



Statement of Work

For

**Real-Time Radiography
Characterization Support Services
For Transuranic Waste**

Rev. 0

June 2023

**Salado Isolation Mining Contractors,
Central Characterization Program
WASTE ISOLATION PILOT PLANT**

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1.0 Introduction and Background

Salado Isolation Mining Contractors (SIMCO) requires technical support services to perform safe and compliant waste characterization and certification activities at multiple waste generation sites throughout the Department of Energy (DOE) complex. SIMCO is acquiring these services in support of its Central Characterization Program (CCP). The purpose of waste characterization is to certify compliance with the requirements contained in the Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC) for all defense-generated Contact-Handled (CH) and Remote-Handled (RH) Transuranic (TRU) waste to be disposed at WIPP.

The characterization data is used to certify the waste for transportation to the WIPP for permanent disposal. The WIPP is a DOE facility located 33 miles southeast of the city of Carlsbad in the state of New Mexico.

2.0 Description of Services

The Subcontractor will provide qualified personnel to perform waste characterization including, but not limited to, using CCP approved Real-Time Radiography (RTR) procedures and equipment.

The equipment may be either leased from the Subcontractor, or Government furnished. The Subcontractor shall perform all work in accordance with the SIMCO Quality Assurance Program. Proposed improvements to standardize, streamline, and enhance waste characterization and certification processes shall be authorized by SIMCO prior to implementation. The processes and systems comprising the services delivered during the characterization of TRU waste will be DOE Carlsbad Field Office (CBFO) certified unless otherwise stated.

Operations personnel will be assigned to a primary Host site facility, including, but not limited to:

- Los Alamos National Laboratory,
- Oak Ridge National Laboratory,
- Savannah River Site,
- Idaho National Laboratory,
- Lawrence Livermore National Laboratory,
- Hanford,
- Waste Control Specialists (WCS), and
Small Quantity Sites, to be determined.

Some limited travel to support operations at a location other than the primary Host site may occasionally be required.

The Subcontractor shall have a favorable Foreign Ownership, Control or Influence (FOCI) determination with an approved Facility Security Clearance (FCL) and capable of providing personnel that possess either “L” or “Q” DOE clearances as needed depending on Host site requirements. The need for such clearances shall be identified as early in the planning and scheduling process as feasible to allow the Subcontractor to identify and hire eligible personnel.

A summary of the services to be required include:

- Equipment Mobilization

- Development, validation, and maintenance of operating procedures
- Equipment Operation
 - Certification Scans
 - Fast Scans
- Generation of Batch Data Reports (BDRs)
- Maintenance support activities
- Configuration management support
- Qualification training
- Procurement of services/parts

The Subcontractor shall adhere to these subcontract stipulations as noted for the qualification of Level-II NDE personnel. Any subcontract of this service shall require that the prospective Subcontractor be placed on the SIMCO Qualified Subcontractors List before performing certification activities. The Subcontractor shall prepare and submit to SIMCO for approval its Quality Program Manual for training and qualification of Real-Time Radiography (RTR) Level-II Operators in accordance with SNT-TC-1A 1980 for on the job training, examination, certification and re-certification. The manual shall also address training in the fluoroscopic methods as introduced in the 1984 version. The manual shall be approved by SIMCO and shall be locked at that revision for this Subcontract unless resubmitted for approval. Level-II Operator certificates provided to CCP Training shall state that personnel were qualified in accordance with the approved Quality Program Manual at the locked revision number.

In addition, the Subcontractor shall ensure SIMCO access to all data collected by the Subcontractor for CCP Waste Characterization activities.

SIMCO reserves the right to operate subcontractor provided equipment (leased) and to provide qualified operators without restrictions.

3.0 Assumptions

The Host site facility shall provide general oversight of work performed by SIMCO and its Subcontractors. SIMCO has general management oversight responsibility for the scope defined in this SOW. At each Generator site, SIMCO reserves the right to conduct self-assessments, safety walk-downs, drills, work reviews/inspections, or other such oversight activities as are deemed appropriate to ensure that project functions are managed safely and effectively and that deliverable schedules are being properly managed. SIMCO shall have lead planning authority for all characterization work, including:

- Weekly throughput goals will be established for each host site.
- Waste stream processing priorities.
- Scope, Budget, and Schedule authority for all projects.

The CCP Vendor Project Manager (VPM), or designee, will conduct a daily pre shift meeting to be attended by the Subcontractor's on-site staff as directed per the CCP VPM. All initial notifications of injury or noncompliance shall be made to the CCP VPM. The Subcontractor shall comply with current CCP procedures.

The Subcontractor shall also support all audits, inspections, reviews, and assessments. The Subcontractor shall comply with host site requirements to perform work at the respective location. The Subcontractor shall maintain a clean and safe work environment at all times.

4.0 Applicable Documents

The Subcontractor shall complete the services required by this SOW in accordance with CCP Procedures shown in Attachment A. The applicable documents include the 10 CFR 851 (*Worker Safety and Health Program*) required documents which are 15-GM.02, 15-GM.03, and 15-HS.02. The applicable documents shall be flowed down to any lower tier Subcontractors if applicable. CCP technical procedures specific to each piece of equipment, or to a specific site, and Host Site requirements will be defined in individual task order releases.

If CCP programmatic discrepancies are found within this Statement of Work, the requirements found in the programmatic document listed in Attachment A will take precedence.

5.0 Personnel

All Subcontractor personnel shall meet CCP training and qualification requirements for their position within a reasonable time period of deployment. A Field Supervisor shall be identified as the administrative interface point between Subcontractor personnel at a Host site and the CCP VPM at the Host site. This person shall be the point of contact for on-site Subcontractor employees for administrative and personnel issues. The Subcontractor shall nominate a Lead Operator (LO), who upon SIMCO concurrence, will be appointed by the CCP VPM. The LO is the operations contact for day-to-day activities reporting to the CCP VPM. The Lead Operator may be the same person as the aforementioned Field Supervisor with concurrence of the CCP VPM.

The Subcontractor's personnel shall be matrixed from the Subcontractor's Field Supervisor to CCP's VPM or designee. The CCP VPM or designee will be the main point of contact for the LO concerning all work-related matters. The LO shall ensure resources or staffing are adequate to complete work schedules as defined by the VPM or designee.

The Subcontractor shall be responsible for providing all human resource management to its personnel, including, but not limited to, hiring and firing, initial personnel qualification, assigning personnel to the job, validating and signing time records, informal coaching, formal performance evaluations and providing counseling when necessary, setting personnel pay rates and benefits including pay increases, and maintaining disciplinary duties and taking actions as necessary including recommending time off or termination. The Subcontractor shall monitor and ensure security cleared personnel are maintaining their clearances and remain qualified for their assigned positions.

Resumes of all Subcontractor personnel shall be submitted for technical approval to the SIMCO STR prior to personnel placement at each generator site. Note that personnel must be United States citizens in order to work at Generator Sites. All Subcontractor personnel involved with waste characterization operations shall meet and remain current with CCP training, and host-site training requirements.

Subcontractor's personnel shall be qualified to the host site's Lock-out/Tag-out procedures and be able to perform Lock-out/Tag-out when required.

The Subcontractor will be responsible for staffing CCP characterization operations with personnel meeting the training/experience requirements specified by SIMCO. SIMCO shall be responsible for signing the qualification card confirming that the training requirements are completed. The Subcontractor shall maintain adequate staffing to minimize impact to CCP operations due to attrition.

All Subcontractor employees shall meet the programmatic qualifications outlined in CCP-QP-002, CCP Training and Qualification Plan unless an exception is expressly authorized by SIMCO. The Subcontractor shall not move existing subcontract employees between subcontract labor categories,

without first seeking and receiving approval from SIMCO that such employee meets the qualifications of the proposed position. The Subcontractor shall seek approval of SIMCO by submitting the formal request for change to the SIMCO (Buyer and STR). Such request shall provide sufficient information as to why the change in category is warranted. The Subcontractor shall not bill SIMCO for any category change until the change is formally modified or concurred on by SIMCO in writing.

6.0 Technical Requirements

6.1 General

The Subcontractor shall provide staffing and equipment, if needed, to support characterization operations of waste containers in accordance with approved CCP procedures.

The Subcontractor shall provide personnel to operate equipment, prepare Batch Data Reports (BDRs), and perform Independent Technical Review (ITR) in accordance with approved CCP procedures. Acceptable BDRs shall be submitted to CCP Records within five working days from the examination date.

The Subcontractor personnel shall support project level validation and verification, as requested, on BDRs that have been rejected and require re-work. SIMCO comments on the Subcontractor's BDRs shall be resolved within 5 working days from the date SIMCO provides the comments to the Subcontractor.

The Subcontractor shall reimburse SIMCO for all necessary resources expended by SIMCO in the performance of re-work, corrections, repairs, and/or replacements of all non-acceptable Subcontractor work and reporting that results from a failure to follow CCP approved procedures.

The Subcontractor shall comply with the Host facility Health and Safety Plan and perform work in accordance with their radiological postings, radiological work permits, work clearance permits, including the lock-out and tag-out procedures during all phases of this subcontract. In addition, work performed shall be in accordance with CCP-PO-005, *CCP Conduct of Operations*.

The Subcontractor shall use CCP procedures and program plans to develop and maintain technical procedures.

The Subcontractor shall participate and provide support in audits, assessments, surveillances, and inspections of the CCP TRU Waste Characterization Program. The Subcontractor shall assist SIMCO in the resolution of all Corrective Action Reports and other items identified as deficiencies pertaining to the NDE operations.

The Subcontractor shall provide mobilization services to support characterization needs at various sites. The Subcontractor mobilization support includes equipment deployments, setup, maintenance, startup testing, readiness activities, and demobilization as required.

6.2 Data Reporting

When Certification Scans are performed, the Subcontractor personnel shall provide both an electronic and paper copy of the BDRs. The electronic format shall be in a format approved by SIMCO. In addition, an electronic file for each container of waste characterized shall be submitted to the CCP project office. The file format and type will be specified and defined by SIMCO.

The Subcontractor shall provide a primary and backup audio/video media of the process with the BDRs. The Subcontractor shall provide access to all support software that is used to enhance the process. The Subcontractor shall perform “fast scan” operations as requested in accordance with CCP Procedures.

6.3 Equipment

The equipment may be either leased or government furnished. The Subcontractor is responsible for operations and maintenance of the characterization equipment, and shall provide personnel to support the maintenance, troubleshooting, repair, and operation of the equipment.

6.4 Configuration Management

Configuration management of new or newly leased equipment shall follow the requirements of CCP-PO-026, *CCP Configuration Management*. The Subcontractor shall provide technical baseline documentation for characterization equipment including:

- General Layout (including, at a minimum, dimensions, weight, plan and elevation views)
- Electrical Single Line Diagrams
- Information on Safety Systems (including, at a minimum, Interlocks, alarm functions, and fire suppression systems)
- Capacity/Lifting pedigree related to lifting components
- Operating and Maintenance Manuals

Changes to the physical configuration of the equipment currently in the CCP program shall be controlled by the Subcontractor through CCP-CM-001, *CCP Equipment Change Authorization and Documentation*. CCP Configuration Management along with the Subcontractor shall develop a technical baseline for equipment currently deployed at Host sites at time of award, the technical baseline shall be provided within one year of contract award. Updates while developing the technical baseline will be provided on a quarterly basis.

The Subcontractor shall provide technical baseline (or updates) upon deployment of new or newly lease equipment into the CCP program. The technical baseline documentation will be provided to SIMCO prior to certification of the equipment.

Occasionally, the host sites will request additional information to support maintenance/troubleshooting activities. The Subcontractor will support SIMCO by developing and providing that information. The Subcontractor will support SIMCO in the development of Equipment Descriptions and System Design Descriptions, as appropriate. The Subcontractor will review and approve the CM documents developed by SIMCO as appropriate.

6.5 Maintenance

The Subcontractor shall be responsible for maintenance operations of the deployed (certified and uncertified) characterization equipment within CCP’s program and will implement CCP-TP-140, *CCP Equipment Maintenance* to conduct maintenance and establish spare parts. The Subcontractor shall ensure that Corrective Maintenance (CM), Predictive Maintenance (PdM) and Preventive Maintenance (PM) activities are promptly and properly conducted and documented to provide a high degree of confidence that degradation of Subcontractor owned equipment or GFE is identified and corrected, that equipment downtime is minimized due to equipment failure, and that the maintenance performed is cost effective.

The Subcontractor shall start troubleshooting deployed equipment within 24 hours of initial notification. The subcontractor shall also deploy the necessary resources for troubleshooting, maintenance, and/or repair to the respective host site within four working days after initial notification when deemed necessary by CCP. If maintenance and/or repair activities require design drawings and/or documentation changes by the Subcontractor, the revised design drawings and/or documentation shall be submitted to SIMCO for approval within four working days. Extensions may be requested by the Subcontractor to CCP, and will be evaluated on a case-by-case basis.

The Subcontractor shall provide work instructions in accordance with the Host site work document development procedures by personnel who have been trained to work to these procedures.

The Subcontractor shall be required to assist SIMCO in the creation of, trending for, and execution of PdM. Any PdM performed on equipment being used in the CCP characterization program shall be documented in accordance with CCP-TP-140.

In conjunction with the CCP, the Subcontractor shall establish and implement a PM program that will support minimizing the downtime of equipment due to equipment failures. The Subcontractor shall identify PM actions for all characterization equipment and document them in accordance with CCP-TP-140. For deployed equipment, the Subcontractor shall review the existing PM schedule and update as required. For equipment undergoing deployment, the PMs shall be established prior to the equipment being declared operational.

Upon completion of the performance of a PM, PdM, or CM activity, the Subcontractor shall provide the necessary documentation identified in CCP-TP-140 to SIMCO within 2 days.

The Subcontractor shall ensure the availability of spare parts. The Subcontractor shall identify, document, and provide a list of recommended and critical spares to SIMCO for equipment within CCP's program. The Subcontractor shall maintain critical spares for Subcontractor owned equipment in stock to ensure delivery within 24 hours. Other spares may be stocked at the discretion of the Subcontractor as warranted so that operations are minimally impacted. CCP shall provide critical spare parts for GFE under CCP's custodianship.

Spare parts shall be procured in accordance with Section 6.6.

The Subcontractor shall be responsible for all maintenance activities for Host site provided equipment, equipment provided by the Subcontractor or GFE provided by SIMCO. The Subcontractor shall comply with CCP-TP-140, CCP Equipment Maintenance for maintenance activities requiring special skills or qualifications, the Subcontractor shall provide appropriately trained specialists.

Work performed by the Subcontractor for modification and corrective maintenance shall be warranted for 1 year from completion of maintenance. Parts installed during maintenance will be warranted by the Subcontractor for a minimum period of one year. Failure of equipment related to the work performed or parts installed or failure due to the effect of poor workmanship on another component shall require the Subcontractor to perform additional maintenance at no cost to CCP until unit operability is restored. \

Maintenance activities shall be coordinated through the Subcontractor's LO and the VPM. The Subcontractor will provide operator support and Engineering/Technical support as needed. The Subcontractor may support maintenance activities requiring special skills, as coordinated through the VPM. CCP may support maintenance activities requiring special skills, as coordinated through the VPM.

6.6 Subcontractor Procurements

If the Subcontractor is qualified by SIMCO and placed on SIMCO's Qualified Subcontractor List (QSL) for procurement actions, the Subcontractor may procure items such as spare parts.

If the Subcontractor is unable to be placed on the SIMCO QSL, then Quality Level 1 and 2 items, as well as Quality Level 0 items and services that require quality assurance receipt inspection will be graded and procured by SIMCO on behalf of the Subcontractor in accordance with CCP-QP-001, *CCP Graded Approach*, and CCP-QP-015, *CCP Procurement*.

The Subcontractor shall be authorized to purchase items without utilizing the SIMCO procurement process under the following condition that the items being procured have been graded and determined not to be quality affecting according to the CCP Graded Approach Process. The Subcontractor shall be held responsible for verification and compliance of this step.

All software design, modification, and products will be obtained through a vendor that is approved on the SIMCO Qualified Subcontractor's List for software.

6.7 Records

Records shall be controlled in accordance with CCP procedure, CCP-QP-008, *CCP Records Management*. Controlled numbers for laboratory notebooks and logbooks are required and are assigned by CCP. The use of the logbooks shall be in accordance with CCP-PO-005, *CCP Conduct of Operations*. Records shall be submitted to SIMCO for formal records control as specified by the Waste Analysis Plan (WAP).

Records shall be protected and maintained by controlled access by authorized personnel with locks and access lists posted at each storage location. Storage area will be appropriate to minimize the risk of damage or loss from humidity, natural disasters, adverse weather conditions, mold or infestations of insects or rodents. Records will be stored in 1-hour fire-rated cabinets. This includes in-process records maintained by operations personnel.

The Subcontractor shall provide SIMCO with the ability to read and retrieve analytical raw data. This capability shall be required for a minimum of 10 years.

SIMCO will provide all records coordinator personnel.

6.8 Training

The Subcontractor shall provide initial and subsequent training and qualification of RTR Operators for the entire contract period at no additional cost to CCP above the hourly rate for the employee being trained. Any travel required for the training is allowable if pre-approved. This includes but is not necessarily limited to, training provided in accordance with SNT-TC-1A 1980 for the 40 hours of classroom work, on-the-job training, examination, certification, and re-certification.

The Subcontractor shall provide NDE training to SIMCO personnel as requested on an as needed basis.

The Subcontractor shall provide at least one person at each Host site location with sufficient RTR experience and knowledge to serve as an RTR Subject Matter Expert/On-the-Job Trainer (SME/OJT) instructor as delineated in CCP-QP-002, *CCP Training and Qualification Plan*.

7.0 QA Requirements

The Subcontractor shall perform characterization and data generation level review of waste in accordance with CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*.

Control of nonconforming items shall be performed in accordance with CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control*.

Corrective action reporting and corrective action management shall be performed in accordance with WP 15-GM1002, *Integrated Issues Management*.

The Subcontractor shall ensure that all appropriate software is controlled per CCP-QP-022, *CCP Software Quality Assurance Plan*. These requirements apply to all computer software that manipulates or produces data used to process, gather or generate information used to design, analysis, operate or make compliance-related decisions related to characterization, packaging or certification of waste.

Handling, storage, and shipment of items shall be performed in accordance with CCP-QP-023, *CCP Handling, Storage and Shipping*.

Internal management assessments, if requested by SIMCO, shall be performed using CCP-QP-018, *CCP Management Assessment*.

8.0 Deliverables

Batch Data Reports (BDRs) shall be submitted in accordance with CCP procedures.

The Subcontractor shall provide technical baseline documentation within one year of award.

A Preventive Maintenance Plan shall be submitted within 60 days of subcontract award and updated annually.

A list of critical spares shall be submitted within 60 days of subcontract award and updated annually or as additional equipment is put in service.

Attachment A

CCP-AK-XXX-XXX	CCP –AK Summary Report for each waste stream at each host site
CCP-CM-001	CCP Equipment Change Authorization and Documentation.
CCP-CM-XXX	Equipment Description Documents related to NDE
CCP-PO-001	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	CCP Transuranic Waste Certification Plan
CCP-PO-005	CCP Conduct of Operations
CCP-P0-006	Central Characterization Project Conduct of Operations Matrix
CCP-PO-026	CCP Configuration Management.
CCP-QP-001	CCP Graded Approach
CCP-QP-002	CCP Training and Qualification Plan
CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
CCP-QP-008	CCP Records Management
CCP-QP-010	CCP Document Preparation, Approval and Control
CCP-QP-015	CCP Procurement
CCP-QP-016	CCP Control of Measuring, Testing, and Data Collection Equipment
CCP-QP-017	CCP Identification and Control of Items
CCP-QP-018	CCP Management Assessment
CCP-QP-019	CCP Quality Assurance Reporting to Management
CCP-QP-021	CCP Surveillance Program
CCP-QP-022	CCP TRU Software Quality Assurance
CCP-QP-023	CCP Handling, Storage and Shipping
CCP-QP-026	CCP Inspection Control
CCP-QP-027	CCP Test Control
CCP-QP-029	CCP Corrective Action Management
CCP-QP-043	CCP Operations Level Training and Qualification
CCP-TP-001	CCP Project Level Data Validation and Verification
CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	CCP Sampling Design and Data Analysis for RCRA Characterization
CCP-TP-005	CCP Acceptable Knowledge Documentation
CCP-TP-028	CCP Radiographic Test and Training Drum Requirements
CCP-TP-053	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-066	CCP Radiography Screening Procedure for Prohibited Items
CCP-TP-140	CCP Equipment Maintenance
CCP-TP-XXX	CCP Operating Procedures related to NDE/RTR
WP 15 GM-1002	Integrated Issues Management

WP 15-GM.02	Worker Safety and Health Program Description
WP15- GM.03	Integrated Safety Management Description
WP 15-HS.02	Occupational Health Program

Draft