FREQUENTLY ASKED QUESTIONS
REMEDIATION TECHNOLOGIES WORKSHOP

Objectives

**Q1. What are the objectives of the Remediation Technologies projects?**

A1. Kuwait Oil Company is committed to a sustainable remediation solution to environmental damage resulting from the 1991 Gulf War. Recovery of damaged areas and the ecosystem are vital for a sustainable world. The Remediation Technologies Workshop aims to stimulate information exchange and partnering by providing a venue for interested parties to gain insight on the physical, chemical, and logistical challenges, and share experiences and perspectives on how the oilfields can be remediated with a lower environmental footprint.

The overarching objective of the use of technologies to remediate crude oil contaminated soils is to identify and implement sustainable solutions that will reduce the number of landfills required to dispose of approximately 26 million cubic meters of soil.

Key project objectives include:

- **Technical feasibility** – selected Contractors must demonstrate the ability to successfully reduce total petroleum hydrocarbon (TPH) concentrations in the range of 3–10 percent to remediation target criteria.
- **Throughput** – capacity must be increased to meet schedule requirements while meeting TPH remediation target criteria.
- **Cost-effective** – The successful Contractor will provide a sustainable solution at unit rates that are competitive with other engineered solutions.

Contract and Commercial

**Q2. Does my company need to be pre-qualified as a Kuwait Oil Company (KOC) Category 58 Contractor to be eligible to apply for the Remediation Technologies Project?**

A2. Companies must be pre-qualified as KOC Category 58 Contractors to participate in the tender process. Interested parties should contact KOC and initiate the process as soon as possible. Note that if your company is interested in contracting with KOC as a joint venture (JV), pre-qualification as a JV is required.

**Q3. How many Contractors are anticipated to be awarded remediation contracts?**
A3. Multiple awards are anticipated; however, the number of awards has not been pre-determined. The number of awards will vary based on the extent to which pre-qualification requirements are met or exceeded and the quality of submissions.

Q4. Are joint ventures or consortiums allowed?
A4. In principle, joint ventures and consortiums are allowed; however, those entities will be required to be KOC Category 58 pre-qualified as such in order to participate in the tender process.

Q5. What, if any, bonds will be required for a remediation contract?
A5. KOC requires a Performance Bond, Bid Bond, and Tax Retention Bond (if the Contractor chooses in lieu of tax deduction).

Q6. Will there be separate contracts for remediation work in North Kuwait and South Kuwait?
A6. Not necessarily. The number of contracts will depend on the number of successful Contractors and technologies and KOC schedule requirements.

Logistics

Q7. What are the logistical requirements for collecting representative soil samples for treatability analyses to support front-end engineering design?
A7. The following requirements apply for your company to collect the samples:

- KOC Gate Pass – Allows access to the oilfield through the main gate. Note: A Kuwait Civil ID is required to obtain a KOC Gate Pass – total time required to obtain a KOC Gate Pass is approximately 4 months.
- KOC Vehicle Gate Pass – All vehicles entering the oilfield must pass an inspection before being issued a pass.
- Kuwait driver’s license – required to drive within the oilfield (international driver’s license not valid in the oilfield). Note: A Civil ID is required to apply for a Kuwait driver’s license – total time required to obtain a Kuwait driver’s license is approximately 5 months.
- KOC Excavation Notification – required to excavate anywhere within the oilfield. The KOC Excavation Notification requires multiple signatures and the following supporting documentation:
  - Work plan
  - HSE Plan
  - Job Safety Analysis
  - Method statement (summary of Work plan)
  - Excavation location map
- Permit to Work – Daily permit required for working in the oilfield that must be signed in the morning and signed out in the afternoon by the nearest Gathering Center Supervisor. Cold Work Permit is required for hand-excavations (limited to 1.2 meters depth). Hot Work Permit is required for mechanical excavation to any depth or hand-excavation greater than 1.2 meters depth.
- Compliance with KOC HSEMS requirements (e.g., safety requirements, standoff from above and below ground assets).
- Loading Notes – Inbound Loading Note is required for all materials entering the oilfield and Outbound Loading Note is required for all materials leaving the oilfield.
- Shipping of Samples – Advance arrangements must be made with State of Kuwait authorities, the transport company, and your home country for exporting and importing soil (should be shipped as “environmental samples”).

Q8. Will KOC provide any assistance with the logistical requirements for collecting soil samples?
A8. Soil sample collection will be managed entirely by the Contractor as part of the contract.

Q9. Will Contractors have to supply their own labor and equipment for collection of soil samples or will KOC provide labor and/or equipment?
A9. Contractors will have to supply their own labor and equipment or subcontract the work to a pre-qualified KOC contractor. KOC will not provide labor or equipment.

Q10. What are the KOC requirements regarding plant and equipment safety?
A10. KOC HSEMS have numerous requirements and guidelines related to plant and equipment safety. It is the Contractor’s responsibility to determine which requirements are applicable and ensure compliance with those requirements.

Q11. Are refrigerated storage facilities available for short-term storage of soil samples?
A11. Storage facilities are not available. Your company would have to rent a refrigerated container or make advance arrangements to ship the soil as early as possible after collection.

Q12. Will Contractors have to supply their own unexploded ordnance (UXO) anomaly avoidance teams for collection of soil samples?
A12. Contractors will have to supply their own labor and equipment or subcontract the work to a pre-qualified KOC contractor.

Q13. What are the requirements to import remediation equipment or material into Kuwait?
A13. The importer must have a Government contract and provide justification for the importation of the equipment and material. The equipment and material must be inspected at the docks by Kuwait Customs. The Contractor is responsible for determining and complying with all specific requirements.

**Q14. What are the requirements to bring remediation equipment into the oilfields?**

A14. The equipment must comply with KOC HSEMS requirements. Additional information will be provided in the *Logistics for Working Inside KOC Oilfields* during the Remediation Technologies Workshop.

**Q15. What are the requirements to bring vehicles into the oilfields?**

A15. The vehicles must pass inspection and comply with KOC HSEMS requirements. Additional information will be provided in the *Logistics for Working Inside KOC Oilfields* during the Remediation Technologies Workshop.

**Q16. What are Loading Notes, what do they apply to, and how are they obtained?**

A16. Loading Notes are short forms that provide a brief description of all equipment or material that is being brought into or out of the oilfield each day. Loading Notes are required each day and must be signed by the KOC Soil Remediation Support Team Leader or his designated representative.

**Q17. What are the requirements for driving onto and within the oilfields?**

A17. The driver must be in possession of a valid Kuwait driver's license (international driver's permit is not allowed). The vehicle must have a Vehicle Pass. All typical driving regulations apply.

**Technical and Technologies**

**Q18. What indicator(s) (e.g., chemical, biological, physical) will be used to evaluate treatment success?**

A18. To date, the reduction of Total Petroleum Hydrocarbons (TPH) concentration to 0.5 percent (i.e., 5,000 mg/kg) is the benchmark remediation target criteria.

**Q19. Are Contractors free to use any analytical laboratory for testing soil samples?**

A19. Contractors receiving soil samples at the Workshop may, at their own cost, use any analytical laboratory of their choice to conduct tests on the soil samples. Once under contract, all analytical laboratory testing must be performed by a pre-qualified KOC Category 73 firm.
**Q20. Are there specific accreditations that analytical laboratories must have?**

A20. Analytical laboratories on the pre-qualified Category 73 list have met all KOC requirements for that category including accreditations.

**Q21. Are any remediation technologies excluded?**

A21. Remediation treatment technologies are expected to treat soils with an initial TPH concentration in the range of 3–10% TPH. No specific remediation treatment technology or type of remediation treatment technology is excluded.

**Q22. Are treatment trains acceptable?**

A22. No process or combination of treatment technologies is excluded; however, please reference the project objectives stated in Answer 1 above.

**Q23. Is there an upper limit on the TPH concentration that may be treated?**

A23. There is no upper limit on the TPH concentration that may be treated; however, please reference the project objectives stated in Answer 1 above.

**Q24. The maximum TPH concentration that our Company’s process can treat is 5 percent (50,000 mg/kg). Is this acceptable?**

A24. The Remediation Technologies Project is setting a target on technologies that are capable of treating TPH concentrations from 10% and below but this is dependent upon source type.

**Q25. What data (e.g., chemical, biological, physical) is available?**

A25. Historical data on the nature and extent of contamination dating back to 2003 (CIC characterization) and as recent as December 2014 is available.

**Q26. The spatial density of the available data regarding the nature and extent of contamination appears to be limited. Will additional data become available?**

A26. A site / soil characterization project is currently under tender development. Project work will be initiated in the areas anticipated for remediation treatment and the results are expected to be received in time to support front-end engineering design for the remediation technologies.

**Q27. Will additional sampling and analysis be allowed to support our engineering design?**

A27. Technology-specific assessment and design are expected to be conducted during the mobilization period (post contract award). However, soil samples may be collected earlier from the specific areas assigned in accordance with Answer 12 above.
Location and Facilities

**Q28. Will distinct areas or features be assigned for each contract?**

A28. Each Contractor selected will be assigned one or more areas and features. Historical data on the nature and extent of contamination dating back to 2003 (CIC characterization) and as recent as December 2014 is available.

**Q29. What utilities are available in the oilfield?**

A29. Utilities (i.e., power, water, and welfare) are not available in the oilfield for Contractor use. Each Contractor shall provide utilities for their use in accordance with the terms of their contract.

**Q30. May groundwater or other on site water source(s) be utilized for remediation purposes?**

A30. KOC is evaluating the potential use of shallow groundwater. Additional information will be available at a later time.

**Q31. Will contaminated soil be supplied to the plant site or will the Contractor be responsible for excavation and transportation?**

A31. The Contractor will be responsible for excavation and transportation of contaminated soil to their treatment location for ex situ remediation technologies.

**Q32 Will treatment technology permit and approval be obtained from KEPA?**

A32. The Contractor will be responsible to obtain the necessary approvals from KEPA prior to the construction and operation of treatment plant in the form of a Final Environmental Impact Assessment (FEIA) and follow-up reporting. All treatment work shall be in accordance with KEPA regulations.

**Q33. If waste materials are generated as byproducts of the remediation process, will the Contractor be responsible for proper characterization and disposal?**

A33. The Contractor will be responsible for characterization and disposal of waste byproducts in accordance with KEPA regulations.

**Q34. Are required haul roads in place for transportation of contaminated and treated soil?**

A34. The oilfields have an extensive network of existing haul roads. Depending on the location of the treatment hubs or plants, additional haul roads may be required.
Additional haul roads if required would be included as an element of the tender contract.

Health, Safety and Environment

**Q35. Where may I obtain KOC applicable KOC policies and procedures?**

A35. KOC policies and procedures are not available to the public on the KOC website. They will, however, be provided in advance to all bidders.

**Q36. What work stand-offs apply to KOC infrastructure?**

A36. Stand-offs are variable depending on the infrastructure and the type of work to be conducted (e.g., hand excavation, mechanical excavation).

**Q37. What environmental regulations apply?**

A37. Contractors working in Kuwait must comply with applicable Kuwait Environment Public Authority (KEPA) regulations (e.g., KEPA Act 210/2001). It is the Contractor’s responsibility to determine which regulations are applicable.

**Q38. What UXO clearance/disposal has been completed or is required?**

A38. Surface detection and clearance has been completed over most of the oilfields and explosive ordnance disposal (EOD) certificates are available. UXO may still be present at depth and the wet oil lakes have not been surveyed or cleared. UXO detection and clearance is still required prior to any work throughout the oilfields. Separate projects will be tendered to clear the oilfields; however, remediation contracts may include UXO detection and clearance as an element of the scope of work.