

**Statement of Work (SOW)**  
**Characterization and Sampling**  
**Department of Energy Oak Ridge Office of Environmental Management**  
**(DOE EM) on the Oak Ridge Reservation (ORR)**

**1. PURPOSE**

The Department of Energy Oak Ridge Office of Environmental Management (DOE EM) requires independent characterization and verification of projects performed on the Oak Ridge Reservation (ORR).

**2. PERIOD OF PERFORMANCE**

The period of performance for this SOW is TBD.

**3. BACKGROUND**

The Y-12 National Security Complex (Y-12 NSC), the Oak Ridge National Laboratory (ORNL) and the East Tennessee Technology Park (ETTP) include numerous facilities, soils, concrete slabs, containerized and non-containerized debris, and aging legacy waste populations that require investigation and additional characterization in order to determine appropriate disposal options. Relevant professional technical support requirements include, but are not limited to development of and performing the following:

- Applicable or Relevant and Appropriate Requirements (ARARs)
- Audit and assessment activities
- Data Quality Objectives (DQOs)
- Process Knowledge (PK)
- Waste Handling Plans (WHPs)
- Waste Management Plans (WMPs)
- Sampling and Analyses Plans (SAPs)
- Sampling and Oversight
- Sample Management coordination and Shipment
- Data Verification/Validation
- Disposal Facility Evaluations
- Waste Profiles (WP)
- Field support and project oversight
- Programmatic Assessments and Audits

DOE may also request the contractor to provide professional technical support to other [DOE EM](#) contractors as directed by DOE, to characterize, manage and disposition wastes in accordance with the approved disposal documentation as applicable.

## 4. SCOPE OF WORK

### a. Overview

The contractor shall provide professional support services including, but not limited to comprehensive waste characterization services, disposal document preparation, technical writing, environmental compliance, geological services, transportation services, field sampling, occupational safety and health, direct measurements, sample analyses, and preparation of reports provided to DOE ORO. Upon contract award, the contractor shall provide ongoing technical support to DOE and other contractor(s) as directed by DOE to assure proper disposition of waste, as required, in accordance with the approved documentation.

The contractor shall also provide, as requested and as needed by the DOE, programmatic and field support associated with characterization activities. Further technical support, such as verification, as well as health physics, surveys, and audit/assessment activities will be available as requested by the DOE.

The contractor shall have mission-ready resources and equipment that can be immediately deployed for field support. Further, the contractor shall have mission-ready professional resources such as Certified Safety Professionals (CSP), Certified Industrial Hygienists (CIH), Certified Hazardous Material Managers (CHMM), Professional Engineers (PE), Professional Geologists (PG), Project Management Professionals (PMP), Certified Health Physicists (CHP), Field Project Leads, and samplers immediately available to support the DOE ORO with technical requirements as necessary.

The contractor shall also perform the following subtasks as directed by DOE:

- ***Waste Characterization Sampling and Surveys***

Develop Project-Specific Sampling and Analyses Plans (SAPs) to include the DQOs for the specific waste streams. The plan(s) will describe a phased approach to collect data to satisfy the WAC of the intended disposal facility. The SAPs will be designed to quantify and/or validate the contaminants of concern (COCs) for the given waste stream.

Support activities may include, but are not limited to the following:

- Research and documentation of Process Knowledge (PK) to support sampling decisions
- Development of ARARs for project specific determinations
- Coordination and presentation of a DQO session to Core Teams or other Potential Responsible Parties (PRPs) to present proposed sampling methods and locations
- Development of Sampling and Analysis Plans (SAPs) to document agreed-upon sampling methods and locations (via the DQO sessions)
- Collection of random physical structural, debris, soil and slab samples using a variety of sampling methods (hole saw, core drill, sawzall, hand auger, coliwasa, etc.)

- If applicable, surface scans and direct measurements for alpha and beta activity in judgmentally selected locations for biased sampling
  - Analysis of samples to identify and quantify contaminants of concerns (radiological and chemical)
  - Data verification and validation
  - Development of disposal documentation (e.g., WHPs and WPs) for review and approval by the Core Team
  - Programmatic assessments and audits
  - Field oversight and field technical support associated with characterization activities
- ***Provide Occupational Safety and Health Support and Oversight***  
The contractor shall perform work in accordance with the flow-down provisions included in the contract. The contractor shall be responsible for reviewing and submitting appropriate documentation; identifying hazards, preparing and reviewing permits; and determining task-specific Personal Protective Equipment (PPE) requirements. The contractor shall have overall responsibility for ensuring all personnel have the appropriate training and that all project activities are conducted in accordance with job-specific requirements. The contractor shall have the ability to develop Job Hazard Analyses/Activity Hazard Analyses (JHA/AHA) and implement the assessments into field activities.
  - ***Sample collection***  
Samples are anticipated to be collected from facility structures, soils, concrete slabs, general debris, liquids/wastewaters, sludges, etc. The verified/validated data will be provided to DOE for future use.

***General Technical Support***

The contractor shall provide technical support, as requested, to DOE ORO for programmatic, project management and professional services. The technical support may require interface with regulators beyond the waste profile development and submittal process. Support may be requested to be provided during the transition of IDIQ contractors and may continue until the final waste lots are removed from the sites. The task(s) may require periodic travel to the ORR site to meet with personnel affiliated with projects and include conducting routine site walk-downs and visual inspections of field sites.

- ***Independent Environmental Assessments/Evaluations***

The contractor shall develop SAPs to include the DQOs. Support activities may include, but are not limited to the following:

- Developing sampling methods and locations
- Reviewing methods for evaluating areas of elevated radiation levels and required MDCs

- Evaluating optimum survey boundaries
- Conducting surface scans and direct measurements for alpha, beta, and gamma activity
- Collecting physical samples
- Analyzing samples to identify and quantify contaminants of concerns (radiological and chemical)
- Performing data verification and validation

## **5. WORK CONTROL**

All work control requirements will be developed and controlled by the contractor, unless otherwise required by DOE.

## **6. STATUS REPORTS**

Status Reports will be submitted to the designate DOE point of contact, Contracting Officer Representative (COR) or designated representative as requested by DOE ORO. Reports shall denote the status and results of assigned tasks, and shall be a means of transmitting information concerning personnel, costs, and communication to DOE ORO.

Status reports will include (at a minimum):

- General description of activities per task element
- Statement of costs, including Year-To-Date (YTD) cost versus the spending plan
- Summation of reports submitted for the week/month
- Problems/issues encountered

Other information will be provided per DOE ORO requirements.