STATEMENT OF WORK

(SOW)

B505 UPS Assessment Deficiencies Repair

ZONE 2, CAMP ARIFJAN

AJ25-0005

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PROJECT BACKGROUND

In reference to project AJ24-0468, a UPS assessment had been conducted and found out that four numbers of UPS system including each associated electrical equipment are on their End-of-life cycle. Replacing those UPS system will solve some technical issues to power supply of critical loads connected to each UPS. Batteries are not giving the full backing time as per the requirement that may put the critical loads at risk. Apart from that, all the DB's connected to each UPS are not suitable for critical loads, replacing those DB's with individual RCBO's per circuit will solve the issue of tripping the whole panel if one circuit has fault.

1. OBJECTIVE

The objective of this SOW is to provide specifications and requirements to correct all the deficiencies of UPS in B505 refering to previous assessment.

2. SCOPE

2.1. The Contractor shall provide all labor, equipment, tools, supplies, materials, and logistics support required for the UPS deficiencies repairs at B505, Zone 2 , CAMP ARIFJAN.

2.2. The Contractor shall submit a method statement for all material installation. All material and method statements must be approved by the Directorate of Public Works (DPW) prior to the procurement of materials. All work described herein shall be performed within the specifications outlined in this SOW and in accordance with corresponding drawings. The Contractor shall provide all labor, equipment, tools, supplies, materials, and logistic support required to execute all the works mentioned in this SOW.

3. PERIOD OF PERFORMANCE

The Period of Performance is **190 Calendar Days** from award of contract to final project acceptance.

4. PROJECT REQUIREMENTS

4.1. The Contractor shall exercise extreme care in handling, placement, and installation of required items and tasks. All installation shall comply with the latest editions of International Building

Codes (IBC), U.S. Federal Laws, Local Kuwait Codes and Ordinances, Environmental Protection Agency (EPA), Occupational Safety & Health Administration (OSHA), British Standard (BS), National Fire Protection Association (NFPA), National Electric Code (NEC, only if applicable) / applicable Host Nation standards Ministry of Electricity & Water (Kuwait MEW), Ministry of Public Works (MPW), ASHRAE, AWWA, ARCENT Theater Electrical Standards, ASG-KU and DPW Policy Memorandums, Unified Facilities Criteria (UFC), and all other regulatory standards and applicable policies. Contractor shall perform within the specified time frame to meet mission requirements. In case of conflict among the referenced standards and codes, the most stringent provision will govern.

4.2. All work shall comply with all federal, local, regional, and Kuwait Government laws, rules, regulations, or standards concerning environmental pollution control and abatement. Prior to placing an order for any equipment or material, the Contractor shall submit comprehensive documents comprising of working drawings, catalogues and descriptive literature of components, maintenance manuals, samples, etc. for review and approval.

4.3. The Contractor assumes responsibility for delivery and transportation to the site of all personnel, materials, and equipment excluding, if applicable, panels/boards and HVAC equipment. COR will verify the materials are staged on site by physical inspection. All material shall be inspected verified and approved by SCO for accuracy, quantity, damages, and required specifications. All material not meeting the requirements will be removed from the site by the Contractor. The Contractor is responsible to always maintain and organize the designated work areas, to minimize safety incidents. All materials and equipment shall be stored in a safe place and properly organized. If for any reason materials are damaged, lost or stolen, the Contractor shall replace the materials prior to use, at the Contractor's expense.

4.4. Contractor shall reference through KO all mentioned Requirements, Directives, Policies, Specifications, Regulations, and Technical Standards & References when proposing, procuring, and executing the tasks outlined within this SOW. Materials and Executed Tasks not adhering to US DOD, ASG-KU, and USARCENT standards will not be accepted.

4.5. The contractor shall identify and provide all those items which are not mentioned in the SOW in full compliance with all applicable codes and standards.

4.6. The Contractor shall make a site investigation prior to producing a Quote to determine all services, locations, and site requirements.

4.7. The contractor shall complete work within the agreed Period of Performance for the Sub-Contract.

4.8. Contractor shall immediately notify the KO, if originally awarded Contractor intends to Re-Subcontract any requirements included in this scope of work, for KO approval. Prime Contractor shall provide the below listed for approval prior to engaging in a Third-Party Subcontract:

4.8.1. Staff numbers and qualifications

4.8.2. Past performance demonstrating experience in similar work (minimum five similar projects)

4.9. Delivery, Storage, and Handling of Material: Contractor shall protect all materials from contaminants such as refrigerants, grease, oil, and dirt. Contractors shall ensure materials can be accurately identified after bundles are broken and tags removed. The Contractor shall exercise extreme care in handling, placing, and installing required items and tasks.

4.10. **Procurement/Materials:** All Contractors and Subcontractors must ensure that Installation Materials prepared in the BOM (Bill of Materials) submitted for review and acceptance prior to being procured and installed on ASG-KU facilities, conform to the specifications outlined in the ASG-KU DPW Master Catalog of approved Materials. The catalog will be made available by the Contractor upon request. Similar items from the Master Catalog can be substituted for items that are not currently listed. Items proposed by vendors which are not listed in the Master Catalog of approved Materials must be approved by DPW via the submittal process.

4.11. GENERAL CONDITIONS:

4.11.1. **Billing:** Contractors shall only provide invoicing for completed work that has been inspected and accepted by KO per the approved Project Schedule. Incremental billing may be submitted upon the completion of the defined Project Milestones of 30%, and 60% as determined in the approved Schedule. The Contractor shall submit requests for Milestone Payments with proper justifications of the Milestone Inspections Reports together with evidence of any subsequent punch list corrections. Final billing will only be provided upon final acceptance of the project by SCO and upon delivery of all project deliverables as outlined in the SOW.

4.11.2. **Inspections:** COR maintains the right to inspect all works called for by the Contractor, to the extent practicable, at any time or location during the period of performance. Interim Milestone Inspections and any corresponding acceptance by COR does not relieve the Contractor of completing all works as stated in the SOW.

4.11.3. **Verification:** The KO or COR verify all work for quality, form, fit, function, conformance with specification and billing purposes at each stage of Milestone Completion (30%, 60%, 90%, Pre-Final and Final).

4.12. PROJECT SITE:

4.12.1. **Site Location: ZONE 2, CAMP ARIFJAN**

4.12.2. **Disruption of Activities:** The Contractor shall schedule and execute this project in such a way that limits disruptions to ongoing operations. If a power outage is required, Contractor shall be responsible for isolating the affected area and providing back-up power if needed.

4.12.3. **Mobilization & Laydown / Storage Area:** The Contractor shall submit the areas required for mobilization and installation as a submittal to KO.

4.12.4. **Existing Conditions:** The Contractor shall field verify all measurements and existing conditions prior to placing any material orders.

4.12.5. **Dig Permit:** The Contractor shall obtain all necessary permits and permissions required for this work. If required, Contractor shall submit Dig Permits to CO at least 30 days in advance prior to any excavating. The Contractor shall not perform any digging/excavation until Dig Permit approvals are obtained.

4.12.6. The contractor shall be deemed to have visited the site, acquainted themselves with the prevailing conditions, and investigated the extent of work thoroughly. No claims whatsoever should be considered about said work.

4.12.7. Regarding the location of existing underground pipelines, sewers, cables, etc., Contractor shall verify their locations, and request/post on site a DPW/PWD official Dig Permit, before commencing any work.

5. PROJECT SPECIFICATIONS

5.1. **PROJECT TASKS**: The Contractor shall execute/provide the following for this:

5.1.1. Replace UPS1,UPS2,UPS3, and UPS6 not limited to batteries, Transformers, racks, cables, main feeder, Disconnect Switches and any other items which required UPS to run efficiently as required by this scope of work.

5.1.2. Replace all DB's associated to each load side of UPS 1 to UPS 8.

5.1.3. Provide temporary power supply on each computers, data racks and other equipment required by the client by connecting to the nearest circuits o the same voltage and frequency. Must conduct a load and connection assessment before connecting to other circuit for temporary power supply.

5.1.4. Hauling of all dismantled equipment and infrastructure to KO designated place.

5.1.5. Install all the required labeling from feeder to UPS to DB's, and to Receptacles.

5.1.6. Conduct all testing and commissioning prior to energization and turn over.

5.1.7. Conduct a sequence of operation training to all the parties required.

5.2. **Subcontractor**: If the contractor further contracts any work out to another organization or entity, all requirements set forth in this SOW will flow down to the subcontractor from the Contractor. Subcontractor information is required and will be made available to KO prior to any work activities,

for KO approval. This information shall be provided as a submittal. All personnel on site working directly or indirectly for the Contractor will adhere to all the requirements set forth in this SOW. If the Contractor is to submit any certificates/licenses or obtain any permits prior to conducting any works on ASG-KU installations, then the same will apply to subcontractor.

5.3. SITE PREPARATION

5.3.1. Site Description and Constraints:

- Before site preparation begins, the Contractor shall submit a plan for the proposed installation sequence, means of access, space for storage of materials and equipment, and use of approaches and corridors to COR.
- Contractor will request 10 days in advance through COR for coordination to isolate any utilities prior to start of any work involving utility shutdown.
- The contractor will remove all existing components to be replaced and dispose of them in accordance with para 11 of SOW

5.4. CIVIL SPECIFICATIONS:

NOT APPLICABLE

5.5. MECHANICAL SPECIFICATIONS:

NOT APPLICABLE

5.6. FIRE ALARM/PROTECTION SPECIFICATIONS:

NOT APPLICABLE

5.7. ELECTRICAL SPECIFICATIONS:

5.7.1. The Contractor shall refer the specification to U.S. standards (e.g., NFPA 70,NEMA, ANSI, IEEE, etc.) for electrical work is made to establish a level of quality and standardization for this project. Other internationally recognized standards such as British Standards (BS) and International Electrotechnical Commission (IEC), which have been adopted as local acceptable standards in Kuwait, shall be used to define equivalent quality and standardization in compliance with local requirements. All electrical equipment shall have Kuwait ratings in accordance with the Ministry of Electricity and Water (MEW).

5.7.2. In case of conflict between standards, the most stringent will take precedence. (from highest to lowest).

- Theater Electrical Standard
- Technical Direction Bulletin (TBD)
- UFC (Unified Facilities Criteria)
- The Sand Book 415-1
- USFOR-A fire Prevention SOP
- NEC (60 Hz) / British Standard 7671 (50 Hz)
- Memorandum for Record

5.7.3. Contractor shall procure, install, and test all electrical material, infrastructures and controls needed on this project.

5.7.4. Contractor shall coordinate for unit responsibility for escorts to work in B505. Notification of escorts and work schedule shall be communicated to DPW by 14 days in advance.

5.7.5. **Contractor shall submit a Quote for 60 minutes back-up time. (UPS-1, UPS-2, UPS-3, UPS-6)**

5.7.6. Contractor shall comply to Buy American Act, means avoid product manufactured in “NO” countries (China, Thailand, India, Cuba, North Korea, Iran, Sudan, Burma/Myanmar).

5.7.7. **UPS 1:** Contractor shall supply and install new 100 kVA static uninterruptable power supply (UPS) using double conversion type to replace the existing 80 kVA UPS. New UPS must have a built-in bypass switch for maintenance purposes.

- Contractor shall supply and install new 100 kVA, 3 Phase, 415V/240V to 208V/120V, 50/60 Hz, Dry type step down transformer to replace the existing 80 kVA transformer.
- Contractors shall replace all the existing batteries with new batteries according to the capacity requirements.
- Contractor must upgrade the MCCB and bus bar arm in MSB-1 to 175A capacity to feed the new 100 kVA UPS.

- Contractor must upgrade the cable size to 4C x 95 mm2 Cu/XLPE Cable and 50 mm2 PVC ground wire from MSB-1 to UPS-1. Armored cable is not required if securely installed in cable tray/ladder and not subject to physical damage.
- Contractor shall supply and install 4 pole disconnect switch before and adjacent to UPS-1.
- Contractor shall supply and install battery disconnect switch to replace the existing DS with the correct capacity.
- Contractor shall replace all the cables and grounding wire from Disconnect switch to UPS, to Transformer, to batteries and secure it to cable tray.
- Contractor shall replace the existing battery racks with **new battery cabinet** and size according to the new numbers of batteries and complying to UFC 3-520-05 Section 2-2.3 to 2-2.4.
- Contractor shall replace the DB's associated to UPS-1. These are DB-9A to DB-9B with the same number of circuits and breaker capacity, the only difference is invidual MCB's will be replace with 30 mA RCBO.

5.7.8. **UPS 2:** Contractor shall supply and install new 200 kVA static uninterruptable power supply (UPS) using double conversion type to replace the existing 200 kVA UPS. New UPS must have an built-in bypass switch for maintenance purpose.

- Contractor shall perform testing and servicing to existing 200 kVA, 3 Phase, 415V to 208V, 50/60 Hz, Dry type step down transformer.
- Contractor shall replace all the existing batteries with new batteries according to the capacity requirements.
- Contractor shall supply and install 4 pole disconnect switch before and adjacent to UPS-2. Remove the existing bypass switch arrangement and connect the UPS-2 directly to the new disconnect switch
- Contractor shall supply and install battery disconnect switch to replace the existing DS with the correct capacity.
- Contractor shall replace all the cables and grounding wire from Disconnect switch to UPS, to Transformer, to batteries and secure it to cable tray.
- Contractor shall replace the existing battery racks with **new battery Racks** and size according to the new numbers of batteries and complying to UFC 3-520-05 Section 2-2.6.

- Contractor shall replace the DB's associated to UPS-2. These are DB-1A to DB-8A with the same number of circuits and breaker capacity, the only difference is invidual MCB's will be replace with 30 mA RCBO.

5.7.9. **UPS 3:** Contractor shall supply and install new 40 kVA static uninterruptable power supply (UPS) using double conversion type to replace the existing 40 kVA UPS. New UPS must have an built-in bypass switch for maintenance purpose.

- Contractor shall perform testing and servicing to existing 40 kVA, 3 Phase, 415V to 208V, 50/60 Hz, Dry type step down transformer.
- Contractor shall replace all the existing batteries with new batteries according to the capacity requirements.
- Contractor shall supply and install 4 pole disconnect switch before and adjacent to UPS-2. Remove the existing bypass switch arrangement and connect the UPS-2 directly to the new disconnect switch
- Contractor shall supply and install battery disconnect switch to replace the existing DS with the correct capacity.
- Contractor shall replace all the cables and grounding wire from Disconnect switch to UPS, to Transformer, to batteries and secure it to cable tray.
- Contractor shall replace the existing battery racks with **new battery Racks** and size according to the new numbers of batteries and complying to UFC 3-520-05 Section 2-2.6.
- Contractor shall replace the DB's associated to UPS-3. These are DB-12A and DB-13A with the same number of circuits and breaker capacity, the only difference is invidual MCB's will be replace with 30 mA RCBO.

5.7.10. **UPS 6:** Contractor shall supply and install new 40 kVA static uninterruptable power supply (UPS) using double conversion type to replace the existing 20 kVA UPS. New UPS must have a built-in bypass switch for maintenance purpose.

- Contractor shall supply and install new 40 kVA, 3 Phase, 415V/240V to 208V/120V, 50/60 Hz, Dry type step down transformer to replace the existing 20 kVA transformer.
- Contractor shall replace all the existing batteries with new batteries according to the capacity requirements.
- Contractor shall supply and install 4 pole disconnect switch before and adjacent to UPS-1.

- Contractor shall supply and install battery disconnect switch to replace the existing DS with the correct capacity.
- Contractor shall replace all the cables and grounding wire from Disconnect switch to UPS, to Transformer, to batteries and secure it to cable tray.
- Contractor shall replace the existing battery racks with **new battery cabinets** and size according to the new numbers of batteries and complying to UFC 3-520-05 Section 2-2.3 to 2-2.4.
- Contractor shall replace the DB's associated to UPS-6. The DB-10A with the same number of circuits and breaker capacity, the only difference is invidual MCB's will be replace with 30 mA RCBO.

5.7.11. **UPS 7:** Contractor shall replace the DB's associated to UPS-7. These DB's are DB-14A and DB-15A with the same number of circuits and breaker capacity, the only difference is invidual MCB's will be replace with 30 mA RCBO.

5.7.12. **UPS 8:** Contractor shall replace the DB's associated to UPS-8. The DB-11A with the same number of circuits and breaker capacity, the only difference is invidual MCB's will be replace with 30 mA RCBO.

5.7.13. Contractor shall install all UPS with a 415V/240V, 50 Hz input and 415V/240V, 60 Hz output and connect to step down transformer.

5.7.14. **Batteries:** Contractor shall use Valve-regulated Lead Acid Batteries (VRLA), Because VLA Batteries will not satisfy the design and installation requirements like the available space, and eyewash station requirements. Valve-regulated Lead Acid Batteries (VRLA) Batteries must satisfy the required application in UFC 3-520-01 Section 3-11.1.2.1 and 3-11.1.2.1. Batteries for UPS applications should be rated for UPS or high-rate use.

5.7.15. **Battery Chargers:** Use single phase chargers for smaller applications. Use 240V single phase chargers, unless 120V is available. Use three-phase chargers if the charger's dc output current will be greater than 75A. Unless the battery has specific requirements to the contrary, all chargers should be of the constant voltage type.

5.7.16. **Battery Protection:** Install a circuit breaker or fused protection device as close to the battery as possible. Provide overcurrent protection for each string in a parallel battery system. Refer to IEEE Std 1375 for additional guidance. If the DC conductors leave a separate battery room. Provide a disconnect device outside the room near the entrance, or provide a shunt trip device near the entrance that opens a disconnect device inside the battery room.

5.7.17. VRLA batteries shall have temperature compensated charging base on battery temperature not the ambient temperature.

5.7.18. Do not use type **AC, NM, NMC, NMS, and UF** cable in battery rooms**.** Do not use **flexible metal conduit or flexible metallic tubing**.

5.7.19. **Battery Cabinets (UPS 1 & 6):** Provide cabinets that are a commercial manufactured product, designed and UL listed or third-party verified and tested for battery containment. Provide a minimum 200mm (8 in) working clearance around the batteries within the cabinet or provide drawout racks that allow for the specified working clearance. Cabinets is required on this location because there are some communication engineers/technician going in and out inside the room.

5.7.20. **Battery Racks (UPS 2 & 3) :** Provide racks from the same manufacturer that supplies the battery. Racks and trays must resist corrosion from continuous exposure to a 70 percent concentration of the electrolyte's acid or base chemical. Select the battery rack to fit within the defined footprint while also satisfying the need for maintenance access. Refer to UFC 3-520-05, Figure 2-1 and Figure 2-2.

5.7.21. Bond conductive battery racks, cabinets, and cable racks/trays to ground using minimum 16 mm2 conductors (yellow/green).

5.7.22. All DB's and disconnect assembly must comply to ATES, IEC 61439, and DPW Policy 12A & 12B. Equip panelboards with separate ground bus bars and insulated neutral bus bars to isolate the bus bar, when required by code. Circuit breakers must be bolt-on type unless where specifically indicated otherwise for load center type panelboards. Panelboards and load centers with up to 54 poles may be used. Do not use dual section panelboards. Provide with hinged fronts to allow safer maintenance access for electrical safety. Clearly fill out panelboard circuit directories indicating the specific load location, such as "Lights, Room 102". Circuit breakers, disconnect switches, and other devices that are electrical energyisolating must be lockable in accordance with NFPA 70E and OSHA 1910.303.

5.7.23. Contractor shall supply and install necessary labeling and warning sign in all new DB's in accordance to IEC 61439. Labeling must indicate "Feed from" and "Feed to" , voltage, and frequency engrave in a phenolic or aluminum type material.

5.7.24. Contractors shall install labeling to all power outlets supplied by each UPS. Label indicates UPS Number, DB name, circuit number, and voltage.

5.7.25. Contractor shall provide temporary power supply to all power outlets of computers and equipment that require by the client to be remain energize. Contractor can temporary connect to nearest DB with the same voltage and frequency provided that a load study and connections will be address.

5.7.26. It is contractor responsibilities to haul all dismantled infrastructure and transport to DPW designated place.

5.7.27. Contractor shall submit a warranty certificate of UPS, Batteries, and Distribution panels from the Manufacturer.

5.7.28. Contractor shall perform earth fault loop impedance test and insulation resistance test on each wire of UPS DB circuits. Record the results and submit to DPW or COR for further evaluation.

5.7.29. Contractor shall perform tesing and commissioning. All test report must be approved and submitted to COR and DPW by ACONEX.

5.8. COMMUNICATIONS SPECIFICATIONS:

RESERVED

5.9. PROJECT EXECUTION:

5.9.1. A method of statement shall be submitted stating the detailed execution procedure and its phases.

6. REQUEST FOR Quote (RFQ)

6.1. The Contractor shall prepare a technical and commercial Quote, detailing the method of execution, labor, equipment, and materials required to complete the works. The Quote and all supporting information, documentation, drawings, and calculations shall be submitted to the KO or Contracting Specialist. The following sections shall be part of the Quote:

6.1.1. Project introduction and understanding

6.1.2. Technical Quote including the method of execution and QA/QC procedures,

6.1.3. Equipment plan, with list of equipment to be provided,

6.1.4. Labor plan, with number of labors, positions as well as names and qualifications of Key Personnel to be provided,

6.1.5. List of materials to be provided,

6.1.6. Period of Performance and Project Schedule (Gantt chart in MS Projects Format)

6.1.7. Material data sheets and certificates

6.1.8. Past performance demonstrating experience in similar works (Minimum three similar projects),

6.1.9. Risk Assessment and Mitigation Plan to identify any risks to performance of required schedule.

6.2. Review of the Quote and acceptance by KO is for general compliance with project documents, permits and specifications. Sole responsibility for correctness of dimensions, details, and quantities during installation remains with the Contractor. Comments made during the Quote review do not relieve the Contractor from complying fully with the Statement of Work and applicable codes, standards, and guidelines.

7. INSPECTION/ACCEPTANCE

7.1. Inspection and Acceptance shall take place upon completion of final inspection and submission of all specified requirements per this project. The works must be deemed acceptable by DPW/ASG-KU before the USG takes ownership.

7.2. The Contractor shall carry out all necessary checks and tests to prove that the completed installations fully comply with specified requirements. Tests not carried out in the presence of KO, shall not be regarded as valid for the purpose of the Subcontract unless the KO shall have authorized the Contractor to proceed with the testing process in his absence. The Contractor shall submit certified, numbered, written test reports to include the following: Test procedures used and test conditions, the date and time of the test, the ambient conditions, and a fully detailed description of the test(s) carried out, the result obtained, and any relevant performance curves, results of failed tests and corrective action taken to achieve test results that comply with requirements.

7.3. **FINAL ACCEPTANCE**: The Contractor shall request through the COR/DPW a final inspection for the Project. This inspection will take place at project completion

or end of Period of Performance. Attendance at the final inspection is mandatory for the Contractor and their skilled personnel to test any part of the system as required by DPW. The Contractor's representative must be able to speak on behalf of the company and able to obligate the Contractor. The final inspection will be attended by the COR, DPW Inspector(s), and Contractor. Inspection will be based on all contractual agreements as made in the SOW and on any approvals obtained formally by respective control forms (e.g.: Form 4025), which would supersede the SOW, to ensure project completion. Any discrepancies will be added to a punch list for the contractor to complete. Upon final acceptance, by written notice, the USG will take over ownership of the project not limited to all underlying Contractual obligations.

7.4. **PUNCH LIST**: The Contractor has five (5) calendar days to complete items on the punch list.

8. CONTRACTING OFFICER REPRESENTATIVE

8.1. The Contracting Officer Representative (COR) monitors all aspects of the contract and assists in contract administration. The COR is authorized to perform the following functions:

8.1.1. Assure that the Contractor performs the technical requirements of the contract.

8.1.2. Perform inspections necessary in connection with contract performance; maintain written and oral communications with the Prime Contractor concerning technical aspects of the contract.

8.1.3. Issue written interpretations of technical requirements including Government drawings, installations, specifications.

8.1.4. Monitor Contractor's performance and notifies Prime Contractor of any deficiencies.

8.1.5. Coordinate availability of government furnished property.

8.2. The COR is not authorized to change any of the terms and conditions of the approved Scope of Work.

8.3. COR shall direct all communications concerning project planning and execution.

9. WARRANTY

9.1. The contractor shall provide all manufacturers with original warranty information for procured items 90% after completion of the Project and 12 months workmanship warranty.

10. CAMP ACCESS

10.1. **BADGING**: In coordination with the COR, the Contractor is responsible for personnel being properly badged for access to Camp Arifjan and/or Camp Buehring. The Contractor is responsible for ensuring all vehicles are

properly registered with PMO for Camp Arifjan and/or Camp Buehring. The contractor is solely responsible for ensuring the badging process is complete prior to the start of work and maintained through USG acceptance. The USG will not be responsible for delays resulting from badging issues due to Contractor failure to provide appropriate paperwork.

10.2. Contractor or Third-Party Sub found unable to provide Camp Access for required job site personnel before or during project execution may risk termination for cause and removed from the project. Adequate time and diligence in the execution of this task is paramount to successful project execution.

10.3. **CAMP BADGES**: The Contractor is responsible for returning all badges issued per this project to PWD post DPW final inspection. Delivery Note will not be signed upon passing final inspection until badges are returned.

11. SITE CLEAN-UP

11.1. The Contractor shall daily remove and properly dispose of all waste materials generated by this project in accordance with all local environmental standards or authority having jurisdiction (AHJ).

11.2. The Contractor is responsible for clean-up of any Contractor generated hazardous material produced, delivered, or stored at the emplacement site. In the event of Contractor caused fuel or hazardous chemical spill, the Contractor shall be responsible for the cleanup at their expense and shall comply with local environmental standards as applicable.

11.3. The Contractor is responsible to maintain the designated work areas organized at all times to minimize safety incidents. All materials and equipment shall be stored in a safe place and properly organized.

11.4. After finishing the project completely, the Contractor shall perform the final site cleanup.

11.5. The Contractor shall ensure that the designated work site is always left in clean and orderly condition.

12. REGULATORY COMPLIANCE

12.1. The Contractor shall comply with all provision of this SOW and U.S. and Host Nation Laws, regulations, and guidelines in the performance of this requirement, and shall meet US Military

Service standards unless otherwise stated and shall be vetted through JCCS. Pursuant to Area Support Group Kuwait (ASG-KU) Commander, the Contractor shall be responsible for the following and complying with all environmental regulations and policies established by the Government of the United States and the State of Kuwait while conducting daily operations. The Contractor shall ensure and maintain environmental compliance throughout the period of the contract. The Contractor is responsible for securing any necessary permits for excavations and hot work, prior to commencement of permit require work. In the case of conflict, the Contractor shall identify the conflict to the KO or his representative. In the absence of specific direction from Contractor SCA or PWD Project Manager, or his representative, the Contractor shall comply with the more stringent requirement.

12.2. Precedence of Documents: The Contractor shall follow all relevant codes and practices and standards as directed by the SOW. In all cases the SOW is the final document to be followed at site for Inspection. However, the approved submittal in any case overrules the SOW if approved as revised/deviation to the SOW by all concerned Parties. In case of any ambiguity in the documents or drawings, the decision of the PWD/DPW Engineer is final and Clause 13.3 is to be referred to.

12.3. Ambiguity of Statements in the SOW: If any ambiguity for the scope of work is identified during the review of the SOW, an RFI (Request for Information) will be raised by the Contractor and the same shall be responded by the Contractor in due course and in this event the decision of DPW is final and no appeal is applicable in this verdict. Any RFI response provided during solicitation shall be considered as part of this SOW.

13. PROJECT MANAGEMENT AND ADMINISTRATION

13.1. There shall be a meeting, coordinated by PWD, with all stakeholders to identify any potential issues of concern during the project. Documentation of the meeting minutes will be the responsibility of the USG, with a draft delivered to the KO PM within 48 hours.

13.2. The Contractor shall identify a Project Manager that is 100% dedicated to the project and is on site full time to provide direction on all phases of the work and respond to issues. The submittal for the proposed person for this position will include a resume and document other projects of this type, magnitude, and complexity the individual has managed to demonstrate their experience. Any changes in Project Manager will be documented with a new appointment letter vetted through the submittal process. KO reserves the right to remove the Project Manager

and Safety Manager with five to seven day's written notice, if it is deemed the person is not capable and/or performing to a level to successfully manage the project.

13.3. The KO shall be the central Point of Contact (POC) with the PWD Projects PM and shall be able to make changes for performance of all work under the contract. The Project Manager will provide e-mail addresses and telephone numbers/ organizational chart to the PWD Projects PM.

13.4. A Contractor employee shall be designated to act for the Project Manager during the latter's absence and such person shall be available at the work site. The Contractor shall provide a written 48-hour advance notice of such designation, to be approved by the KO.

13.5. The Project Manager, and any individuals designated shall have full authority to contractually bind the Contractor for prompt action on matters pertaining to execution of the contract.

13.6. The requirement to provide a full-time project manager and safety manager may be filled by the same person provided their resume demonstrates the qualifications to do both jobs. Replacement of either of these positions requires a written notification and approved submittal of the replacement.

13.7. The Contractor is obligated to host a meeting once a week to discuss and address project status and provide minutes of the meeting within 48 hours as a submittal. Prime Contractors' key representatives will be in attendance. Changes to this frequency shall be approved by the COR after proper notification to the KO and DPW team.

13.8. If the contractor further contracts any work out to another organization or entity, all requirements set forth in this SOW shall flow down to the Subcontractor.

13.9. A material staging area and work camp will be proposed and requires approval by DPW for storage of materials for the project and administrative requirements. It will be the contractor's responsibility to provide a secure storage container or fenced in area for the tools and materials stored on the job site. The US Government will be responsible for delivery of GFE to the job site at an agreed time frame. Once GFE is delivered to the jobsite and transfer of custody occurs, the Contractor assumes full responsibility for the equipment.

13.10. The USG shall provide an onsite office and be required to always maintain a full set of all project documents on the project site for access by KO, COR, and KS. These may be copies as opposed to originals. The office shall remain in place until final acceptance of the project. All temporary facilities such as storage areas, office trailers and toilet facilities must be removed within 14 days of project acceptance. All areas utilized by temporary facilities will be left clean and graded to their original condition.

14. PROJECT SCHEDULE

14.1. The project schedule communicates what work needs to be performed, which resources will perform the work along with timeframes in which that work needs to be performed. The project schedule should reflect all the work associated with delivering the project on time. Creating a schedule is one of the first tasks completed when given a project to manage, plan with the team, cover the project scope, group the task into phases, create milestones, allocate time for the tasks, plan for resources, check for errors, create/determine required "hold-points" for inspections and update on regular basis. The key building blocks of a schedule shall start with a Work Breakdown Structure WBS.

14.2. The contractor shall provide updated meeting schedules based on progress. Contractor shall submit a resource histogram showing all the average resources (Manpower and Equipment). Deviation from the baseline schedule must be approved by KO.

14.3. Project timeline and work schedule. The Contractor shall provide KO, a project schedule Gantt Chart in MS Projects format both as a static and editable version, which clearly identifies project phasing, timelines, milestones, "hold-points" (i.e., inspections, 30,60,90%, cover-up, material etc...), and resources. The schedule will clearly define the critical path for the overall project. Contractor shall provide weekly updates to COR and noted on the schedule as percentage of completion. The Contractor shall follow COR format for the presentation of the schedule.

14.4. Installation is required to proceed 6 days per week at a minimum of 8 hours per day and will be reflected as such in the submitted Gantt chart. Days off and holidays must be identified in the schedule.

14.5. The contractor shall report immediately any changes to the critical path that will impact on the project schedule to Projects Team Management. A revised schedule shall be submitted within 24 hours.

14.6. KO will document government caused delays and will modify the schedule to document government caused delays exceeding 4 cumulative calendar days within 48 hours of the hours of the 6th day of the delay.

15. RELATIONSHIP OF PERSONNEL

15.1. Personnel are Contractor employees; consequently, the Contractor is responsible for all normal employer-employee matters such as recruitment, visas, travel, insurance, pay, discipline, and termination of employment. The Contractor recognize that the personnel are an integral part of the workforce and those issues regarding quality of life, housing, pay and Contractor support that would adversely affect job performance and morale must be promptly resolved by the Contractor.

15.2. Contractors shall communicate with COR only and shall not communicate with other stakeholders directly without explicit approval from the COR.

16. QUALIFIED PERSONNEL

16.1. The contractor shall provide qualified personnel to serve as support staff as required by the terms and conditions of the contract. The personnel shall be trained and certified, to perform the tasks required. The aggregate of personnel will constitute the staff of personnel whose job titles and/or positions are set forth in this contract. Contractor shall retain a copy of all employee education, training, certifications & resume on file for COR inspection and data to support vetting of the applicants resume.

16.2. The Project Manager and Staff must be able to read, write, speak, comprehend, and convey any English directives at a level 4, proficiency.

16.2.1. **Reading Ability**:

Ability Level 4. Able to read all styles and forms of the language pertinent to professional needs. With occasional use of a dictionary, can read all materials in his special field including official and professional documents and correspondence. Can read reasonably legible handwriting without difficulty.

16.2.2. **Speaking Ability**:

Ability Level 4. Able to use the language fluently and accurately on all levels normally pertinent to professional needs. Can understand and participate in any conversation with the range of his experience with a high degree of fluency and

precision of vocabulary. It would rarely be taken for a native speaker bit can respond appropriately even in unfamiliar situations. Errors of pronunciation and grammar are quite rare. Can handle formal interpreting from and into the language.

16.2.3. **Writing Ability**:

Ability Level 4. Can draft all levels of prose pertinent to professional needs. Grammar, vocabulary, and spelling are broad and precise. Sense of style is nearly native. Errors are rare and do not interfere with understanding. Nevertheless, drafts of official correspondence and documents need to be edited by an educated native.

17. SUBMITTALS

17.1. The Contractor shall make all submittals in accordance with the specifications identified within this SOW. The Contractor shall make submittals as necessitated by the items of work identified in the SOW per the general terms and conditions of the Contract. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. The Contractor shall provide brand and manufacturer cut sheets for all proposed material components. No components, materials or equipment may be utilized in this project without prior approval from KO and or Authority Having Jurisdiction (AHJ). Contractor is responsible to provide submittals and obtain approvals for the applicable activity before starting that activity. All submittals shall be issued to KO through Aconex.

17.2. All submittals will follow PWD Projects Aconex Submittal Naming Convention. Naming convention details, base submittal register, submittals workflows and submittal timelines will be discussed during the Pre-installation meeting held after subcontract award and before execution phase.

17.3. Required Submittals will be approved by PWD Projects and DPW to include but are not limited to the following:

17.3.1. Contractor shall submit if applicable the following items for approval within **7 Calendar days** after pre- installation meeting and prior to start of work:

17.3.1.1. Prime contractors' full-time on-site Project Manager – POC Information Prime contractors' full-time on-site Safety Manager– POC Information

17.3.1.2. Detailed Submittal Register explaining the logical relationships between submittals and accordingly proposed sequence of submission

17.3.1.3. Submittals requiring "Long Lead Time" to procure

17.3.1.4. Documentation of contractors' roles and responsibilities

17.3.1.5. Key members of the contractors' management team, their roles, responsibilities and contact information

17.3.2. The contractor shall submit if applicable the following items for approval within **15 Calendar days** after pre- installation meeting and prior to start of work:

17.3.2.1. Resource-loaded Work Schedule and S-Curves in MS Project which shall be updated weekly

17.3.2.2. Documentation of qualifications for independent certified testing laboratories

17.3.2.3. Health, Safety and Environmental Plan

17.3.2.4. QA/QC Plan

17.3.2.5. Mobilization Plan

17.3.3. The contractor shall submit if applicable the minimum following items for approval within **14 Calendar days** after pre- installation meeting and prior to start of work:

17.3.3.1. Electrical works Requirements

17.3.3.2. Civil works Requirements

17.3.3.3. Industry Standard Blueprints

17.3.3.4. Industry Standard Installation and Shop Drawings

17.3.3.5. All Materials, Parts and components required to complete all work

17.3.3.6. Detailed components of work

17.3.3.7. Method Statement for all Tasks

17.4. PWD Projects and DPW shall review and Approve/Dis-Approve all Contractor provided submittals within 14 Calendar Days. Resubmission by the Contractor of any rejected submittals shall occur within 5 Calendar Days of rejection date.

17.5. The Contractor shall make submittals as necessitated by the items of work identified in the SOW, as identified in UFC 1-201-01 (dated 1 Jan 13) , and DPW Policy 7, Installation Design Guide, O & M Programs, Acceptance of Projects. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Additionally, the Contractor shall submit a baseline schedule and provide updated schedules based on progress. Deviation from the baseline schedule must be approved by the KO.

17.6. Upon project completion the Contractor shall provide hardcopy and AutoCAD or similar

program drawings for the Works. Contractor shall Submit 3 hard copies and 1 electronic copy of the drawings. Drawing shall be submitted within 3 days of USG acceptance of the project. Drawings shall be in accordance with NCS – National CAD Standard, CSI.

17.7. Name and contact information of the person responsible for managing the project for the Contractor.

17.8. Engineering drawings shall include but are not limited to Civil, Electrical and Mechanical Fire Protection Design Analysis and Life Safety Plans.

17.9. Material Data Sheets (MDS) and Safety Data Sheets (SDS) for Paints and Primer, or any other Hazardous Material used in the installation requirements outlined in this SOW.

17.10. The Contractor shall make submittals as necessitated by the items of work identified in the SOW, as identified in UFC 1-201-01 (dated 1 Jan 13), and DPW Policy 7, Installation Design Guide, O and M Programs, Acceptance of Projects. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

17.11. If required, revise and resubmit submittals within 5 business days.

17.12. Submit badging papers immediately upon Sub-Contract Award and not later than 45 days prior to requiring site access.

17.13. Submit dig-permit applications (if applicable) immediately upon Sub-Contract Award and not later than 30 days prior to excavation.

17.14. Submit utility outage requests at least 14 days prior to requiring the outage.

17.15. Submit generator request immediately upon Sub-Contract Award and not later than 60 days prior to needing the generator on site.

17.16. Submit "for installation drawings" in one (1) hard copy size A3 and in electronic format (AutoCAD DWG), for verification and approval by KO at least 14 days prior to implementing the design into installation.

17.17. The Contractor shall submit one (1) hard copy and one (1) electronic copy (AutoCAD DWG) of as-built drawings upon completion of the project.

17.18. Use "Transmittal of Shop drawings, Equipment Data, Material Samples, or Manufacturer's Certificates of Compliance" (ENG FORM 4025-R, MARCH 2012), for all submittals or deliverables provided to KO and/or DPW PO for review and approval.

17.19. Submit Daily Diary and Weekly Progress Reports.

17.20. Submit updated project program/schedule weekly.

17.21. Submit third party test certification for all materials supplied by the Contractor IAW UFC 1-201-01. All proposed materials are to be submitted for review and approval to ensure compliance with the subcontract specification.

17.22. Any work requiring approval but installed without approval will be removed and replaced at no additional cost to the USG.

17.23. Contractor shall provide appropriate Manuals in English, with each Office Trailer, if applicable.

18. PERIOD OF PERFORMANCE

18.1. Upon award of the Contract from 408th, the Contractor has **190 Calendar Days** to complete all work described within this Statement of Work and associated drawings, including all requisite 'acceptance' and turn activities of the contract. The Contractors Notice to Proceed (NTP) on any given activity will be issued once the activity associated Contractor submittals are approved and materials (if required) have been procured.

Preinstallation Meeting: - - - 10 Calendar days from contract award
Submittal Period ---------- 20 Calendar days from preinstallation meeting
Submittal Approval Period: - - 20 Calendar days from transmittal submission
Material Procurement Period: - 90 Calendar days from submittal approvals

Badging Period ---------- 90 Calendar days from contract award

Installation Period ---------- 40 Calendar days from receipt of materials
Inspection Period---------- 10 Calendar days from completion of installation

Total Task Order Period ---------- 190 Calendar Days from contract award

NOTE: Some of the tasks in the total task order are executed concurrently.

19. CONTRACTOR RESPONSIBILITY

19.1. Provide qualified personnel capable of meeting Camp Arifjan/Buehring KU access requirements.

19.2. Provide names and qualifications of the following Key Personnel:

19.2.1. Project Manager

19.2.2. Electrical Engineer

19.2.3. Mechanical Engineer

19.2.4. Civil Engineer

19.2.5. Safety Officer / Engineer

19.3. Provide the name of an alternative person responsible for the performance of the work when the Project Manager is unavailable. The Project Manager or the alternative shall have full authority to act for the Contractor on all contract matters and shall be available between 07:00 hrs. to 17:00 hrs. Monday through Sunday except on statutory public holidays.

19.4. The Contractor shall submit an organization chart showing the details of all indirect Manpower to be used for this project.

19.5. All Key Personnel must be fluent in English, must be able to read, write, speak, comprehend, and convey any English directives at a level 4 proficiency.

19.6. The Supervisor shall be fluent in English and in the language of all workers on site with the intent of being able to interpret between representatives and workers.

19.7. The contractor is responsible for all normal employer-employee matters such as recruitment, visas, travel, retention, insurance, pay, discipline, and termination of employment. The Contractor recognize that the personnel are an integral part of the workforce and those issues regarding quality of life, housing, pay and Contractor support that would adversely affect job performance and morale must be promptly resolved by the Contractor.

19.8. The contractor shall complete all work detailed under this Statement of Work (SOW) and related drawings.

19.9. Contractor shall perform all coordination and certify that work is completed IAW all standards and codes referenced in the SOW.

19.10. In event of requirement for additional clarification, Contractor shall seek guidance from KO.

19.11. The contractor shall seek and obtain all required permits and approvals through KO.

19.12. Pre- installation Meeting to be held with Directorate of Public Works Project Officer (DPW PO), KO and Contractor prior to commencing work.

19.13. Work that requires excavation below the surface must have "Dig Permit" obtained from DPW via KO. Any damage to the underground utility by the Contractor activity shall be the responsibility of the Contractor.

19.14. Work that requires power to be turned off must have an approved "Utility Outage Request" obtained from DPW. If unscheduled outage is required, the Contractor will be responsible for all costs, if any, associated with interference with operations dependent on power.

19.15. The Contractor shall provide the work schedule through KO for approval by DPW PO.

19.16. The Contractor shall supply adequate and reliable portable power generation resources. The contractor will be responsible for fuel, maintenance, and placement of power generation resources. All temporary electrical equipment and tools must comply with applicable electrical codes, for instance the latest British Standard (BS 7671:2018) and the ARCENT Electrical Safety Policy.

20. ON-SITE STORAGE OF CONTRACTOR MATERIALS

20.1. The Contractor is responsible for the receipt, unloading, security and handling of all equipment and materials required for the completion of this work. The Contractor shall identify storage area requirements and coordinate site location with KO.

20.2. The Contractor shall protect all stored material from weather and negligence. If for any reason materials are damaged the Contractor shall replace the materials prior to use at the Contractor's expense.

20.3. The Contractor is responsible for providing security around any stored material. All materials stored on site will be kept clean, off the ground and always protected from adverse weather.

20.4. Materials deemed unfit for use for reasons of contamination, rusting, sun damage, water damage, wind damage, general poor condition or quality or abuse will be replaced as directed by KO and at the Contractor's expense for all work, cost and material required to make the correction.

20.5. The Contractor's need for lay-down area shall be identified during the site assessment and/or the Pre-installation Meeting.

20.6. The contractor is responsible for maintaining the designated work areas always organized to minimize safety incidents. All materials and equipment shall be stored in a safe place and properly organized.

21. MILITARY INSTALLATION REQUIREMENTS

21.1. The Contractor shall comply with base security requirements. Contractor shall have a Supervisor of employees present at all times.

21.2. The Contractor shall provide a minimum of four (4) days' notice before bringing any material deliveries on the work site. The Contractor may be required to offload materials at a site approved by the USG for search purposes. Once the material has been cleared, the Contractor shall reload the material and proceed to the job site. Stockpiling of material will be allowed at a USG approved site. The USG reserves the right to refuse access to vehicles not having prior coordination.

21.3. Contractor employees will be issued proper access badges by the installation security forces. These items will be issued and controlled by the USG. The Contractor Project Manager is responsible for managing, securing, and returning to USG all passes issued to his/her employees.

21.4. Contractor shall obtain approval from DPW for his desired work schedule and working hours prior to start of work. Any changes must be approved prior to implementing any deviation from the approved work schedule. In the event the Installation Commander directs a temporary

shutdown of the jobsite, the Contractor shall comply with all directives. Any delays caused by the USG as result of a temporary shutdown that may require an adjustment to the contract period of performance will be coordinated through DPW.

21.5. Toxic Substances: The Contractor shall certify that products do not contain mercury, lead, hexavalent chromium, toluene, chlorinated solvents, hydrolysable chlorine derivatives, ethylene-based glycol ethers and their acetates, nor any carcinogen. When tested, the lead content shall not exceed 0.06% by weight of the dry film and the test for chromium content shall be negative.

21.6. The Contractor is responsible for ensuring all vehicles are properly registered for Camp Arifjan and/or Camp Buehring access.

22. QUALITY CONTROL PLAN (QCP)

22.1. Quality Assurance Quality Control (QC): Subcontractor must develop and submit a Quality Control Plan specific to this SOW. The QCP shall be submitted to KO within 15 calendar days of subcontract award or before work is started, whichever comes first. Your QCP must be reviewed and approved for content by Program Quality Manager or designee, prior to initiating work. The Subcontractor Must Identify in writing an assigned Quality Point of Contact that will address Quality related issues with KO. Once reviewed and accepted, the Quality Plan must be maintained IAW the controls/actions you have stated. The Quality Control Plan must address the following at a minimum:

The Plan specifically provides the project specific functions to ensure the statement of work is adhered to. These functions include:

a. Providing quality assurance and quality control services that specifically verify that requirements are met by onsite surveillance and documentation of results.
b. Verification of materials and design as required by the project plans and specifications (If Applicable).

c. Development and adherence to means and methods to store and protect materials (If Applicable).

d. Development and adherence to TMDE (calibrated items) practices and controls. (As applicable)

e. Providing risk management services related to Quality matters. Examples include Time Management, Multiple Project Management, Deliverable Submittals, Qualified Personnel, Sufficient Personnel, Transportation of Personnel, Material Issues, Weather Issues, etc.

f. Coordinating the establishment of documented project standards, procedures, and processes that meet the intent of the Statement of Work and Performance Work Statement requirements. All procedures and processes within, to include forms, will be reviewed by KO. All procedures and processes within, to include forms will be approved by the Technical Manager for use. The KO will receive a copy for their records.

23. HEALTH, SAFETY AND ENVIRONMENTAL

23.1. Environmental, Safety, and Health Plan: Subcontractor operating on site shall implement and maintain a Site-Specific Environmental, Safety, and Health [ESH] Plan to prevent incidents in the performance of their duties; protecting personnel, equipment, and property receiving services provided by the Subcontractor.

a. The Subcontractor must develop and submit a Site-Specific ESH Plan specific to this Statement of Work [SOW]. Your ESH Plan must be reviewed for content and accepted by the local Program ESH Manager or designee, prior to initiating work. Once review is completed, the Plan must be maintained IAW the controls/actions you have stated. A provided Site Specific Environmental, Safety, and Health Plan (SSEP) template may be utilized to create this required Plan and a manual on ESH expectations is available upon request.

b. The Subcontractor's ESH Plan shall mitigate hazards, reduce risks, prevent injuries and illnesses to personnel, to preserve the life and health of personnel, and protect USG property against accidental loss or damage.

c. Subcontractor plan shall provide a documented process that details frequency and method of reporting: all Employee on and off duty injury or illness status to include physician follow ups, and property or environmental damage.

d. The Subcontractor's ESH Plan shall fully comply with the provisions of the FAR clause 52.236-13. The subcontractor's operations shall comply with OSHA, EPA, federal, state, and local regulations/directives that pertain to environmental, safety, health, and fire.

24. LIST OF ATTACHMENTS

Attachments are for conceptual use only. All designs and shop drawings are to be to be developed following the approved Statement of Work.

24.1. Attachment 01 Safety and Health Expectations Projects

End of SOW

Attachment 1

Safety and Health Expectations Projects

ENVIRONMENTAL, SAFETY, and HEALTH EXPECTATIONS

Site-Specific Environmental Safety and Health Plan (SSEP): Subcontractor work conducted on site shall implement and maintain a Site-Specific Environmental Safety and Health Plan (SSEP) to prevent accidents and environmental incidents in the performance of their duties and protect personnel receiving services provided by the Subcontractor. The Subcontractor's ESH Plan shall mitigate hazards, reduce risks, prevent injuries and illnesses to personnel, preserve the life and health of personnel, and protect USG property against accidental contamination, loss, or damage. The Subcontractor's ESH Plan shall fully comply with the provisions of the FAR clause 52.236-13. The subcontractor's operations shall comply with OSHA, EPA, federal, state, and local regulations/ directives that pertain to environmental, safety, health, and fire.

Site-Specific ESH Plan (SSEP): A *provided Site-Specific ESH Plan (SSEP)* ***template*** *may be utilized to create this required Plan and is available upon request.* Each subcontractor shall establish and submit for review a written Site-Specific ESH Plan that includes details commensurate with the work to be performed. The subcontractor's Site- Specific ESH Plan [SSEP] shall clearly describe the subcontractor's methods for meeting its obligations to provide a safe and healthful work environment, as well as to protect other trades, vendors, visitors and members of the public from exposures to the hazards generated by the subcontractor's work. Once review is completed, the Plan must be maintained IAW the controls/actions you have stated. The subcontractor's Company ESH Manual **will not** be accepted as a substitution for a SSEP. The following will be submitted prior to the subcontractor's mobilization to the project. The plan must always include a dedicated ESH person on site whose sole job is to monitor installation activates to ensure ESH compliance. The ESH personnel must be able to communicate with the personnel preforming work in a language they understand as well as being able to communicate in English with USG personnel.

- As a condition of their contract, all Subcontractors shall submit a Site-Specific ESH Plan within fifteen (15) days after receipt of notice to proceed **and** prior to start of installation activities. **This Plan must be accepted by the ESH Manager or his designee.**
- A written Project Site-Specific ESH Plan (hard copy on site)
- Submit all Technical Certification to KO in the SSEP submittal requirements.
- Process for managing Tier Subcontractor's Job Hazard Analysis plan

Site-Specific ESH Binder: The Subcontractor shall make available a Site-Specific ESH Binder which shall always be kept on site and available. The binder shall have a copy of the SOW, SSEP, JESA's, Safety Data Sheets (SDS), required inspection forms and daily toolbox topic forms.

Site Hygiene: The Subcontractor shall ensure that the designated work site is always left in a clean and orderly condition. Removing waste and excess material daily.

Site Housekeeping: During the project the subcontractor shall ensure all tools, equipment and materials are left secure and do not pose a hazard to any entrant whether authorized or not. Before work commences daily, the subcontractor shall ensure all tools, equipment and materials are secured, including PPE. The Contractor shall clean the site at the completion of the project and remove all Contractor equipment and materials.

Environmental Compliance: The following requirements contain general information designed for inclusion in all contracts with any potential environmental implications. These paragraphs shall be incorporated in their entirety (Including Terminology and Definitions section below) and listed in the following order.

Environmental Training: While on site for servicing and maintenance of equipment (i.e., generators), Subcontractor personnel shall follow existing U.S. Military environmental, health, and safety regulations.

The Subcontractor shall designate a Primary and Secondary Environmental Officer (EO) for this subcontract. The designated Environmental Officer(s) shall enroll in and attend the local Environmental Officer training course. This training will aid in proficient operations relating to emergency spillage events and conducting environmental compliance inspections;

The Subcontractor shall enroll designated staff, to include subcontracted staff, in the Environmental Officer and Emergency Spill Response training courses within 10 days of signing the awarded subcontract. Proof of course completion shall be made available to the Technical Manager upon request;

The subcontractor shall have trained staff to ensure an Environmental Officer trained employee is on site during all operational activities outlined in this subcontract. Environmental Officer trained employees shall be available to respond to any environmental impacts or emergency response incidents 24 hours a day, 7 days per week.

Environmentally Friendly Equipment: The Subcontractor shall develop and implement a routine equipment maintenance process which maintains equipment free of potential environmental impacts. This process shall identify all equipment, define schedule timeframes, and promote compliant operation, safety, and release prevention standards.

The Subcontractor shall immediately abate, contain and remediate all releases associated with any portion of the contracted operation, equipment, or ancillary equipment such as piping, supply/return lines, valves, connections, vents, drain lines,

etc.

The Subcontractor shall display a company name, contact name and phone number on every piece of equipment listed in the routine equipment maintenance process.

Standards developed in the Subcontractor's maintenance process shall meet the minimum qualifications outlined in the local Environmental Handbook Guidance and Instructions.

Clean-up Responsibilities: The Subcontractor shall be responsible for immediate abatement, containment and removal of all contaminated media and waste materials associated with or resulting from any spills. Any clean-up efforts shall be coordinated by the Subcontractor Environmental Officer and approved by the Camp Cell/Zone Lead Environmental Officer (LEO)

Remediation efforts should also include verification and documentation that the source of contamination has been abated, all contaminated media removed, and all waste materials disposed in an approved disposal site;

A spill contingency and response plan shall be made available to the Technical Representative which at a minimum complies with all applicable directives of the local Environmental Guidance and Instructions document. The Subcontractor spill contingency and response plan shall specifically describe how the Subcontractor shall prevent and respond to spill incidents;

In the event of accidental or deliberate discharge, the Subcontractor fails or refuses to remediate the spill, the Subcontractor shall be held liable for all clean-up costs.

Subcontractor Inspection Process: An internal inspection process shall be developed and implemented to provide a quality control initiative (preventative evaluation) designed to prevent potential spills, leaks and accidental discharges;

The process shall document and track daily and weekly itemized inspections conducted by the Subcontractor;

All inspections shall be presented to the Camp/Zone Environmental Compliance Officer upon completion. Any discrepancies shall be documented in the daily/weekly report and submitted to the Technical Representative and Camp Lead Environmental Officer (LEO) as required;

The subcontractor shall use trained Environmental Officer staff to perform the inspection evaluations.

Emergency and Routine Maintenance Clean-up Supplies: At no additional cost to Contractor, Subcontractor shall maintain supplies for emergency response and routine maintenance releases;

These supplies shall be available, or accessible, in sufficient quantity to resolve any volume of materials, wastes or contaminants that may potentially affect or impact the environment;

Coordination and confirmation, by the Subcontractor Environmental Officer and Camp/Zone Lead Environmental Officer (LEO), shall be mandatory to ensure supplies are always available.

Secondary Containment for Hazardous Materials, Wastes and Petroleum, Oils and Lubricants (POL): The Subcontractor shall provide secondary containment devices for temporary and permanent storage facilities that retain POL substances, hazardous materials, and hazardous wastes (i.e. - new and used – oils, fuels, lubricants, solvents, batteries, acids, paints, antifreeze, etc.).

Secondary containment structures shall be provided for all bulk POL storage tanks, fuel cans, barrels, bladders, etc. When applicable, drain-off devices (w/valve, cap or plugs) shall be installed in the secondary containment structure to permit discharge of uncontaminated storm water accumulations. Containment applies to both, Above Ground Storage (AST) tanks and Under Ground Storage (UST-dual walled w/interstitial monitoring) tanks which supply fuel to generators, equipment, vehicles, light sets, etc. In addition, secondary containment requirements apply to all tanks and/or containers from 5 to 55 gallons to include mobile tanker trucks used for refueling operations. All secondary containment structures shall be free from soil and sand accumulations.

In the event hazardous materials are required to be stored at a job site or location where services are being provided, the Subcontractor shall be responsible for providing flammable storage cabinets with current inventory sheet and Safety Data Sheet (SDS). The flammable cabinets shall be subject to environmental compliance inspections.

Acceptable secondary containment must be coordinated by the Subcontractor Environmental Officer and confirmed by the Zone or Camp Cell Commander Lead Environmental Officer (LEO).

Mobile Fuel Trucks, Tankers and Trailer Mounted Fuel Pods: Mobile fuel trucks, tankers and fuel pods used as a stationary refueling point to other pieces of equipment shall be employed on secondary containment devices. The containment devices must be coordinated by the Subcontractor Environmental Officer and confirmed by the Zone or Camp Cell Commander Lead Environmental Officer (LEO).

Portable drip pans are required during all refueling operations to catch and contain

spills.

Emergency spill absorbent material shall be available on all fuel vehicles and located at each stationary refueling point.

Environmental Terminology and Definitions:

Hazardous Material: Any material that can pose an unreasonable risk to health, safety, or environment if improperly handled, stored, issued, transported, labeled, or disposed because it displays a characteristic listed in Table C5.T1, "typical Hazardous Materials Characteristics," or the material is listed in Table AP1.T4. Munitions are excluded. (Reference OEBGD, Paragraph C5.2.2).

Hazardous Waste: A discarded material that may be solid, semi-solid, liquid, or contained gas and either exhibits a characteristic of a hazardous waste defined in section AP1.1. or listed as hazardous waste in Table AP 1 . T 1 -AP1.T4. Excluded from these definitions are domestic sewage sludge, household wastes and medical wastes. (Reference OEBGD, Paragraph C6.2.5).

Solid Waste: Garbage, refuse, sludge, and other discarded materials, including solid, semi-solid, liquid, and contained gaseous materials resulting from industrial and commercial operations and from community activities. It does not include solids or dissolved material in domestic sewage or other significant pollutants in water resources, such as silt, dissolved or suspended solids in industrial wastewater effluent, dissolved materials in irrigation return flows or other common water pollutants. (Reference OEBGD, Paragraph C7.2.30).

Petroleum, Oil and Lubricants (POL's): Includes all types of fuels (MOGAS, JP8, and Diesel), hydraulic fluid, lubricating grease, engine, and gear oil.

Leaks, Spills and Releases: This implies a loss of product or waste (hazardous material or waste, wastewater sewage, food waste) because of an accidental or intentional event from normal equipment operation, procedure, transport vehicle or container. Examples of spills, leaks or releases from sources include but are not limited to:

- Tanks, Drums, Barrels, Cans, Containers and Pods.
- Fuel lines, filters, and pumps.
- Vehicle or equipment engines, transmissions, oil reservoirs and fuel tanks.

- Transport vehicles (hauling Refuse, Fuel, Installation Debris, Wastewater, etc.) ;
- Wastes from Dining Facilities (DFAC's) and disposal dumpsters (food, cooking oils, greases)
- Parts Cleaning Machines (Solvents)
- Refrigerant Equipment, Lines, Compressors, Pumps, and other components
- Corrosive materials and acids (batteries, special cleaning compounds)
- Infectious medical wastes, microbiology, pathology, sharps

POL Clean-Up Materials: Absorbent material used to clean-up or soak up free liquids such as hazardous materials associated with fuels, oils, lubricants, and paints. Material is available in the form of absorbent pads, booms, pillows, socks, dry sweep compounds or peat.

Installation Debris: Waste which is generated from building materials, packaging and rubble resulting from installation, remodeling, renovation, repair and demolition operations on buildings, pavements, infrastructure and utilities or other structures.

Secondary Containment Structures/Devices: Secondary containment pertains to a structure or device which provides a second line of defense in preventing a vehicle, tank, drum, barrel, can, equipment, dumpster etc. from leaking the liquid contents for which it is storing or uses as part of its operation. The holding capacity (volume) of the device must be equal to 110% of the volume of the largest component in the structure being protected. Examples of common structures or devices may consist of the following (but not limited to):

- Wooden fabricated boxes (floor w/ sidewalls) lined with fuel resistant membrane, ` seamless to prevent leaks and hold a liquid product.
- Expedient fuel bladder membrane placed under the equipment with a perimeter ring of sandbags placed along the outer edge of the structure and underneath the membrane elevated to form an outer perimeter containment wall.
- Prefabricated membrane containment (factory made) material containing a seamless floor with supported perimeter sidewalls. (Drive Off/Drive On, commonly used for trucks and portable generators).
- Concrete pad with curbing and storm water drainpipe with control valve, plug or cap.
- Metal prefabricated drip pan, sized to be placed under the piece of equipment or tank with perimeter side walls OR sized to accommodate placement of the equipment (tank, generator, dumpster etc.) inside the containment structure.
- Self-Containment built into the equipment (i.e., electric generator) that can contain the fuels and lubrication oils used by the equipment being protected.

Equipment: Any permanently installed or mobile fueling system, generator, light set, compressor system, track or wheeled vehicle, or installation equipment that contains

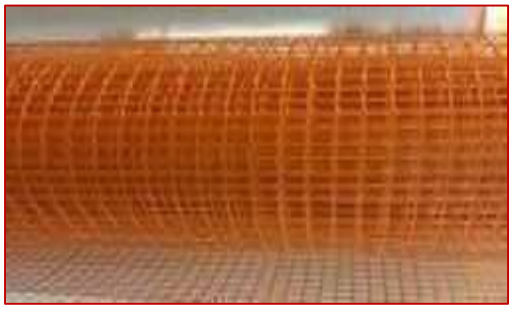
fuels and/or oils in any amount.

Installation Site Signage: The subcontractor will provide professional installation site barriers and safety signs to cordon off the project holistically from the public and unauthorized visitors. Installation site barriers at a minimum shall be woven orange plastic safety mesh, preferably HDPE material and minimum 3 feet in height (see picture). The site barrier shall be supported every 3 meters using rebar or posts to avoid sagging and unauthorized site access over it.

Premises / Safety Devices: No smoking areas must be observed and annotated on Site Map. Excavations, openings, and overhead work shall be properly barricaded and warning signs posted in the likely avenues of approach. Barricades or warning signs of any type subject to personnel access during hours of darkness shall be illuminated or identified with warning lights.

Barriers for High Hazard Operations: Operations, such as Confined Space Entry, Excavation & Trenching, Material Handling, must be protected from traffic in the area – either foot or vehicle. The types of barriers are: If the operation is exposed to members of the Public/Customers or vehicles/equipment, then a Class I perimeter protection (barrier) is required. Class I perimeter protection for personnel shall have the strength, height, and maximum deflection requirements as guardrails, and will provide fall protection equivalent to that provided by a top-rail, mid-rail, and toe board with post spacing equivalent to standard guardrail. Class I perimeter protection for vehicles must be designed by a qualified person to withstand the potential forces due to vehicular impact.

If the operation does not meet the requirements for a Class I perimeter protection (barrier) but is routinely exposed to Employees or contains hazards (impalement, hazardous substances, etc.), then Class II perimeter protection is the minimum protection required. Class II perimeter protection (barrier) consists of warning barricades or flagging placed at a distance not closer than 6 feet from the operation. Warning barricades or flagging does not have to meet the requirements of Class I perimeter protection but does need to display an adequate warning at an elevation of 3 to 4 feet above ground level.



Rerouting traffic must include signage for directions around the hazard. These hazards must be lit if they remain during hours of darkness.

Training: The Subcontractor employee(s) shall receive training in all tasks expected of him/her on the worksite in accordance with USG policies, OSHA, NFPA, all applicable regulations and standards, and local government safety, health, and environmental regulations, which is required by the work to be performed, and personnel training status shall be current. The Subcontractor will provide a training sign in sheet to prove that the work force has been trained/ briefed about the identified ESH hazards outlined in the JESA.

Job Environmental Safety Analysis (JESA): Detailed JESAs addressing hazards associated with the Subcontractor's scope of work are required as part of the subcontractor Site-Specific ESH Plan (SSEP) submittal. Each task should have a JESA, which includes all the steps of each task; each associated task with the step should list the hazards it presents and the planned adopted control measures to eliminate or mitigate the hazards to an acceptable level. The Subcontractor shall also prepare additional JESA's upon request and modify as the work process and/or associated risks change. These procedures will be reviewed with all affected employees prior to starting the work or after modifications to the JESA, by the subcontractor.

Personal Protective Equipment (PPE): The Subcontractor must provide suitable PPE for each of its employees based on the work to be performed and a sufficient additional quantity must be kept on hand for replacement as and when required. This PPE must conform to a nationally recognized standard such NIOSH, ANSI, or other applicable Regulations, etc. Subcontractor personnel will use appropriate PPE while performing activities and be trained in its use by the subcontractor, training records must be present on site and made available to authorized USG personnel. The subcontractor's operators/crews will be equipped with and utilize appropriate work uniforms, personal protective equipment, to include but not limited to; safety shoes, hard hats, gloves (not cotton gloves) preferably work gloves (see picture), eye protection both dark and clear glasses and goggles, if necessary (clear and dark), hearing protection, high visibility vests, and any other equipment required to work safely under normal day-time or night-time conditions. Employees must be trained, and provisions provided for protection against adverse and inclement weather conditions. Specialty equipment such as respirators and fall protection must be made available when needed. Subcontractor personnel shall be trained by the subcontractor in the proper use, maintenance, serviceability, and storage of all required PPE. If employees wear respiratory protection when using chemicals, paints or substances that are harmful, the subcontractor must adhere to all the requirements set forth in OSHA 29 CFR 1910.134 and for employees to be medically qualified, and fit tested.

Tools and Equipment: All tools and equipment provided to conduct work shall be in safe condition. All tools and equipment must comply with the requirements set forth per OSHA 29 CFR 1926.20(b)(3). All cords and electrical wiring must be free from damage and unauthorized repair such as illegal splicing. All electrical repairs should only be conducted by a certified competent electrician. All safety devices such as guards and emergency cutoff switches etc., installed by the Manufacturer must not be removed or disengaged and will always be used as intended by the manufacturer.

Working at Height: Suitable fall protection systems are to be implemented in accordance with OSHA 29 CFR 1910.28 and OSHA 29 CFR 1926.20(b)(4) by the subcontractor, for any work conducted at heights four (4) feet or above. Employees must be trained and deemed competent prior to any use of fall protection equipment. Training must include inspection procedures prior to each use, limitations of equipment and anchor point standards. Fall protection equipment must be inspected prior to each use. This inspection is to be documented and made available to authorized USG personnel when requested on site. Training records for working at heights must be present on site and available to authorized USG personnel.

- Proposed working at height equipment such as scaffolding, boom or scissor lift is to be inspected and documentation maintained by the subcontractor competent person before any working at height commences. This is to ensure the equipment is suitable for the height to be worked at and is sufficiently designed to implement adequate fall protection system(s).
- The types of ladders utilized to conduct activities must be appropriate, for example, ladders utilized for access and egress must be straight or extension ladders and must overlap the working surface or platform by at least two rungs to allow employees to hold onto the ladder while accessing or egressing. All A-Frame and step ladders must be made of **fiberglass**, have all the locking mechanisms available and be serviceable. All ladders must be inspected prior to use and deemed serviceable. All ladders must have a documented monthly inspection conducted. Always maintain a 3-points (two hands and a foot, or two feet and a hand) contact on the ladder when climbing

Trenching and Excavation: A *digging permit must be acquired prior to any digging operations and a copy must be posted on the site*. A competent person must be identified and appointed to ensure the operations comply to the procedures in accordance with OSHA 29 CFR 1926, Subpart P. Suitable measures such as sloping, benching and/or shoring must be used to prevent cave-in of the excavation work area. Daily [and when conditions change] inspections of open trenches and excavations will be carried out by the identified competent person, to record conditions and any adverse changes that may occur during the life of the open trench/excavation. Each inspection must be made available for audit by authorized USG personnel. The competent person must be able to classify types of soil, inspect, adopted protective systems, design structural ramps, monitor water removal equipment (if needed), and ensure suitable entry and exit provisions

have been made available. If conditions alter suitable corrections must be administered to realign with the standards set forth. All inspection records must be kept on-site for auditing and inspection purposes. Trenching and excavation competent person must be identified on in the SSEP.

Material Handling Equipment (MHE): The subcontractor shall only utilize Material Handling Equipment (MHE), including but not limited to; cranes, lift trucks, scissor lifts, man-basket boom trucks, etc., that are maintained with a valid service record and load test certificate. Only valid licensed operators shall operate the equipment at any time, certificates and licenses are to be present with the operator during any operations. The subcontractor must certify the individual for each piece of equipment the employee must operate. Load bearing equipment must have a valid load test certificate which is to be made available as part of the submittal process for each piece of equipment. A Lifting and Rigging Plan must be submitted before [any such activities, at any stage of the project] are performed with the SSEP.

- An operator must hold a current valid heavy vehicle license. The subcontractor must assess, examine, and certify the individual to ensure competency on each piece of equipment he/she will operate. The license or certificate provided by the subcontractor to the employee must list each piece of equipment the employee is certified to operate. The operator must always keep the country license and the certificate/license provided by the subcontractor on his/her person while operating any equipment. The licenses and/or certificates of all personnel operating any vehicle or equipment must be submitted with the SSEP.
- All applicable documentation is to be kept with the equipment, such as daily and pre-operation inspections, owner's manuals, a valid service/maintenance record, etc. All recommendations set forth by the manufacturer for safe operation for any equipment shall be adhered to. All requirements set forth by OSHA, USG, and Traffic Control Policy must always be adhered to by the subcontractor.

Hot Work / Welding / Brazing / Cutting: Welding and hot work operations require a Hot Works Permit to be completed with local Fire Departments. Welding and Hot Works operations shall only be conducted by a certified and competent person. All PPE required for the safety of the welder(s) and the assistant(s) must be provided. Suitable and sufficient actions shall be taken to always ensure the safety of other personnel on site and the public such as screens and suitable signage. The

subcontractor must abide by standards as per OSHA 29 CFR 1926 Subpart J. The technical certificates of all personnel conducting any hot work must be submitted with the SSEP.

Electrical Work: All electrical work will only be performed by an identified trained, qualified, competent electrician. The trade certificate of this competent person must be submitted as part of the SSEP for the employee conducting electrical work on any USG work site. Lock out Tag out (LOTO), procedures must be adhered to with LOTO steps in accordance with OSHA and NFPA standards. Appropriate signage must be clear and legible, displayed in a suitable area warning those that may be unaware of the danger and/or hazard in the area. The technical certificates of all personnel conducting any electrical work must be submitted with the SSEP.

Traffic: It is the responsibility of the Subcontractor to ensure the correct authorities have been informed of any disturbance of standardized vehicular traffic routes due to work activity. When work activity affects pedestrian traffic, suitable safe designated walkways will be installed by the subcontractor, with barriers for protection. Suitable guarding and signage must be legible and visible to inform pedestrians and vehicle operators of the changes in advance.

Confined Space Entry: A confined space entry plan is to be completed and provided to USG in the SSEP. Entry will only occur after the space is determined to be non-permit required or a permit required space and approval from USG has been received. Entry for permit required spaces may only be made when a valid Permit-to- work is present and only after all hazards have been identified, eliminated, or mitigated. The Confined Space Entry plan will identify the key personnel involved in the entry and their roles. A rescue plan must be included in the plan and all personnel must be trained in its procedure. The subcontractor shall adherence to all requirements listed in 29 CFR OSHA 1926 Subpart_ AA. The technical and training certificates of all personnel conducting any work in a confined space must be submitted with the SSEP.

Hazard Communication: All chemicals or hazardous substances that are to be utilized for completing work activities shall be accompanied with a manufacturer's Safety Data Sheet (SDS). These SDS must be onsite and legible for employees to review. Employees using the chemicals shall be trained in their hazards and risks and protected against any harm the chemical(s) or substance(s) may pose. Any means of PPE required for protection shall be provided to the employee. If the need for respiratory protection is required to protect employees from hazards, subcontractors must have in place a Respiratory Protection Program (RPP) as specified in 29 CFR OSHA 1910.134. In the event of an emergency a suitable means of first aid must be provided in accordance with the recommendations of the SDS. Employees that are subject to and included in the RPP must be identified in and certification must be submitted with the SSEP.

Hazardous Materials: Operations conducted at facilities requiring the use of hazardous materials must provide a list of the materials to be used, a copy of the Safety Data Sheet (SDS) for each material, and information regarding the location of the materials shall be located at the respective areas where personnel will be working. As above, ensure that personnel are trained in the chemicals, their hazards, and proper PPE required to be used, how to use it, and the proper storage [secondary containment] and disposal.

Warning: Do *not bring on-site or accept hazardous material products and shipments unless accompanied by Safety Data Sheet (SDS). The only exception to this is if the non-acceptance of the shipment causes a life-threatening emergency. Materials identified on site without the appropriate information will be immediately removed and taken off site by the subcontractor.*

Waste: Chemical or hazardous material substance waste will not be discharged into any sewer or into any facility waste receptacle. All waste will be properly separated, stored, and disposed of as required by USG, EPA, state, and local regulations/directives. The subcontractor shall maintain a list of hazardous waste, quantity generated, and the disposal method (company) used for disposal (cradle to grave). Combustible waste/scrap will be properly stored, such as solvent waste [oily rags], flammable liquids must be kept in fire retardant containers. Chemical or hazardous waste will be removed from the premises daily.

Incidents: *Immediately report all incidents* to KO through your POC, with all available facts relating to any incident of damage to government property/material, any occupational illness/injury or environmental event to subcontractor, contractor, or government personnel, any injury or illness to a member of the public resulting from Subcontractor operations, or any damage to property belonging to a member of the general public. Notification must be made no longer than four (4) hours after the event. *Investigate* all incidents to determine the contributing factors and root cause to formulate corrective actions to prevent recurrence. KO shall be informed of the results and all investigative reports will be submitted **NLT three (3) days from the date of the incident.** If completion of all factual findings cannot be accomplished within that period, the subcontractor may request an extension from KO. The subcontractor must immediately secure the accident area and wreckage and not permit any movement of evidence until permission to do so is granted by the accident investigation authority. The subcontractor must cooperate fully and assist KO and USG personnel during investigations.

Other Requirements: Any work conducted on-site for USG, whether listed here by title or not, shall be conducted as per the SSEP and requirements set forth within applicable governing standards and those listed in the subcontract agreement.