

**EXHIBIT B**  
**STATEMENT OF WORK – TASK ORDER**

**Title:** TO-1 HVAC Replacement BEEF Bunker 04-300

**Requisition Number:** REQ-0036696

**SOW Revision Number:** 2

**Prepared By:** Clyde Mallory

**Requisition Date:** 4/30/2026

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## LIST OF ACRONYMS

| Acronym  | Definition                                            |
|----------|-------------------------------------------------------|
| ACM      | Asbestos Containing Material                          |
| CAP      | Contractor Acquired Property                          |
| CM       | Construction Manager                                  |
| EPP      | Environmentally Preferable Products                   |
| ES&H     | Environmental Safety and Health                       |
| GFE      | Government Furnished Equipment                        |
| GFP      | Government Furnished Property                         |
| HVAC     | Heating Ventilation and Air Conditioning              |
| LAO      | Los Alamos Operations at Los Alamos, NM               |
| LO       | Livermore Operations at Livermore, CA                 |
| M&O      | Maintenance and Operation                             |
| MSTS     | Mission Support and Test Services, LLC                |
| NATE     | North American Technician Excellence                  |
| NFO      | Nevada Field Office                                   |
| NLV      | North Las Vegas Facility                              |
| NNSA     | National Nuclear Security Administration              |
| NNSS     | Nevada National Security Site                         |
| ProcSpec | Procurement Specialist                                |
| RCM      | Radiological Control Manual                           |
| RGD      | Radiation-Generating Devices                          |
| RPP      | Radiation Protection Program                          |
| RSLA     | Remote Sensing Lab at Andrews AFB, Maryland           |
| RSLN     | Remote Sensing Lab at Nellis AFB, North Las Vegas, NV |
| RWP      | Radiological Work Permit                              |
| SME      | Subject Matter Expert                                 |
| SSSP     | Site-Specific Safety Plan                             |
| STL      | Special Technologies Lab at Santa Barbara, CA         |
| STR      | Subcontract Technical Representative                  |

## **B-1 INTRODUCTION**

### **1.1 Introduction**

The Nevada National Security Site (NNSS) is a U.S. Department of Energy, National Nuclear Security Administration (NNSA) installation, operated by Mission Support and Test Services, LLC (MSTS or CONTRACTOR), comprising approximately 3,561 square kilometers (1,375 square miles) of federally owned land located in southeastern Nye County, Nevada. Located approximately 105 kilometers (65 miles) northwest of Las Vegas, Nevada, the NNSS is accessed from U.S. Highway 95, which roughly forms the southern boundary of the site.

The MSTS also operates the North Las Vegas Facility (NLV); the Remote Sensing Lab at Nellis AFB, North Las Vegas, NV (RSLN); the Remote Sensing Lab at Andrews AFB, Maryland (RSLA); Special Technologies Lab at Santa Barbara, CA (STL); Livermore Operations at Livermore, CA (LO); and Los Alamos Operations at Los Alamos, NM (LAO).

This Statement of Work (SOW) is for the services of HVAC removal and replacement with new cooling system in support of Mission Support and Test Services, LLC (MSTS) in accordance with Basic Master Agreement for General Construction Services at NNSS.

## **B-2 OBJECTIVE**

MSTS requires the services of an experienced SUBCONTRACTOR to provide all personnel, required tools, equipment, and associated materials to complete hands-on service to remove and replace an existing Heating Ventilation and Air Conditioning (HVAC) system, with **Mitsubishi R-32 Mini Split** system.

## **B-3 DESCRIPTION OF WORK**

The SUBCONTRACTOR shall provide technically qualified resources that work as a part of a team under the direct oversight of MSTS. SUBCONTRACTOR resources shall be responsible for independent planning, organizing, and performing a wide variety of non-hazardous specialized administrative/technical duties in support of the successful completion of goals and deliverables. Additionally, the SUBCONTRACTOR shall furnish all necessary labor, technical and professional services, supervision, materials, tools, equipment, consumables, and payment of any applicable taxes to perform all operations necessary and required to perform the scope as directed by MSTS.

Unless otherwise approved, the SUBCONTRACTOR shall work in accordance with MSTS subcontract requirements, operating policies and procedures and shall be responsible for execution of the work in accordance with the quality standards and requirements specified for the assigned project and facility.

SUBCONTRACTOR shall investigate technical requirements, remove existing HVAC system and related materials, design and install a fully functional **Mitsubishi R-32 Mini Split** system and related components such as air handlers, duct work, vents, and thermostats. The work location is an underground bunker located at the BEEF complex, building 04-300.

The SUBCONTRACTOR proposal shall include Phase 1, each Option listed below, and the timeline per each phase sequentially.

### **3.1 Phase 1: Discovery**

Upon CONTRACTOR authorization, the SUBCONTRACTOR shall perform the following activities

#### **3.1.1 Task Objectives:**

The purpose of this phase is for SUBCONTRACTOR to thoroughly investigate and refine the project scope, objectives, technical requirements, and potential constraints to ensure a robust design and construction activities for **Mitsubishi R-32 Mini Split** Cooling System. The Primary objectives of the SUBCONTRACTOR are to:

- Define the functional and operational requirements for a **Mitsubishi R-32 Mini Split** Cooling System at building 04-300.
- Identify critical interfaces with existing infrastructure and NNSS systems.
- **Thermal & Operating Requirements:** The HVAC system shall be designed to operate continuously in cooling mode at an ambient outdoor dry-bulb temperature of 115°F (46°C). The system must also be certified by the manufacturer to withstand/survive outdoor temperatures up to 120°F (49°C) without triggering a hard safety lockout or experiencing component damage. To compensate for high-ambient thermal derating, the outdoor condensing units must be oversized by a minimum of 20% of the nominal indoor heat load.
- **Vibration, Blast, and Piping Requirements:** To withstand ground-shock and blast-vibration at BEEF:
  - The outdoor condensing units shall be mounted on the existing concrete pad using external, fully restrained seismic/blast-rated spring vibration isolators (equipped with multi-directional limit stops).
  - All refrigerant piping shall be Type L, Hard-Drawn ACR copper and must be supported by cushion-clamped hangers (e.g., Unistrut with Cush-Clamps) spaced no more than 5 feet on center.
  - All refrigerant lines shall be equipped with braided stainless-steel flexible connectors (vibration loops) outdoors, immediately adjacent to the condenser unit, to absorb relative motion and prevent pipe shear at the bunker wall penetrations.
- Assess site-specific conditions and environmental factors affecting the design, such as climate control, ventilation, asbestos, safety hazards.
- Establish preliminary technical specifications, safety standards, and regulatory compliance criteria.
  - To include at a minimum IBC 2015 and associated references, NFPA 70 – 2017, and IEEE C2 – 2017.
- Formulate a comprehensive project brief to guide subsequent design phases.

### 3.1.2 Tasks:

#### 3.1.2.1 Information Review and Validation:

- SUBCONTRACTOR shall complete and validate Discovery information provided by the CONTRACTOR.
- SUBCONTRACTOR shall obtain and incorporate any additional information needed to effectively complete Design.

#### 3.1.2.2 Requirements Development:

- SUBCONTRACTOR shall ensure that the design approach addresses and strives to eliminate a single point of failure.
- SUBCONTRACTOR shall ensure design utilizes CONTRACTOR's required standardized Mitsubishi equipment.

#### 3.1.2.3 Discovery Summary Briefing:

- SUBCONTRACTOR shall develop and deliver to the CONTRACTOR a comprehensive project briefing that covers the SUBCONTRACTORS' understanding of stakeholder needs and expectations.

### 3.2 Option 1: Planning and Development

#### 3.2.1 Task Objectives:

This phase focuses on translating the validated requirements into a conceptual design and establishing the necessary project management frameworks for successful execution. The primary objectives are to:

- Produce a conceptual design that meets the validated functional and operational requirements.
- Identify and register potential risks for design, construction and service interruptions.
- Develop initial project planning documents, including a Work Breakdown Structure and associated dictionary.
- Define operational requirements during the construction phase to complete the final design.

#### 3.2.2 Tasks:

**3.2.2.1 Universal Conceptual Design:** Produce and deliver a conceptual design to replace and construct a **Mitsubishi R-32 Mini Split** system..

**3.2.2.2 Risk Management:** Develop a Risk Register that identifies risks that may be realized during design and construction (template provided).

**3.2.2.3 Project Planning Documents:** Develop and deliver a preliminary Work Breakdown Structure (WBS) and Associated Dictionary for the design and construction of the **Mitsubishi R-32 Mini Split** system.

**3.2.2.4 Operational Requirements During Construction:** Develop and provide an "Operational Requirements during Construction Document." The SUBCONTRACTOR will work with the CONTRACTOR to identify and document operational requirements during the execution of the construction phase, affecting the final design.

**3.2.2.5 Artifact Update:** Update any artifacts developed in the Discovery phase, based on the planning phase of the project.

### 3.3 Option 2: Design

#### 3.3.1 Task Objectives:

This phase involves the detailed Architectural/Engineering (A/E) design for the **Mitsubishi R-32 Mini Split system**, culminating in a construction-ready design package. The primary objectives are to:

- Execute detailed A/E design to produce construction-ready drawings and specifications replacement for a **Mitsubishi R-32 Mini Split system**.
- Design meets functional requirements identified in Phase 1 Discovery of this subcontract.
- Develop comprehensive design documents that comply with all applicable codes, standards, and NNSS requirements.

- Conduct systematic design reviews at specified completion percentages (60%, 90%, IFC) to ensure quality and stakeholder input.
- Produce deliverables necessary for long-lead item procurements and construction execution, including a definitive schedule.
- Develop a Bill of Materials.

### **3.3.2 Tasks:**

**3.3.2.1 Architectural/Engineering (A/E) Design:** Perform A/E design requirements as noted in Appendix 1.3 ("Detailed Design Drawing Requirements MSTS Rev 01"). Design shall utilize 3D modeling via Revit and 2D drawings with AutoCAD. Key design elements to be included are:

#### **3.3.2.2 General Design Requirements:**

- Provide design packages with all necessary details and data for a cooling system, including design construction drawings that illustrate the construction scope and support the required American Association of Cost Engineers (AACE) estimate class 2.
- Include preliminary design criteria, recommendations for construction, relevant performance standards, construction specifications, layouts, drawings, commissioning information, and other documents.
- Ensure 60% design includes specifications for long-lead items, ready for SUBCONTRACTOR procurement.
- Draft commissioning plan required at 60% design and final at 90%.
- The design shall include functional and technical requirements, commissioning plan requirements, and alternative construction solutions if any.
- Design documents shall comply with review recommendations made by the CONTRACTOR and refer to technical and functional requirements including Codes and Standards, Substitutions, Submittals, and Environmental, Safety, and Health (ES&H) specifications.

NOTE: Deviations from requirements, regulations, codes, standards, and guidelines shall require advance written authorization from the CONTRACTOR.

#### **3.3.2.3 Long Lead Items**

- SUBCONTRACTOR shall deliver specifications for all long lead items at 60% design review or earlier.

**3.3.2.4 Site Research:** All visits should be complete at Discovery and/or Planning and Development Phases and not required for Design. If requested by SUBCONTRACTOR, coordination with CONTRACTOR's STR is required.

**3.3.2.5 Design Reviews:** The SUBCONTRACTOR shall submit for approval to Contractor at, 60%, 90%, and IFC design completion. The SUBCONTRACTOR shall initiate the next phase of Design only upon receipt of CONTRACTOR written approval.

- SUBCONTRACTOR shall conduct comment review session to discuss comments made by CONTRACTOR to ensure understanding and compliance. (as stated in Appendix 1.2 of Master Agreement)

### 3.4 Option 3: Construction

#### 3.4.1 Tasks:

##### 3.4.1.1: Construct **Mitsubishi R-32 Mini Split Cooling System:**

SUBCONTRACTOR shall remove and dispose of existing HVAC system located at BEEF Bunker, building 04-300.

**3.4.1.1.1** SUBCONTRACTOR shall remove and dispose of all related obsolete HVAC materials such as inoperable piping, vents, thermostats, air handlers, cooling tower and refrigerants per industry standard requirements.

**3.4.1.1.2** Sample of existing system is one (1) two-ton air handling unit, one (1) five-ton air handling unit, two (2) six-ton air handling units, and one (1) thirty-ton cooling tower.

**3.4.1.1.3** The cooling tower currently sits on a concrete ledge with roughly 33% hanging over a ledge. The cooling tower is mounted on a metal skid with 33% overhang supported by a metal support beam.

**3.4.1.1.4** SUBCONTRACTOR shall remove and dispose of cooling towers metal skid mounted base and metal supporting arm structure and cooling tower.

**3.4.1.1.5** SUBCONTRACTOR shall replace or install railing on the concrete ledge after removal of cooling tower.

- SUBCONTRACTOR shall provide fall protection and appropriate safety measures during demolition.

**3.4.1.1.6** SUBCONTRACTOR shall dispose of removed HVAC equipment at disposal site located on NNSS. **All additional waste materials will be dumped in the designated onsite dumpster provided by CONTRACTOR.**

**3.4.1.1.7** SUBCONTRACTOR shall install a new replacement **Mitsubishi R-32 Mini Split**, system to provide adequate operation for size, location, and structure.

- **Thermal & Operating Requirements:** The HVAC system shall be designed to operate continuously in cooling mode at an ambient outdoor dry-bulb temperature of 115°F (46°C). The system must also be certified by the manufacturer to withstand/survive outdoor temperatures up to 120°F (49°C) without triggering a hard safety lockout or experiencing component damage. To compensate for high-ambient thermal derating, the outdoor condensing units must be oversized by a minimum of 20% of the nominal indoor heat load.
- **Vibration, Blast, and Piping Requirements:** To withstand ground-shock and blast-vibration at BEEF:
  - The outdoor condensing units shall be mounted on the existing concrete pad using external, fully restrained seismic/blast-rated spring vibration isolators (equipped with multi-directional limit stops).
  - All refrigerant piping shall be Type L, Hard-Drawn ACR copper and must be supported by cushion-clamped hangers (e.g., Unistrut with Cush-Clamps) spaced no more than 5 feet on center.
  - All refrigerant lines shall be equipped with braided stainless-steel flexible connectors (vibration loops) outdoors, immediately adjacent to the condenser unit, to absorb relative motion and prevent pipe shear at the bunker wall penetrations.

**3.4.1.1.8** SUBCONTRACTOR shall organize delivery, set up and craning of equipment into place.

**3.4.1.1.9** SUBCONTRACTOR shall relocate, connect and insulate as required all service units to include electrical, gas lines, control wires, condensate piping and any other associated efforts to complete installation of fully functioning system at building 04-300.

- Existing duct work may be utilized and added to for any potential transitions.
- Existing penetrations may be utilized, but SUBCONTRACTOR shall have allowance for any additional penetrations.
- Flush out existing lines that will be re-used.

**3.4.1.1.10** SUBCONTRACTOR shall install one (1) thermostat per air handling unit.

**3.4.1.1.11** SUBCONTRACTOR shall install remote control operations and connect operations to existing facility network (V-LAN).

**3.4.1.1.12** SUBCONTRACTOR shall install a new communication line to each air handling unit.

**3.4.1.1.13** SUBCONTRACTOR shall ensure proper operation of new **Mitsubishi R-32 Mini Split** cooling system.

**3.4.1.1.14** SUBCONTRACTOR shall warranty installation of labor, parts and equipment to manufacture specifications.

**3.4.1.1.15** SUBCONTRACTOR shall clean up and properly dispose of all equipment and materials used to perform work.

**3.4.1.1.16** SUBCONTRACTOR shall notify the CONTRACTOR's Subcontract Technical Representative (STR) once all work is complete for final approval.

**3.4.1.1.17** SUBCONTRACTOR shall submit a service report certifying that the new **Mitsubishi R-32 Mini Split** cooling system is fully installed and operating within manufacturing specifications.

**3.4.1.1.18** Work Planning (move ahead of turnover/Commissioning)

- SUBCONTRACTOR shall develop and coordinate with the STR for the development of necessary activity level work documents in accordance with Exhibit E of this subcontract.
  - Activity level work documents must be completed two (2) weeks prior to the construction activities outlined in the work package.
  - Authorization must be obtained in advance for transporting and using electronics with Wi-Fi/Bluetooth capabilities, laser or radiological devices, (e.g. nuclear density gauge), and Global Positioning System.

### **3.5 Post Construction Activities**

**3.5.1** Whole **Mitsubishi R-32 Mini Split** Cooling System Commissioning (CX)

- SUBCONTRACTOR shall complete all pre-functional checklists and demonstrate equipment and system functional performance through testing directed by qualified commissioning agent. Before completion of all work on-site
- Resolve any issues found not meeting the subcontract requirements

**3.5.2** A Functional Acceptance Test (FAT) will be required with CONTRACTOR personal to witness and verify. FAT plans must be documented in the commissioning plan.

**3.5.3 Turn Over**

- Punch list items shall be completed as outlined in the subcontract documents.

- Training of CONTRACTOR maintenance crew on operation and maintenance of the cooling systems.
- Warranty certificates and O&M manuals shall be provided a week before turnover.

**3.5.3.1** Any arc flash labeling must be applied, and any analysis done in support or arc flash analysis will be completed utilizing SKM Power tools.

- A full-time CONTRACTOR, approved safety representative must be present during all construction activities.

### **3.6: As-Built Documentation:**

**3.6.1** Assist in the completion and finalization of all as-built drawings. All native files of design documents shall be provided to CONTRACTOR.

#### **3.6.2: Lessons Learned and Artifact Close-Out:**

**3.6.2.1** Collaborate with the CONTRACTOR to develop comprehensive lessons learned documentation.

**3.6.2.2** Ensure all project artifacts are properly closed out and archived.

- Lessons Learned Sessions
- All risks have been closed and Risk Register completed.
- Project close out report
- Validate all project documents received
- Customer feedback captured
- As-builts have been created for all red-line drawings or field changes

### **3.7 Assumptions**

The SUBCONTRACTOR should operate under the following assumptions:

- CONTRACTOR personnel are available Monday – Thursday, 7:00 AM – 5:30 PM, except for MSTS identified holidays, for coordination and engagement.
- Regular communication will be required with the STR throughout all phases.
- CONTRACTOR will review and approve with or without comments each schedule item prior to the SUBCONTRACTOR initiating work on the subsequent phase.
- Any power outages required shall be coordinated with CONTRACTOR at least thirty (30) days in advance of requested outages.
- The SUBCONTRACTOR is responsible for ensuring all files are scanned and free of any viruses prior to submittal.
- Scheduling start of work will need to be thirty (30) days or more in advance with STR to deconflict with users/experiments scheduled at the facility.

### **3.8 Acceptance Criteria**

SUBCONTRACTOR to provide fully functioning, new **Mitsubishi R-32 Mini Split** cooling system.

SUBCONTRACTOR shall provide service report certifying the new cooling system is fully installed and operating within manufacturing specifications.

### 3.9 Site Conditions and Known Hazards (Facility Specific)

Site facility specific conditions/requirements and known hazards are incorporated in this SOW.

| 3.9.1 Asbestos                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | It is <b>NOT</b> expected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <input type="checkbox"/>            | <p>It <b>IS</b> expected that asbestos-bearing materials will be encountered during the performance of this work.</p> <ul style="list-style-type: none"> <li>a. The SUBCONTRACTOR shall submit an Asbestos Abatement Plan for STR approval prior to start of work, which meets all the criteria of OSHA 29 CFR 1926.1101, "Asbestos." The Asbestos Abatement Plan shall identify the procedures that will be used to remove and dispose of all asbestos-containing materials that may be encountered during work performed under this Subcontract. These items include, but are not limited to, piping insulation, floor tiles, ceiling tiles, and boilers.</li> <li>b. Supervision of the asbestos abatement work shall be performed by a federal, state, or local accredited/licensed competent person (as defined by OSHA 29 CFR 1926.1101) employed by the SUBCONTRACTOR and who will be at the worksite(s) at all times.</li> <li>c. Installation of asbestos containing material (ACM) in newly constructed facilities is prohibited. For all new facilities, certify that no ACM was used for building construction.</li> </ul> |

| 3.9.2 Silica                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | It is <b>NOT</b> expected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/>            | <p>It <b>IS</b> expected that silica-bearing materials will be encountered during the performance of this work and all activities that may potentially generate respirable silica.</p> <ul style="list-style-type: none"> <li>a. A SUBCONTRACTOR with employees potentially exposed to respirable crystalline silica (RCS) above 25 micrograms per cubic meter of air (25 ug/m<sup>3</sup>) as an 8-hour time-weighted average under any foreseeable conditions shall comply with the 29 CF 1910.1053, "Respirable Crystalline Silica," and/or 29 CFR 1926.1153, "Respirable Crystalline Silica."</li> <li>b. The SUBCONTRACTOR shall submit a Written Silica Exposure Control Plan (if applicable) to the CONTRACTOR for review and approval as part of the SSSP.</li> </ul> <p><i>NOTE: The CONTRACTOR's RCS Occupational Exposure Limit is 25 ug/m<sup>3</sup> as opposed to OSHA PEL of 50 ug/m<sup>3</sup>.</i></p> |

| 3.9.3 Toxic Metals (Lead, Cadmium, Mercury) |                                                                                                                                                                                                                                                                         |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/>                    | It is <b>NOT</b> expected. However, since painted surfaces typically contain lead chromates, and many metals contain hexavalent chromium, the SUBCONTRACTOR is required to notify the STR prior to cutting, burning, welding or polishing of metal or painted surfaces. |
| <input checked="" type="checkbox"/>         | <p>It <b>IS</b> expected.</p> <ul style="list-style-type: none"> <li>a. A SUBCONTRACTOR with employees working in toxic metals contaminated areas shall submit a Written Toxic Metals Exposure Control Plan in accordance to the appropriate</li> </ul>                 |

|  |                                                                                                                                                                                                                                                                                                                                   |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>section of 29 CFR 1910 to the STR for review and approval as part of the SSSP.</p> <p>b. All SUBCONTRACTOR employees working under the accepted Written Toxic Metals Exposure Control Plan shall have been trained in accordance with the plan. Training records shall be submitted to the STR prior to the start of work.</p> |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| 3.9.4 Hoisting and Rigging          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/>            | <p>It is <b>NOT</b> anticipated that Hoisting and Rigging will occur during performance of the work. However, if the SUBCONTRACTOR's chosen means and methods include hoisting and rigging activities then all applicable requirements shall apply.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <input checked="" type="checkbox"/> | <p>It <b>IS</b> anticipated that Hoisting and Rigging will occur during performance of this work.</p> <ol style="list-style-type: none"> <li>The SUBCONTRACTOR shall provide the resources necessary for inspection, certification, and maintenance of rigging and lifting equipment as well as monitor all lifts to ensure that regulatory lifting practices are followed by the MSTS Lifting SME.</li> <li>The SUBCONTRACTOR shall submit its 29 CFR 1926.1400, Subpart CC, "Cranes and Derricks in Construction" compliant program as part of the Environmental, Safety &amp; Health (ES&amp;H) program.</li> <li>The SUBCONTRACTOR shall designate a qualified supervisor to determine the methods and develop plans for rigging operations to ensure safe lifts.</li> <li>The SUBCONTRACTOR shall ensure all crane operations maintain minimum safe distances from all high voltage lines, as determined by the CONTRACTOR. Twenty feet is required for voltages up to 350 kV. At voltages greater than 350 kV, the distance shall increase as required.</li> <li>Cranes (Mobile) - The SUBCONTRACTOR shall provide the resources necessary for inspection, certification, and maintenance of rigging and lifting equipment and shall monitor all lifts to ensure that acceptable lifting practices are followed.</li> <li>Lift Plan requirements <ol style="list-style-type: none"> <li>Lift plans are required to be submitted to the CONTRACTOR for concurrence. The SUBCONTRACTOR shall submit a detailed rigging plan with all applicable supporting calculations to the CONTRACTOR for review and acceptance prior to the lift. A Formal Lift Plan will be required for the following activities: <ul style="list-style-type: none"> <li>Excess of 5 tons</li> <li>Lift classified as critical (exceeding 75% of crane capacity chart)</li> <li>Any two-crane lift or any lift over operating or occupied facilities, process pipe racks or near power lines)</li> <li>High value or long lead time item</li> </ul> </li> <li>The SUBCONTRACTOR shall designate a qualified supervisor to determine the methods and develop plans for rigging operations to ensure safe lifts.</li> <li>The SUBCONTRACTOR is required to meet DOE Standard DOE-STD-1090-2020, "Hoisting and Rigging" for lift classification and lift plan requirements.</li> </ol> </li> </ol> |

### 3.9.5 Radiological Contamination

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | It is <b>NOT</b> expected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <input type="checkbox"/>            | <p>It <b>IS</b> anticipated that work may be performed in radiological areas.</p> <ol style="list-style-type: none"> <li>a. The SUBCONTRACTOR shall abide by the requirements of the current version of the NNSS Radiation Protection Program (NNSS RPP) as implemented with the NNSS Radiological Control Manual (NNSS RCM).           <ul style="list-style-type: none"> <li>• The NNSS RPP can be downloaded from the following web address:<br/> <a href="https://www.osti.gov/servlets/purl/1435448">https://www.osti.gov/servlets/purl/1435448</a></li> <li>• The NNSS RCM can be downloaded from the following:<br/> <a href="https://www.osti.gov/servlets/purl/1895616">https://www.osti.gov/servlets/purl/1895616</a></li> </ul> </li> <li>b. The SUBCONTRACTOR shall abide by the CONTRACTOR'S radiological postings.</li> <li>c. The SUBCONTRACTOR shall make arrangements with the CONTRACTOR'S Radiological Control Division to develop adequate controls, prescribe protective measures, and generate required Radiological Work Permit (RWP) necessary to demonstrate compliance with the NNSS RPP.</li> <li>d. The SUBCONTRACTOR shall comply with all RWPs approved by the CONTRACTOR controlling the work performed by the SUBCONTRACTOR.</li> <li>e. The SUBCONTRACTOR shall provide a list of all equipment and materials expected to be utilized in areas controlled for radiological purposes and shall additionally disclose all heavy equipment to be brought on NNSA/NFO-managed property to the CONTRACTOR'S STR (to be provided to the Radiological Control Division), prior to arrival on NNSA/NFO property.</li> <li>f. All SUBCONTRACTOR-owned/rented/leased equipment and vehicles brought onto NNSA/NFO property are subject to radiological survey at any time during the contract period.           <ul style="list-style-type: none"> <li>• All SUBCONTRACTOR-owned/rented/leased heavy equipment utilized for soil disturbing or building demolition activities are required to undergo baseline and re-entry radiological surveys upon arrival at NNSA/NFO property or prior to use at the work site, as directed by the CONTRACTOR'S Radiological Control Division.</li> <li>• All SUBCONTRACTOR-owned/rented/leased equipment and vehicles are required to undergo radiological evaluation prior to removal from the work site and/or NNSA/NFO property.</li> <li>• All SUBCONTRACTOR-owned/rented/leased equipment and vehicles brought onto NNSA/NFO property that cannot meet established radiological release requirements shall not be removed from NNSA/NFO property.</li> </ul> </li> <li>g. SUBCONTRACTOR shall require dosimeters, if used at the worksite, are exchanged by CONTRACTOR, as required, by the CONTRACTOR's Radiological Control Division.</li> <li>h. Upon completion of work, the SUBCONTRACTOR shall return the dosimeters to the CONTRACTOR.</li> <li>i. When required, the SUBCONTRACTOR shall ensure radiobioassay samples from their employees are submitted to the CONTRACTOR'S Radiological Control Division and/or RWP.</li> <li>j. If the SUBCONTRACTOR is expecting to bring radioactive material/radioactive sources (including those contained within equipment) or radiation-generating devices (RGDs) onto</li> </ol> |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>NNSA/NFO property:</p> <ul style="list-style-type: none"> <li>i. The SUBCONTRACTOR shall maintain radioactive material/radioactive sources per the CONTRACTOR'S direction.</li> <li>ii. The SUBCONTRACTOR shall provide a planned schedule of moves or advise the CONTRACTOR'S STR (to be provided to the Radiological Control Division), in writing, prior to moving any radioactive source to, around, or away from CONTRACTOR-managed property. Prior approval to move such radioactive sources onto or from CONTRACTOR-managed property must be received from the CONTRACTOR'S Radiological Control Division. <ul style="list-style-type: none"> <li>(1) The SUBCONTRACTOR shall notify the CONTRACTOR'S Radiological Control Division immediately after they bring radioactive material/radioactive sources onto CONTRACTOR-managed property so a pre-use radiological survey can be performed by the CONTRACTOR.</li> <li>(2) The SUBCONTRACTOR shall notify the CONTRACTOR'S STR prior to removing radioactive material/radioactive sources from CONTRACTOR-managed property so a post-use radiological survey can be performed by the CONTRACTOR.</li> </ul> </li> <li>iii. The SUBCONTRACTOR shall provide to the CONTRACTOR'S STR (to be provided to the Radiological Control Division) prior to arriving onsite, a copy of the current applicable radioactive material license (Nuclear Regulatory Commission or applicable state reciprocity) or other approval to the CONTRACTOR'S STR (to be provided to the Radiological Control Division) that gives the SUBCONTRACTOR authority to possess and operate the radioactive source/radioactive material or RGD (copy of current License for Industrial Radiography per 10 CFR 34, "Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations,") along with procedures for operating the device. <ul style="list-style-type: none"> <li>(1) The SUBCONTRACTOR shall have adequate controls, protective measures, and work control documents/procedures/permits as required under their approved radioactive material license (Nuclear Regulatory Commission or applicable state reciprocity) or other approval for all operations associated with SUBCONTRACTOR-owned radioactive material/radioactive sources or RGDs.</li> <li>(2) The SUBCONTRACTOR shall provide current leak test results, training records for RGD Operations, and source certificate/nominal activity sheets to the CONTRACTOR'S STR (to be provided to the Radiological Control Division) prior to the radioactive source arriving on NNSA/NFO-managed property.</li> <li>(3) The SUBCONTRACTOR shall provide special form certificates, Department of Transportation shipping papers, and radioactive source container certifications, to the CONTRACTOR'S STR (to be provided to the Radiological Control Division) upon entry to NNSA/NFO-managed property.</li> <li>(4) The SUBCONTRACTOR shall provide or make arrangements for transportation of radioactive source/radioactive materials in compliance with Department of Transportation regulations.</li> <li>(5) The SUBCONTRACTOR shall have a worker radiation safety plan as specified in 10 CFR 39, "Licenses and Radiation Safety Requirements for Well Logging," including Operating and Emergency procedures and Incident Reporting procedures.</li> </ul> </li> </ul> |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### **3.10 Delivery, Storage and Handling**

The SUBCONTRACTOR shall:

- Provide appropriate and necessary equipment and labor required for unloading, transporting, and handling delivered products/materials.
- Ensure that loads entering/exiting the NNSS are properly secured.
- Follow manufacturer's recommendations/instructions regarding the handling and storage of all materials.
- Store packaged products in original unbroken packages and containers.
- Leave manufacturer's seals and labels intact during storage.
- Arrange for immediate disposal and replacement of products found to be defective, damaged beyond repair, or in otherwise unacceptable condition.

### **3.11 Site Coordination Requirements**

#### **3.11.1 Construction Facilities**

Laydown Areas:

- Parking for SUBCONTRACTOR's company and employees' personal vehicles is available at the jobsite.

#### **3.11.2 SUBCONTRACTOR Requirements**

The SUBCONTRACTOR shall provide the following:

- Temporary Construction facilities (e.g., Job trailer, pre-job location, lunchroom).
- When a SUBCONTRACTOR performs physical work which has risk potential (employees, equipment, environment, or plant) outside of daylight hours, they are responsible for providing adequate lighting to perform the project work scope.
- Generators for construction power. The SUBCONTRACTOR is required to ground generators in accordance with NEC/National Electrical Safety Code (NESC) requirements and notify the STR and CM for compliance inspection prior to use. No modifications shall be made to portable generators on MSTS managed property without written permission from STR/CM.
- Cell phones for supervisory personnel.
- Portable restrooms.
- Ice and drinking water.

NOTE: The SUBCONTRACTOR shall restore areas disturbed during construction (including laydown areas) to pre-existing conditions.

#### **3.11.3 Outage Requests**

The SUBCONTRACTOR shall provide thirty (30) working days advance notice for systems requiring an outage or lockout/tagout for the control of hazardous energy. CONTRACTOR will fulfill the role of Controlling Organization for SUBCONTRACTOR lockout/tagout operations.

## **B-4 PERSONNEL REQUIREMENTS**

### **4.1. Training and Qualification**

The SUBCONTRACTOR and its personnel shall attend the following site-specific training in the course of this

work scope. NOTE site access may be delayed until training is completed or renewed. The SUBCONTRACTOR shall contact the STR to coordinate scheduling of training. See Section B-6, 6.4 *Badging*.

| DESCRIPTION                                                                                                                           | DURATION  | FREQUENCY     |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------|
| General Employee Radiological Training (GERT) (WBT 1E00W585)                                                                          | 0.5 Hour  | 730 days      |
| CONTRACTOR's Lockout/Tagout/Tagging Authority Process (1E00W448)                                                                      | 1.0 Hour  | 730 days      |
| HEF General Employee Training (WBT) 1HEFW001                                                                                          | 1.0 Hour  | 730 days      |
| NNSS Site Access Safety Orientation (1E00W102)                                                                                        | 0.5 Hour  | One time only |
| Protective actions (WBT 1REMPAW1)                                                                                                     | 0.5 Hour  | 365 days      |
| Work Location Emergency Response Plan, Including Evacuation Alarms and Accountability (1REM050000)                                    | 3.0 Hours | One time only |
| Safeguards and Security Program Overview of Controlled Unclassified Information (1S000W115) as well as DOE O 470.4B Chg. 3 (Ltd.Chg.) | 1 Hour    | 730 days      |

The SUBCONTRACTOR shall maintain training records for their personnel and ensure all required training is completed prior to work. Additionally, as soon as practical after award, the SUBCONTRACTOR shall submit a badge request for personnel required under the various releases for scheduling training and medical evaluation prior to crews being eligible for work on site.

## 4.2. Key Personnel Qualifications

The SUBCONTRACTOR shall submit a resume along with any documented applicable qualifications/certifications for approval prior to the SUBCONTRACTOR being authorized to proceed with work. The SUBCONTRACTOR shall submit for approval any changes in the Key Personnel representative assignments. Proposed substitutes for prior approved Key Personnel should have comparable qualifications to those of the persons being replaced.

### 4.2.1 Project Manager

Assists CM on construction projects, ensuring they are completed on time, within budget and to the required standards.

#### Responsibilities

- Manage all phases of projects, from planning and budgeting to execution and completion.
- Coordinates with various stakeholders, including clients, contractors, and suppliers.
- Create and manage project schedules, ensuring that all tasks are completed on time and that resources are allocated efficiently.
- Supervise project activities to ensure compliance with safety regulations and quality standards, addressing any issues that arise during the construction process.
- Identify and resolve issues that may impact project timelines or budgets, ensuring projects stay on track.

#### Qualifications

- Bachelor's degree in Management, Civil Engineering, Architecture, or a related field.
- Certifications such as Certified Construction Manager (CCM) or Project Management Professional (PMP)
- Minimum of five (5) years of experience managing large scale construction work, similar in type, scope, and complexity as will be requested under the Agreement.
- Excellent project management and organizational skills.

#### **4.2.2 Lead Engineer**

Oversees engineering projects, leads a team, and ensures the design and implementation of mechanical systems meet performance and safety standards.

##### Responsibilities

- Lead the design, development, and implementation of design through construction.
- Work closely with electrical, firmware, and software engineers to develop integrated solutions that meet performance, cost, and constructability goals.
- Provide technical support for inspection personnel, ensuring compliance with safety standards and regulations.
- Maintain accurate documentation of design processes, project specifications, and compliance with industry standards.
- Identify complex technical issues and develop effective solutions to eliminate root causes.

##### Qualifications

- Minimum of eight (8) years of experience in engineering
- Proven experience in leading engineering teams and projects.
- Excellent problem-solving skills and attention to detail.
- Professional Engineer (PE) License.

#### **4.2.3 Construction Manager (CM)**

Oversees construction projects, ensuring they are completed on time, within budget, and to the required quality standards.

##### Responsibilities

- Manage all phases of construction projects, from planning and budgeting to execution and completion.
- Coordinates with various stakeholders, including clients, contractors, and suppliers.
- Create and manage project schedules, ensuring that all tasks are completed on time and that resources are allocated efficiently.
- Supervise construction activities to ensure compliance with safety regulations and quality standards, addressing any issues that arise during the construction process.
- Identify and resolve issues that may impact project timelines or budgets, ensuring projects stay on track.

##### Qualifications

- A Minimum of five (5) years of experience managing HVAC construction work, similar in type, scope, and complexity as will be requested under the Task Order.
- Strong knowledge of construction principles, practices, and standards.
- Excellent project management and organizational skills.
- Strong communication and interpersonal skills.

#### **4.2.4 Safety Manager**

Ensure a safe and healthy work environment, compliance with safety regulations, and the development of safety programs and policies.

##### Responsibilities

- Develop and implement health and safety plans.
- Conduct regular safety inspections and audits to identify potential hazards and ensure compliance with local, state, and federal regulations.

- Lead safety training sessions to educate employees on best practice and required safety measures.
- Investigate accidents and incidents to identify root causes and recommend corrective actions to prevent future occurrences.
- Collaborate with management and employees to create a culture of safety and encourage open communication regarding safety concerns.

#### Qualifications

- Bachelor's degree in Safety Management or relevant field, or a minimum of five (5) years of proven work experience as a Safety Officer or similar role.
- Experience in writing reports and policies for health and safety.
- Familiarity with conducting data analysis and reporting statistics.
- Knowledge of potentially hazardous materials or practices.
- Experience in conducting safety drills and training.
- Strong communication and interpersonal skills.

## **B-5 TECHNICAL SPECIFICATIONS AND DRAWINGS**

The SUBCONTRACTOR shall perform work in accordance with the national codes, specifications, drawings, exhibits, and other documents, which by reference are made a part of the SOW.

Inspection of the work required by governmental agencies shall be arranged by the STR. The SUBCONTRACTOR shall request inspections through the STR, after the work is ready for inspection. In-process oversight of the SUBCONTRACTOR's in-process work shall be performed by the STR's construction project support personnel as appropriate

### **5.1 Specifications**

N/A

### **5.2. Drawings**

N/A.

## **B-6 PLACE OF PERFORMANCE**

Refer to 6.1. Delivery Location, 6.2 Work Location, 6.3 Site Access and Work Hours, 6.4 Badging of the Basic Master Agreement.

### **6.1. Work Location**

Work will be performed at Nevada National Security Site - Area BEEF Building 04-300 Mercury, NV 89023 For any work performed on the NNSS site or in an MSTS controlled facility, the provision of the On-Site services shall apply to this subcontract.

### **6.2. Site Access and Work Hours**

MSTS personnel at the NNSS work a standard 4/10 schedule. The standard work week consist of ten (10) hours of work between 6:00 a.m. and 4:30 p.m. with one-half hour designated as an unpaid period for lunch, Monday through Thursday.

Onsite work required to be performed outside normal operating hours shall be coordinated and/or approved through the STR and/or the Procurement Specialist prior to performing the work.

### 6.3. Badging

Any on-site work will be coordinated with the STR in accordance with the SOW and site-specific training requirements. The SUBCONTRACTOR shall wear a MSTS issued security badge identifying themselves. A minimum of ten (10) working days advance notice is needed for site badging. SUBCONTRACTOR employees shall be required to submit to vehicle searches and not personally carry or transport certain prohibited articles ([NvE-PA-CA-R3.pdf](#)).

## B-7 CLEARANCE REQUIREMENTS

The following access authorization or clearance requirements are required.

1) Check all that apply:

- ☒ No security clearance; unclassified work
- ☐ DOE L
- ☐ DOE Q
- ☐ HSPD-12 PIV Credential

2) If applicable, add any or all parts of the following statement security qualifications:

- ☐ The SUBCONTRACTOR shall have the ability to obtain a U.S. Department of Energy (DOE) facility security clearance and have personnel capable of obtaining a Q-type or L-type security clearance.
- ☐ Q- or L-type security clearance is required for all SUBCONTRACTOR personnel having access to classified information or special nuclear material when performing such work.
- ☐ A corresponding level of security clearance from another federal agency may be applicable if approved by the MSTS and DOE.
- ☒ N/A

## B-8 SPECIAL REQUIREMENTS

### 8.1. Personal Protective Equipment

SUBCONTRACTOR shall be responsible for providing Personal Protective Equipment (PPE) for all SUBCONTRACTOR personnel. PPE shall be suitable for the working environment of the project.

Minimum PPE is defined as:

- Steel-Toed boots (safety shoes)
- Ear Protection
- Hard hat
- Safety glasses
- Hi Vis Vest
- Face Mask may be required
- ARC Flash as required

### 8.2. Qualifications, Licensing, Certifications

In order to determine whether the SUBCONTRACTOR is qualified to perform the scope of work as outlined, the SUBCONTRACTOR shall have the following qualifications:

1. Experience - SUBCONTRACTOR shall have the following job experience

- 1.1. SUBCONTRACTOR shall have a minimum of five (5) years of experience in HVAC System Installation.

- 1.2. SUBCONTRACTOR shall have demonstrated experience at a Government facility, working with multiple regulators and clients in an operational environment.
- 1.3. SUBCONTRACTOR shall have experience in preparing evaluations and forecasts for maintenance services to ensure delivery.
2. Licenses – SUBCONTRACTOR shall have the following job-specific licenses:
  - 2.1. A Contractor's License to perform work in the United States of America
3. Certifications – SUBCONTRACTOR shall have the following job-specific certifications:
  - 3.1. Technician(s) shall be certified North American Technician Excellence (NATE), HVAC Excellence Certification or equivalent.

In addition to the above, the SUBCONTRACTOR shall provide qualified personnel throughout the period of performance of the Subcontract. SUBCONTRACTOR shall be responsible for ensuring its personnel meet and/or maintain current and valid training requirements, certifications and are fully capable to complete the duties described through the entirety of the Subcontract period of performance.

### 8.3. Government Assets

#### 8.3.1 Use of Government Vehicles

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | There is <b>NO</b> anticipated need for any SUBCONTRACTOR employees to use a Government-furnished vehicle in the performance of this SOW. The SUBCONTRACTOR's employees, therefore, are specifically prohibited from driving any Government-furnished vehicles under the performance of this SOW unless this SOW is formally so modified by the parties and the employee(s) will present a valid driver's license to the STR for review. |
| <input type="checkbox"/>            | One or more SUBCONTRACTOR employees will have access to Government-furnished vehicles while performing this SOW.                                                                                                                                                                                                                                                                                                                         |

#### 8.3.2 Government Property

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | Government Property <b>NOT</b> anticipated to be furnished to or acquired by the SUBCONTRACTOR under this SOW.                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/>            | Pursuant to FAR 52.245.1 – Government Property, the following Government-owned property will be furnished to the SUBCONTRACTOR. The SUBCONTRACTOR shall be responsible for managing the Government-Furnished Property (GFP) below and/or Contractor-Acquired Property (CAP) as required in accordance with FAR 52.245-1. A list of the property to be furnished to the SUBCONTRACTOR can be found in Appendix Choose an item, along with any special technical and/or handling instructions. |

### 8.4. Permits

Except for permits furnished by MSTS the SUBCONTRACTOR shall, without additional expense to the MSTS be responsible for obtaining any and all necessary licenses and permits.

The SUBCONTRACTOR shall also be responsible and liable for all materials delivered and Work performed until completion and acceptance of the entire Work, except for any completed unit of Work which may have been accepted under the SUBCONTRACTOR.

### 8.5. Quality Assurance (QA)

| The work as described has been identified to be. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/>                         | <p><b>SAFETY CLASS/SAFETY SIGNIFICANT SERVICES AND/OR COMMODITIES (NUCLEAR/RADIOLOGICAL)</b></p> <p>This PO is related to items or services used in support of the nuclear and/or radiological mission(s) of the Nevada National Security Site, therefore:</p> <p>The SUBCONTRACTOR shall implement and maintain a Quality Assurance (QA) program in accordance with at least one the following quality assurance criteria and requirements:</p> <ul style="list-style-type: none"> <li>• ASME NQA-1 (2015) quality assurance requirements for nuclear facility applications</li> <li>• ASME NQA-1 (2008 with 2009 addenda) quality assurance requirements for nuclear facility applications</li> <li>• Equivalent program authorized in writing by the contractor's quality assurance organization</li> </ul> <p>In addition, the SUBCONTRACTOR shall be responsible for:</p> <p>Price Anderson Amendments Act (PAAA)</p> <p>The item or service identified in the purchase order agreement is being procured by a contractor to the Department of Energy (DOE)/National Nuclear Security Administration (NNSA). This item or service is intended to be used in the performance of activities that (1) prevent or mitigate radiological or harm to the worker, the public or the environment or (2) provide a healthful and safe workplace for DOE/NNSA contractor personnel. Therefore, the SUBCONTRACTOR is responsible for assuring that the items or services provided under this purchase agreement meet the stated requirements.</p> <p><b>SUSPECT/COUNTERFEIT ITEMS</b></p> <p>The SUBCONTRACTOR will take positive measures to ensure that only new, unused equipment/material from acceptable sources is provided under this subcontract. Notwithstanding, any other provisions of this subcontract, should any suspect/counterfeit items or components be found within or on this equipment during CONTRACTOR receipt inspection, SUBCONTRACTOR shall, at its expense, promptly replace such items or components.</p> |
| <input checked="" type="checkbox"/>              | <p><b>GENERAL SERVICES AND/OR COMMODITIES</b></p> <p>This PO is for items or services that support the mission(s) of the Nevada National Security Site, therefore:</p> <p><b>SUSPECT/COUNTERFEIT ITEMS REQUIREMENTS:</b></p> <p>The SUBCONTRACTOR will take positive measures to ensure that only new, unused equipment/material from acceptable sources is provided under this subcontract. Notwithstanding, any other provisions of this subcontract, should any suspect/counterfeit items or components be found within or on this equipment during CONTRACTOR receipt inspection, SUBCONTRACTOR shall, at its expense, promptly replace such items or components.</p> <p>These requirements shall be flowed down to all levels of SUBCONTRACTORS as it pertains to this procurement activity.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### 8.6. Lower-Tier Subcontracts

As addressed in accordance with the Basic Master Agreement.

## B-9 ENVIRONMENTALLY PREFERABLE PRODUCTS

As addressed in accordance with the Basic Master Agreement.

## B-10 MEETINGS

After Task Order Release award, a Subcontract Kickoff Meeting is requested, which may be a conference call, an internet meeting, or a meeting to be held at MSTS. The time, date, and agenda for the meeting will be provided to the SUBCONTRACTOR by MSTS.

The SUBCONTRACTOR shall interface with various MSTS (and other) organizations through MSTS' Procurement Specialist (or STR for in-scope work), as required, or at points and frequency determined by the Procurement Specialist.

MSTS will issue meeting notices and prepare an agenda and minutes for each meeting addressed in this Section. When applicable, minutes will identify action items, assigned actioner, and due dates. The purpose of the meetings is the exchange of work-related information. The person or persons designated by the SUBCONTRACTOR to attend all meetings shall have all required authority to make decisions and commit SUBCONTRACTOR to technical decisions made during meetings.

- A. **Site Labor Conference:** Will be held between MSTS, the appropriate union(s), and the SUBCONTRACTOR before work commences at the NNSS in accordance with the applicable Project Labor Agreements.
- B. **Kickoff Meeting:** after issuance/acceptance of the subcontract, MSTS will conduct a meeting with the SUBCONTRACTOR and major lower-tier SUBCONTRACTORS. The meeting's purpose is to provide the SUBCONTRACTOR with additional information as required to accomplish the scope specified in this SOW, and to develop lines of communications, and a working relationship. This meeting will focus on a discussion of the work scope and goals and roles and responsibilities of each participant. Pertinent documents will be reviewed discussed. The SUBCONTRACTOR shall prepare meeting minutes that emphasize agreements, commitments, and planned actions.  
  
The SUBCONTRACTOR shall submit the final minutes after the meeting in accordance with the Submittal Register.
- C. **BEEF Meetings:** SUBCONTRACTOR shall attend daily pre-job or POD meeting located at BEEF doublewide.
- D. **Status Meetings:** Project status meetings will be held weekly either by MS Teams or in person to review the progress, to provide weekly schedule status, and exchange work-related information, including but not limited to design and scope changes, progress, coordination with functional utility providers, and scheduling issues. The SUBCONTRACTOR shall prepare meeting minutes that emphasize agreements, commitments, and planned actions. The SUBCONTRACTOR shall submit the final minutes after the meeting in accordance with the Submittal Register.
- E. **Safety Meetings:** SUBCONTRACTOR shall perform and document daily pre-job meeting using the MSTS Pre-job Briefing Form 1063B. Late arrivals and/or visitors shall be provided with the same daily briefing. The SUBCONTRACTOR is also required to perform a documented weekly safety meeting. This documentation shall be maintained onsite for the job duration for review upon request.

## B-11 SUBMITTALS

If the SOW requires the submittal of SUBCONTRACTOR Information, the following apply:

- The following items shall be submitted to the submittal e-mail address(es) as indicated on Appendix A, *Submittal Register*, identifies deliverables due during the execution of this subcontract and the recipient.
- The SUBCONTRACTOR shall include the Procurement Specialist and STR on the transmittal.
- Subcontractor information shall be submitted in either hard copy or electronic format (If electronic, it must

be viewable using either Microsoft® Windows®, Microsoft® Office, or Adobe® Acrobat® software).

- Submittals should consist of any information, documentation, data, etc. which will require review/approval or used as verification or acceptance of work completed.

## B-12 DELIVERABLES

### A. Schedule and Management Reports

The SUBCONTRACTOR shall submit a Monthly Activity Status Report by the fifth of each month for the previous month. The Monthly Activity Status Report shall include at a minimum the following information.

- Issues and concerns (cost, schedule, technical), recommended solutions, and progress made toward resolution.
- New or outstanding agreements and/or commitments for problem or technical issue resolution.
- Schedule performances with respect to the Performance Measurement Baseline for current month and contact-to-date.
- Action Items List showing the cumulative status of action.
- As built design drawings and manuals for all installed equipment.

- B. The SUBCONTRACTOR is required to participate in the project turnover process by assisting the STR and Construction Manager in developing and completing the project punch list. The SUBCONTRACTOR shall notify the STR and CM no later than one (1) day after completing the punch list item(s).

## B-13 PROJECT CONTROLS, MILESTONES & PERFORMANCE SCHEDULE REQUIREMENTS

### A. Performance Schedule

The SUBCONTRACTOR shall submit its project schedule for approval no later than ten (10) calendar days after Notice of Award covering activities for the duration of the Subcontract and in accordance with the Submittal Register. The resource loaded schedule shall identify logical sequence and relationship of activities for design, submittals, procurement, delivery, installation, subcontracted work, milestones, and testing and inspections of the work covered by the subcontract. There shall be sufficient detail that identifies the major identifiable elements of the project that constitute a reasonable basis for progress reporting and/or payment. This shall be at a discrete level to reveal facility and system work sequencing as applicable. Activity durations shall be in working days. The schedule shall be based on MSTS's 4-10 work schedule (Monday through Thursday). The 4-10 working schedule closure days shall be as nonworking days on the SUBCONTRACTOR's schedule. The SUBCONTRACTOR schedule shall include line-item resource loading as an attachment to the project schedule. The schedule shall identify the dollar amounts for labor and materials separately for each activity shown on the schedule at a level of detail providing an accurate expenditure plan by month or other work breakdown consistent with request for progress requests.

## B-14 APPENDIX

| APPENDIX NUMBER | TITLE              | REV   | PAGES    |
|-----------------|--------------------|-------|----------|
| Appendix A      | Submittal Register | Rev 1 | <b>3</b> |

| <i>APPENDIX<br/>NUMBER</i> | <i>TITLE</i>                                                                              | <i>REV</i> | <i>PAGES</i> |
|----------------------------|-------------------------------------------------------------------------------------------|------------|--------------|
| Appendix 1.1               | FRM-3176 Risk Register-Common Projects                                                    | NA         | 6            |
| Appendix 1.2               | Work Breakdown Structure-WBS                                                              | NA         | 12           |
| Appendix 1.3               | Detailed Design Drawing Requirements MSTS                                                 | 0          | 6            |
| Appendix 1.4               | MSTS Building Authority NNSS Construction Office and Equipment Trailer Permit Application | 06/23/25   | 3            |

The SUBCONTRACTOR shall meet the required schedule and provide the documents specified in accordance with the following submittals.

## APPENDIX A SUBMITTAL REGISTER

### Section A: Purchase Order/Subcontract Information

|                                    |                                                        |
|------------------------------------|--------------------------------------------------------|
| Subcontractor Name:                | SOW Title: TO-1 HVAC Replacement BEEF Bunker<br>04-300 |
| Purchase Order and Release Number: | Requisition Number:                                    |

### Section B: Submittal Delivery Requirement

Submittals shall be electronically, unless otherwise noted, to: *Procurement Specialist; Vanessa Clark, Clarkvl@nv.doe.gov and Subcontract Technical Representative; Wisam AlShammary, alshamwj@nv.doe.gov*  
*Insert any special notes. DO NOT INCLUDE internal distribution notes.*

### Section C: Submittal Requirement Details

| NO.  | TITLE                                                   | REFERENCE        | DUE DATE / FREQUENCY                               | REVIEWED BY     | COMMENTS                                            |
|------|---------------------------------------------------------|------------------|----------------------------------------------------|-----------------|-----------------------------------------------------|
| 001. | Subcontract Project Schedule                            | <i>Exhibit B</i> | No later than 10 calendar days from date of award, | ProcSpec<br>STR | Prior to the start of work                          |
| 002. | Discovery Phase Validation Document                     | <i>Exhibit B</i> | Per approved SUBCONTRACTOR Schedule, in TO         | STR             |                                                     |
| 003. | Universal Conceptual Design, Planning/Development Phase | <i>Exhibit B</i> | Per approved SUBCONTRACTOR Schedule, in TO         | STR             |                                                     |
| 004. | Monthly Progress Reports, Planning/Development Phase    | <i>Exhibit B</i> | Per approved SUBCONTRACTOR Schedule, in TO         | STR             |                                                     |
| 005. | Design Development Submittal [60%] Design Phase         | Exhibit B        | Per approved SUBCONTRACTOR Schedule, in TO         | STR             | All documents, drawings, and specification required |

## APPENDIX A SUBMITTAL REGISTER

### Section A: Purchase Order/Subcontract Information

|                                    |                                                        |
|------------------------------------|--------------------------------------------------------|
| Subcontractor Name:                | SOW Title: TO-1 HVAC Replacement BEEF Bunker<br>04-300 |
| Purchase Order and Release Number: | Requisition Number:                                    |

### Section B: Submittal Delivery Requirement

Submittals shall be electronically, unless otherwise noted, to: *Procurement Specialist; Vanessa Clark, Clarkvl@nv.doe.gov and Subcontract Technical Representative; Wisam AlShammary, alshamwj@nv.doe.gov*  
 Insert any special notes. **DO NOT INCLUDE** internal distribution notes.

### Section C: Submittal Requirement Details

| NO.  | TITLE                                                   | REFERENCE | DUE DATE / FREQUENCY                       | REVIEWED BY | COMMENTS                                            |
|------|---------------------------------------------------------|-----------|--------------------------------------------|-------------|-----------------------------------------------------|
| 006. | Design Development Submittal [90%] Design Phase         | Exhibit B | Per approved SUBCONTRACTOR Schedule, in TO | STR         | All documents, drawings, and specification required |
| 007. | Final Design Documentation Submittal [IFC] Design Phase | Exhibit B | Per approved SUBCONTRACTOR Schedule, in TO | STR         | All documents, drawings, and specification required |
| 008. | IFC Drawings, Design Phase                              | Exhibit B | Per approved SUBCONTRACTOR Schedule, in TO | STR         | All documents, drawings, and specification required |
| 009. | Baseline Construction Schedule, Design Phase            | Exhibit B | Per approved SUBCONTRACTOR Schedule, in TO | STR         |                                                     |
| 010. | Monthly Project Report, Design Phase                    | Exhibit B | Per approved SUBCONTRACTOR Schedule, in TO | STR         |                                                     |
| 011. | As Built Drawings, Close Out Phase                      | Exhibit B | Per approved SUBCONTRACTOR Schedule, in TO | STR         |                                                     |

## APPENDIX A SUBMITTAL REGISTER

### Section A: Purchase Order/Subcontract Information

|                                    |                                                        |
|------------------------------------|--------------------------------------------------------|
| Subcontractor Name:                | SOW Title: TO-1 HVAC Replacement BEEF Bunker<br>04-300 |
| Purchase Order and Release Number: | Requisition Number:                                    |

### Section B: Submittal Delivery Requirement

Submittals shall be electronically, unless otherwise noted, to: *Procurement Specialist; Vanessa Clark, Clarkvl@nv.doe.gov and Subcontract Technical Representative; Wisam AlShammary, alshamwj@nv.doe.gov*  
*Insert any special notes. DO NOT INCLUDE internal distribution notes.*

### Section C: Submittal Requirement Details

| NO.  | TITLE                                                                                                 | REFERENCE               | DUE DATE / FREQUENCY                             | REVIEWED BY     | COMMENTS                                                                                                |
|------|-------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------|
| 012. | Timesheets/Field Tickets Progress Report/Employee Count                                               | <i>insert reference</i> | Monthly, NLT 5 <sup>th</sup> day of new month    | ProcSpec<br>STR |                                                                                                         |
| 013. | Subcontract Hours, FRM-1253                                                                           | <i>Exhibit E</i>        | On or prior to the 28 <sup>th</sup> of the month | STR             |                                                                                                         |
| 014. | Monthly Total Recordable Incident Rate (TRIR) and Days Away, Restricted or Transfer Case Rate (DART): | <i>insert reference</i> | On or prior to the 28 <sup>th</sup> of the month | STR             |                                                                                                         |
| 015. | Injury/Illness Infraction Report, FRM-0018                                                            | <i>insert reference</i> | Immediately upon incident                        | STR             | The SUBCONTRACTOR is required to report all job-related injuries and illnesses, regardless of severity, |
| 016. | NNSS Construction Office and Equipment Trailer Permit Application                                     | Exhibit B               | 28 days prior to being on site                   | STR             |                                                                                                         |

NLT = No Later Than  
 NTP = Notice to Proceed  
 TLO = Transmittal Letter Only