

1.0 INTRODUCTION / BACKGROUND

This contract is issued for the performance of Software Quality Assurance (SQA) Services in support of Central Plateau Cleanup Company (CPCCo) work scope from the date of award through September 30, 2023, with 2 additional option periods. CPCCo (Buyer) is a prime contractor to the Department of Energy (DOE) and all work on this Statement of Work will be performed in support of the Central Plateau Cleanup Contract with DOE.

2.0 DESCRIPTION OF WORK – GENERAL

The Contractor shall provide technically qualified person(s) that work as a part of a team under the general supervision of CPCCo to perform this work. Contractor employee(s) shall be responsible for independently planning, organizing, and performing a wide variety of non-hazardous specialized administrative/technical duties in support of the successful completion of goals and deliverables and in accordance with all provisions of the Contract.

3.0 DESCRIPTION OF WORK – SPECIFIC

DOE-RL recently performed an audit of specific CPCCo QAP elements (DOE-ASMT-2021-0324). The purpose of this audit was to evaluate the adequacy, implementation, and effectiveness of the CPCCo QAP elements, in relation to Requirements 1, 2, 5, 6, 15, and 16; and the computer software control portions of Requirements 3, 11, and Part II, Subpart 2.7 of ASME NQA-1-2008, *Quality Assurance Requirements for Nuclear Facility Applications*, and ASME NQA-1a-2009, *Addenda A to ASME NQA-1-2008: Quality Assurance Requirements for Nuclear Facility Application*; and DOE O 414.1D, Chg.1, *Quality Assurance*, Attachment 3, “Suspect/Counterfeit Items Prevention,” and Attachment 4, “Safety Software Quality Assurance Requirements for Nuclear Facilities.”

One adverse condition being considered a significant condition adverse to quality, specifically related to SQA, was identified as follows:

- “Contrary to DOE O 414.1D, elements of the software quality assurance program were not adequate or effectively implemented.”

A root cause analysis performed by CPCCo determined that CPCCo has not effectively implemented elements of the SQA program during procurement, implementation and use of safety software, resulting in noncompliance with DOE O 414.1D, Quality Assurance.

CPCCo desires the support of personnel with expertise in Software Quality Assurance to support resolution of corrective actions and bringing our software documentation into compliance with applicable requirements.

3.1 Task Description

Provide a team of one leader and up to 3 team members to provide the following:

- Review SQA-related program documents, training, and supporting tools to become knowledgeable POC team for CPCCo during corrective action plan implementation.
- Under direction of SQA Project Manager, provide support to track completion of corrective actions related to SQA program improvements, and SQA document revision and preparation.
- Provide new or revise existing SQA document templates to ensure consistent and compliant documents.
- Prepare a document review checklist that reviewers can use to determine if documents are complete, correct, consistent, and compliant.
- Provide support to software owners, subject matter experts, and document authors with navigating procedural processes and related tools.
- Assist in the development of a graded approach and, once approved, implement a Level D/E/NA Extent of Review Plan, including a graded approach to the level of review.
- Provide support to software owners with preparation and revision of SQA documents, as needed.

3.2 Special Requirements

No special requirements are identified for the work scope.

3.3 Acceptance Criteria

Work products and services provided shall meet all applicable Buyer procedures for control and review of work products and pertinent regulatory requirements, as required by this contract and incorporated provisions.

Before delivery, the contractor shall review their work product, as applicable, for technical adequacy, completeness, and appropriate content. CPCCo acceptance shall be contingent upon validation by CPCCo that the contractor has completed all work and resolved and/or incorporated all CPCCo comments on the final deliverable.

3.4 Work Not Included

This section is not applicable.

3.5 Buyer Furnished Materials and Equipment

If work is performed at the CPCCO office, Buyer will furnish a work location and equipment necessary to perform this work scope. No material or equipment will be furnished for remote work to be performed.

3.6 Site Conditions and Known Hazards

There are no site conditions and/or hazards identified for performance of this work scope.

3.7 Site Coordination Requirements

There are no special site coordination requirements for this work scope.

4.0 TECHNICAL REQUIREMENTS

Contractor shall perform in accordance with the terms and conditions of this contract, Buyer's internal policies and procedures, and quality assurance provisions, including safety programs, laws, orders, permits, rules, confidentiality of information and intellectual property safeguards.

4.1 Work Location / Access Requirements

Activities shall be conducted at a BTR approved remote work location or at the CPCCo office located in the FERMI Office Building, Richland, WA.

Contractor resources shall be proficient with remote working tools including MS Teams.

4.2 Personnel Requirements

The Contractor resources shall have knowledge and experience with

- ASME NQA-1-2008, *Quality Assurance Requirements for Nuclear Facility Applications*, and
- ASME NQA-1a-2009, *Addenda A to ASME NQA-1-2008: Quality Assurance Requirements for Nuclear Facility Application*; and
- DOE O 414.1D, Chg.1, *Quality Assurance*, Attachment 3, "Suspect/Counterfeit Items Prevention," and Attachment 4, "Safety Software Quality Assurance Requirements for Nuclear Facilities."

4.3 Required Qualifications

The Contractor is expected to provide appropriately trained and qualified staff to perform the type of work specified. Contractor personnel must display and maintain the necessary expertise, understanding of applicable industry standards, and qualification requirements to perform the assigned work. Refer to Table 1.

At a minimum, one team member will hold Bachelor of Arts (BA) or Bachelor of Science (BS) degree in Science, Engineering or Information Systems and a minimum of 15 years experience in Quality Assurance. The team member will be expected to provide oversight to any other team member with less experience.

4.4 Desired Qualifications

- Subject Matter Expert in Software Quality Assurance / Engineering
- DOE Quality Assurance and Quality Control Experience
- Certificate of Quality Assurance
- Experience in the development, implementation, and maintenance of Quality Assurance Program
- Knowledge and experience with NQA-1 and DOE O 414.1D.

4.5 Training Requirements

Buyer will provide Contractor staff task- or facility-specific training as required for site and facility access and safe performance of assigned tasks.

4.6 Security and Badging Requirements

For any on-site work, general site access badging is required.

4.7 Site Access and Work Hours

Onsite work will be done on a 4 x 10 schedule. The standard workday shall consist of ten (10) hours of work between 6:00 AM and 4:30 PM, with one-half hour designated as an unpaid period for lunch. No work occurs on the non-working Fridays. If schedule alternative is required BTR will communicate to contractor's contact

5.0 ENVIRONMENTAL, SAFETY, HEALTH, AND QUALITY REQUIREMENTS

The Contractor shall perform work safely, in a manner that ensures adequate protection for employees, the public, and the environment, and shall be accountable for the safe performance of work. The Contractor shall comply with, and assist Buyer in complying with, Environmental, Safety, Health, and Quality (ESH&Q) requirements of all applicable laws, regulations, and directives.

Materials supplied or purchased for use in performance of this contract, to the maximum extent practical, shall be environmentally preferred as described in 40 CFR 247 and including Biobased products as designated by the USDA (see www.biopreferred.gov).

The following project-specific ESH&Q requirements are applicable to this scope of work in addition to the requirements identified in the Contract [General Provisions](#) and, when work is being conducted on site, the additional ESH&Q requirements in *Special Provisions – On Site Services (SP-5)* should be followed.

- CONTRACTOR may submit for approval to the BUYER, a comprehensive OS&IH plan, or meet all applicable CPCCo OS&IH requirements including but not limited to CPCC-MP-SH-32219, 10 CFR 851 CPCCo Worker Safety and Health Program Description, Appendix B. 2.

- Prior to onsite work, the Contractor shall submit for approval to the Contract Specialist, technical work documents for industrial hygiene and occupational safety (IHEAs, HSE, IHSP, etc.) for the Intended work scope. CONTRACTOR shall comply with Special Provisions – On Site Services (SP-5)
- CONTRACTOR and its subcontractors shall be responsible to comply with State, Federal, and DOE requirements or regulations. Where there is a difference in regulations or requirements, the most stringent shall apply.
- CONTRACTOR and its subcontractors shall be responsible to comply with all applicable sections of Special Provisions – On Site Services (SP-5).
- CONTRACTOR shall perform work in compliance with facility-specific procedures and requirements documents applicable to the work area
- CONTRACTOR shall take appropriate action, up to and including stopping work, and immediately notify the BUYER if an unplanned risk or hazard is discovered that is not covered by directions provided by the BUYER. This action includes notifying the BUYER if the work exposes their workers to hazards that require medical monitoring.

6.0 MEETINGS AND SUBMITTALS

6.1 Meetings

- Kickoff Meeting CPCCo Project Team
- Weekly Status Meeting - the Contractor shall participate in a weekly status meeting with the CIO and Project Manager.
- Scheduled Meetings - Other meetings are expected to be necessary, but on an ad hoc basis.

Meetings will be conducted in-person or virtually via MS Teams as required to support scope of work.

6.2 Submittals

Contractor shall submit, to the Project Manager, a Weekly Activities Report identifying detailed work activities performed for the week/day, by name/hours worked and company and, if applicable, any detailed problems or issues in completing assigned work. Weekly Activities Reports shall be submitted to the BTR by 10:00 a.m. each Monday, documenting the previous week's activities.

Additionally, Weekly Activities Reports shall be submitted as an attachment to each invoice. Submission of Weekly Activities Reports is required until Contract work is completed. A Weekly Activity Report shall be submitted on weeks where no work has been done.

6.3 Requirements for Submittals and Documents

Submittals shall be provided in electronic format unless available only as a hard copy. Electronic formats must be non-password protected in one of the following formats:

- Microsoft® Office Compatible
- Portable Document Format (PDF)

7.0 DELIVERABLES, PROJECT CONTROLS, MILESTONES, AND PERFORMANCE SCHEDULE REQUIREMENTS

- Report documenting the results of field observations or oversight activities.
- Documentation of reviews performed on specified focus areas/activities and status updates to the Project Manager so that progress can be determined.
- Weekly Activities Report identifying detailed work activities performed for the week/day, by name/hours worked and company and, if applicable, any detailed problems or issues in completing assigned work.

Deliverables will be determined and agreed among the SME and BTR based on the scope described in Section 3.0 of this SOW.

Table 1 - Labor Categories and Experience

Labor Category	Min Edu	Min Exp	Labor Category Description
Quality Assurance I	Associates	0	Ensures consistent and measurable performance objectives. Performs analysis of strategic plans; reviews productivity; identifies system improvements; audits and documents all milestones of a project's lifecycle; validates quality of deliverables and regulatory compliance.
Quality Assurance II	Bachelors	4	Ensures consistent and measurable performance objectives. Performs analysis of strategic plans; reviews productivity; identifies system improvements; audits and documents all milestones of a project's lifecycle; validates quality of deliverables and regulatory compliance. Operates as a liaison between the Quality Assurance team and the supervisors of other departments to reiterate and implement existing quality control processes.
Quality Assurance III	Bachelors	6	Ensures consistent and measurable performance objectives. Performs analysis of strategic plans; reviews productivity; identifies system improvements; audits and documents all milestones of a project's lifecycle; validates quality of deliverables and regulatory compliance. Has a thorough knowledge of department processes. Authorized to make day-to-day decisions within department and implement change of personnel objectives.
Quality Assurance IV	Bachelors	8	Ensures consistent and measurable performance objectives. Performs analysis of strategic plans; reviews productivity; identifies system improvements; audits and documents all milestones of a project's lifecycle; validates quality of deliverables and regulatory compliance. Responsible for the design and implementation of policies and procedures to ensure that quality standards are met. Oversees testing of implemented processes. Supervises Quality Assurance team.
Subject Matter Expert I	Bachelors	4	Provides expert consulting, advisement, and resolution of complex issues in a particular area of expertise. Advanced knowledge of best practices as determined by Industry experience and relevancy.
Subject Matter Expert II	Bachelors	6	Provides expert consulting, advisement, and resolution of complex issues in a particular area of expertise. Advanced knowledge of best practices as determined by industry experience and relevancy. Engages stakeholders in a variety of settings. Performs simulated demonstrations of outcome. Level of engagement is fairly complex.
Subject Matter Expert III	Bachelors	8	Provides expert consulting, advisement, and resolution of complex issues in a particular area of expertise. Advanced knowledge of best practices as determined by industry experience and relevancy. Engages stakeholders in a variety of settings. Performs simulated demonstrations of outcome. Level of engagement is complex and multifaceted.

Subject Matter Expert IV	Masters	10	Utilizes functional and/or subject matter area expertise gained through direct industry experience to assess the organizational, operational, and functional baseline for planning and engineering services. Works with senior government officials and executives to provide industry vision and strategic direction with regard to their enterprise. May serve as an expert to assist agencies in determining and engage a wide range of stakeholders, including local, state, and federal agencies. Guides the determination of systems, engineering, and business process inadequacies and deficiencies that affect the functional area's ability to support/meet organizational goals. Participates in strategy sessions, strategic assessments, and design reviews to validate enterprise approach and associated work products. Provides expert consulting, advisory expertise, and resolution of highly complex project and problems. Recognized for strong expertise and recognition in determining industry issues and trends.
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Minimum Requirements		Substitution Matrix (related work experience)				
Min Edu	Min Exp	PhD	Masters	Bachelors	Associate	Highschool
Associates	0	0	0	0	N/A	2
Bachelors	4	0	2	N/A	6	8
Bachelors	6	2	4	N/A	8	10
Bachelors	8	4	6	N/A	10	12
Masters	10	8	N/A	12	14	16