Subcontractor shall anticipate a 2 week turn-around period for deliverables submitted to WRPS for review.

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 TOC Incoming Letter of Transmittal (form A-6005-315). 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 may be sent to TOCVND@rl.gov or delivered via a WRPS designated File Transfer Protocol (FTP) site. Electronic formats must be non-password protected in one of the following formats (or other format as approved by the BUYER):

- Microsoft® Office Compatible
- Portable Document Format (PDF)
- Tagged Image File Format (TIFF)
- Graphics Interchange Format (GIF)
- Joint Photographic Experts Group (JPEG)
- Windows Media Video (WMV)
- Moving Picture Expert Group (MPEG)
- Extensible Markup Language (XML)
- HyperText Markup Language (HTML)
- Comma Separated Values (CSV)
- Text (TXT)

5.0 Acceptance Criteria

Subcontract work products and services 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.
6.0 Configuration Management and Standards

6.1 Configuration Management Requirements

Configuration management requirements for this Release are based upon the types of engineering services being procured and include the TOC standards listed in Section 6.2 Applicable Standards and the statements below.

New or revised Technical Documents shall be prepared in accordance with TFC-BSM-AD-STD-02, Editorial Standards for Technical Documents and meet the document release criteria found TFC-ENG-DESIGN-C-25, Technical Document Control.

6.2 Applicable Standards

APPLICABLE CODES AND STANDARDS

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<tr>
<th>Number</th>
<th>Title</th>
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<tbody>
<tr>
<td>1.</td>
<td>TFC-ENG-DESIGN-C-34 Technical Requirements for Procurement</td>
</tr>
<tr>
<td>2.</td>
<td>TFC-BSM-AD-STD-02 Editorial Standard &amp; Format Guidance for Documents</td>
</tr>
<tr>
<td>3.</td>
<td>TFC-ENG-DESIGN-C-25 Technical Document Control</td>
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7.0 ESH&Q Requirements

7.1 Quality Assurance Requirements

The subcontractor shall follow standard commercial quality practices.

WRPS personnel will coordinate 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

The project will proceed in Phases as indicated in Section 3. The Subcontractor shall not initiate work upon follow-on Phases without the approval of the WRPS buyer.

9.0 Reserved
10.0 Work Location/Potential Access Requirements

The Subcontractor will have no access to radiological controlled areas. The Subcontractor will be provided access to the following WRPS locations/sites as required for performance of subcontract tasks:

- Escorted walk-down(s) in 200 East Area
- 2425 Stevens Center place
- 851 SmartPark
- 2704-HV
- Access to general office areas
- A & AX Tank Farms

Entrance into the Tank Farms is contingent upon WRPS supervision and required training. Subcontractor entrance into the Tank Farms is on an as-needed basis, and the Subcontractor shall adhere to Tank Farm conduct of operations protocols. If visual inspection of equipment in the Tank Farms is requested, pictures or videos may also be made and provided by WRPS upon approval. During any visits to Richland offices and the Hanford site, the Subcontractor will be escorted by a WRPS employee.

11.0 Training

Unless specifically required per Section 11, No WRPS or Tank Farm-specific training is required in connection with this scope of work.

12.0 Qualifications

The Subcontractor organization and staff are required to have asset management and equipment reliability subject matter expertise, including the following topical areas:

- ISO 55000:2014 series standards
- Reliability Centered Maintenance (RCM) including equipment classification schemes
- Condition Based Monitoring
- Vulnerability analysis
- Knowledge of relevant ventilation equipment class functions & failure modes

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.
14.0 Reporting/Administration

The Subcontractor will be expected to provide weekly status reports to the WRPS project manager. Format of the status reports will be agreed between the Subcontractor and WRPS project manager.

15.0 Workplace Substance Abuse Program Requirements

A Workplace Substance Abuse Program is not required for this SOW.