Title: PMTO 19-002 – Provide a recognized Expert in Best Basis Inventory and Waste Processing / Flowsheet Modeling and Analysis in Support of Mission Integration and Strategic Planning at ORP

Revision Number: 0

Date: February 26, 2019

Start: February 27, 2019

Finish: May 25, 2019

1.0 DESCRIPTION

Mission Support Alliance (MSA) Portfolio Management (PFM) will provide the United States Department of Energy (DOE), Office of River Protection (ORP), Mission Integration Office with support for the following tasks:

Task 1: Strategic Planning Involvement, Advice, and Support

MSA will develop model scenarios and calculations as requested by ORP’s Strategic Planning team, and participate in strategic planning discussions and events, including but not limited to:

a. Solubility modeling, flowsheet modeling, process modeling, and calculations as requested by ORP;

b. Attendance at National Academy of Science reviews; and

c. Preparation of data supporting presentations for management, headquarters, regulators, and stakeholders regarding waste constituents and treatment strategies.

This operational scope includes all Hanford tanks, Inactive Miscellaneous Underground Storage Tanks (IMUSTs), tank farms, waste management areas, as well as projects currently in construction such as Tank Side Cesium Removal and Waste Treatment and Immobilization Plant. The scope also includes advice regarding future projects such as (but not limited to) Waste Receiving Facilities, Tank Waste Staging and Characterization capability, modular treatment technologies, and transfer lines.

A strong interface between ORP’s Strategic planning team and DOE Richland Operations Office’s Soil and Groundwater Division will be pursued, as the organizational scope is closely related and the strategy and external messaging between the two organizations should be in lockstep. Interface with Consortium for Risk Evaluation and Stakeholder Participation (CRESP) will be sought as that interface is also crucial as they have parallel and closely related scope. Ideally, the results of the CRESP and the ORP efforts will closely align.

Task 2: Mission Integration in support of the Direct Feed of Low-Activity Waste (DFLAW) Mission

MSA will augment ORP’s process engineering staff and assist with flowsheet challenges as they arise. As an example of what this may entail, current challenges to the DFLAW flowsheet include:
a. Several constituents that may build up over time in the Effluent Management Facility (EMF) evaporator concentrate stream, which recycles to the LAW facility melters;
b. Constituents in the EMF’s evaporator concentrate stream that exceed Liquid Effluent Retention Facility / Effluent Treatment Facility (LERF/ETF) waste acceptance criteria;
c. Controls imposed by the LAW Documented Safety Analysis that may limit feed to Waste Treatment Plant in the out-years of the DFLAW mission; and
d. Constituents that are not expected to be captured in glass or in the secondary offgas treatment within LAW that could impact the Integrated Disposal Facility Performance Assessment results.

Risk mitigation strategies will be developed as these challenges arise, and will require a firm understanding of the entire flowsheet to ensure all impacts are understood and addressed. These risk mitigation strategies will also require careful and consistent coordination between contractors to mitigate risks in the best interest of the government and to optimize mission in terms of safety, schedule, and cost to the government.

**Task 3: Support to ORP - Tank Farms project**

MSA will provide technical advice and support to ORP’s Tank Farms management staff as requested. Documents and products developed during the Strategic Planning and Mission Integration processes will be treated as pre-decisional to inform internal working discussions and labeled as such, unless otherwise requested by ORP.

MSA will ensure that the work effort is performed in a competent, professional manner that meets established milestones and delivery schedules as coordinated with the Mission Integration Office. Work products will be thorough, accurate, appropriately documented, and comply with established criteria. Deliverables, as may be required, will be produced using Microsoft Office products such as Word, Excel, Project, Visio, and PowerPoint, as appropriate along with Primavera P6.

MSA will ensure that the qualified Subject Matter Experts supporting these task possess the following educational and professional experience:

- A Bachelor’s degree in a technical or scientific field. A Master of Business Administration degree is highly desired;
- Direct technical experience supporting DOE and/or DOE prime contractors in the development of mission analysis, system planning, optimization modeling, and scenario development and options analysis;
- Working knowledge of DOE Environmental Management missions and activities;
- Experience with Hanford liquid waste disposition strategies;
- Excellent communications skills; and
- Must be a U.S. Citizen.

2. **DELIBERABLES**

Deliverables: To be determined at a later date.
2.0 ASSUMPTIONS AND CONSTRAINTS

- Travel is not planned at this time. If travel is required, the portfolio management task order will be revised accordingly.
- Work performed under the Mission Support Contract (MSC) will conclude May 25, 2019. For DOE planning purposes, a rough order of magnitude estimate of $70,000 is provided for the remainder of fiscal year 2019.
- Deliverables will be determined at a later date but will not extend beyond the current MSC completion date of May 25, 2019.
- Services will be provided for approximately 10 hours per week for each of the individuals involved. Prior written authorization will be requested from the Contracting Officer for all additional hours and the additional hours will be coordinated with ORP in advance. After hour or weekend support must be coordinated in advance including impact to cost and/or schedule.
- It is understood that the following individuals are allowed to request services on this task order:
  - Timothy Corbett
  - Stephanie Hargroves