

BAUER Emirates Environment Technologies & Services LLC

Project References, Executed and Ongoing

Abu Dhabi, United Arab Emirates

Updated on 23 March 2026





NORM (Naturally Occurring Radioactive Materials)

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



Mubarraz Island

NORM Waste Sludge Segregation, Repacking, Transfer and Containerization

- Scope of Works
 - Safely handle, repack, palletize and containerize 180 drums of filtered NORM sludge waste into new metallic drums and load them into six (6) ADOC IP-1 rated NORM containers (30 drums per container) in compliance with FANR, IAEA and ADNOC/BeAAT requirements
 - Ensure continuous radiation monitoring using calibrated instruments, with readings logged throughout operations
 - Provide all required NORM-related PPEs, spill kits, eyewash/shower stations and contamination-control measures for all personnel
- Characteristics and Technical Data
 - 180 drums containing NORM sludge (semi-solid)

Client

Abu Dhabi Oil Co., Ltd. (Japan) (ADOC)

Execution

February 2026 - ongoing

Value

confidential

Place

Mubarraz Island, Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



Contamination Testing of Water Service SRTP® Pipe

- Scope of Works
 - Measurement of benzene, H₂S and NORM contamination and dose using NORM handheld devices
 - Laboratory analysis: Sample collection, Shipment, and Testing by an ISO 17025 approved laboratory
 - Final report submission
- Characteristics and Technical Data
 - An SRTP® Pipe sample used on water injection and measuring 3.5" diameter x 1.5m length

Client

Specialty RTP International Pipes Trading
– Sole Proprietorship LLC

Value

confidential

Execution

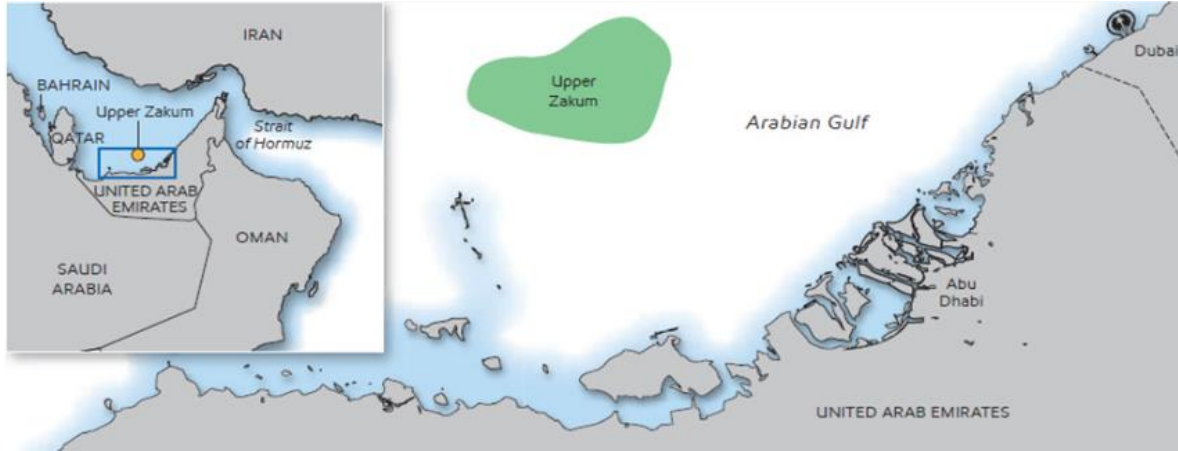
February - March 2026

Place

Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Consultancy & Radiochemical Analysis

- Services
 - Provision of field engineer (NORM RPO) for site visits, surveys, monitoring and samples collection
 - Radiochemical analysis of NORM samples (including transport of samples)
 - Laboratory analysis of NORM samples
 - Preparation of audit report with recommendations
 - Conduct training on “Radiation Protection and NORM Management Training Course”
- Characteristics and Technical Data
 - Contaminants: NORM (radionuclides)

Client

Schlumberger Middle East, S.A. (Abu Dhabi Branch) (slb)

Value

confidential

Execution

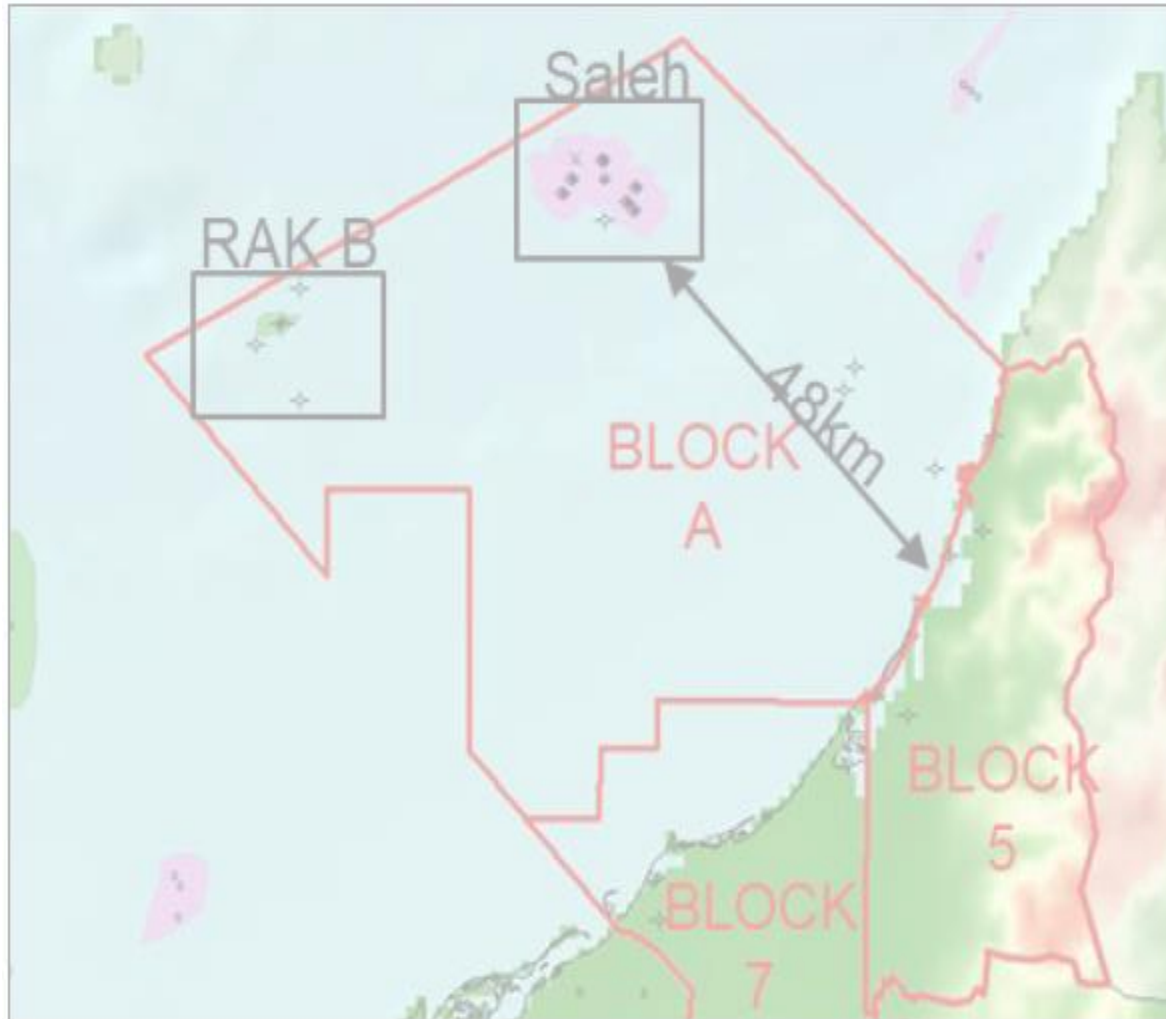
October 2025 - ongoing

Place

Upper Zakum Island, Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Monitoring and Testing Services

- Services
 - Perform NORM survey, sampling and characterization of radionuclides
 - Provide radiological measurements (count rate and dose)
 - Laboratory analysis of NORM samples
 - Preparation of the report with recommendations
- Characteristics and Technical Data
 - Ras Al Khaimah Petroleum Authority (RAKPA) is the regulator of the petroleum sector in Ras Al Khaimah and regulates all activities related to petroleum operations in the Emirate and is the owner of all legacy oil & gas assets and associated infrastructure within the Emirate.
 - Saleh field is a "Gas Condensate" field located 48km NW of Ras Al Khaimah at 86-94m water depth. The field has 6 unmanned platform that contains 9 wells drilled to extract hydrocarbons from Wasia and Thamama reservoirs and 1 well that failed to reach the reservoir.
 - The field has been operated by various companies since it was brought on stream and currently the Client plans to plug and abandon up to 9 wells on 6 mini platforms within 7 km x 3km area within offshore Saleh Gas Field in Block A.
 - Contaminants: NORM (radionuclides)

Client

Ras Al Khaimah Petroleum Authority

Execution

June 2025 - ongoing

Value

confidential

Place

Ras Al Khaimah, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Survey and Radiological Analysis

- Services
 - Provision of field engineer (NORM RPO) for site visits, surveys, monitoring and samples collection
 - Radiochemical analysis of NORM samples (including transport of samples)
 - Laboratory analysis of NORM samples
 - Preparation of audit report with recommendations
- Characteristics and Technical Data
 - NORM survey on a 12" x 12 m long pipe on a FPSO (Floating Production, Storage, and Offloading vessel)
 - Contaminants: NORM (radionuclides)

Client

Halliburton Worldwide Limited

Execution

July 2025

Value

confidential

Place

Drydocks, Dubai, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Audit, Survey and Sampling from different DPE Work Locations

- Services
 - Mobilization of NORM Supervisor/RPO and equipment
 - Perform survey and sampling of contaminated flowlines at Margham Field
 - Perform NORM audit, survey and sampling of NORM-contaminated materials at various offshore fields, i.e. Rashid, South West Fateh and Fateh Platforms.
 - Provide radiological measurements (count rate and dose)
 - Presentation of the findings for knowledge and understanding
 - Conduct on-site training to DPE Off/Onshore staff on “NORM Awareness”
 - Laboratory analysis of NORM samples
 - Preparation of the report with recommendations
- Characteristics and Technical Data
 - Contaminants: NORM (radionuclides)
 - Work Locations: Margham Field and Plant, Offshore Dubai Rashid, South West Fateh and Fateh Platforms

Client

Dubai Petroleum Establishment

Execution

2024 - 2025

Value

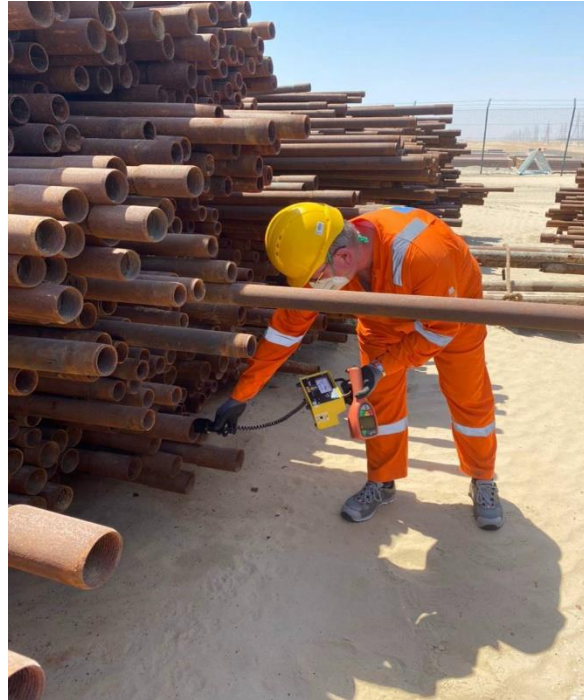
confidential

Place

Dubai, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Survey and Assessment

- Services
 - Perform NORM Survey at 2 Workover Rigs (Bu Hasa and Sahil fields)
 - Perform NORM Survey at Bab 13 Warehouse located at Habshan Area
 - Presentation of the findings and training of ADNOC Drilling Rig workers
 - Collection of samples
 - Laboratory analysis of NORM samples
 - Preparation of the report with recommendations
- Characteristics and Technical Data
 - Contaminants: NORM (radionuclides) from ADNOC Onshore activities

Client

Bureau Veritas Abu Dhabi

Execution

March 2026, April 2025 and September 2021

Value

confidential

Place

Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Survey and Assessment

- Services
 - Perform NORM survey, sampling and characterization of radionuclides on the NORM-suspected pipe spools (RTP)
 - Provide radiological measurements (count rate and dose)
 - Laboratory analysis of NORM samples
 - Preparation of the report with recommendations
- Characteristics and Technical Data
 - Contaminants: NORM (radionuclides)

Client

Ali & Sons Oil-Field Supplies & Services Company

Value

Execution

November – December 2024

Place

Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



Competence Center Waste Treatment & NORM

Basra, Basic Planning for a NORM Handling and Treatment Facility

Scope of Works

- Data collection and basic analysis of requirements NORM-types and contaminated equipment
- Selection of the required treatment and de-contamination units
- Preliminary sizing and selection of necessary auxiliary and periphery equipment
- Pre-selection of mobile equipment
- Interpretation of a preliminary installation drawing (plant layout) as a treatment center
- Design and preliminary layout of mobile descaling equipment and required process water treatment
- Cost estimation and technical description of all key units for descaling, sludge handling and treatment
- Pre-FEED Exhibits for all required technical equipment for treatment/disposal and auxiliary units such as tank farm, evaporation ponds
- Provision of handling and NORM identification procedures on FEED level
- Provision of proposals to execute NORM-descaling on various locations outside of the central plant

Characteristics and Technical Data

- Planning and comprehensive technical description of mobile and semimobile descaling equipment for about 400,000 tubulars on various locations and for the NORM treatment center
- Planning and comprehensive technical description of descaling units for several hundred tons of valves spools and Christmas trees
- Planning and comprehensive technical description for several thousands of drums filled with NORM-contaminated hydrocarbon sludge
- Planning of specific downstream treatment units such as thermal desorption, stabilization & solidification and a double-lined NORM Landfill.

Client

Fortalice Integrated Services LLC

Execution

April 2024 – August 2024

Value

confidential

Place

Basra, Iraq

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Consultancy & Radiochemical Analysis

- Services
 - Provision of radiation consultancy, site visits, auditing and assistance with risk assessment and procedures
 - FANR licensing support, i.e., inventory management, control and development of documents and required information
 - Provision of field engineer (NORM RPO) for site visits, surveys, monitoring and samples collection
 - Radiochemical analysis of NORM samples (including transport of samples)
 - Laboratory analysis of NORM samples
 - Preparation of audit report with recommendations
 - Conduct training on “Radiation Protection and NORM Management Training Course”
- Characteristics and Technical Data
 - Service provided shall be conducted in accordance with relevant FANR Regulations 23 & 24, Dubai Local Orders, Dubai Municipality requirements, best practices specified in the International Atomic Agency Guidelines and internationally recognized standards, DPE Policies and international radiation best practices.

Client

Dubai Petroleum Establishment

Execution

2024

Value

confidential

Place

Dubai, U.A.E.



Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



Segregation and Repacking of NORM and Associated Waste Streams

- **Scope of Works**
 - To ensure NORM contaminated materials in the DPE Jebel Ali Base (sludge, garnets, rags, filters, scale, plastic, PPE, and miscellaneous materials currently mixed in drums) are safely and securely segregated & repackaged ready to be transported to the ADNOC NORM Treatment Plant in Ruwais (Abu Dhabi, UAE)
 - Provision of a temporary area on site (utilising existing bunding) and equipment
 - Provision of required manpower and supervision with the necessary competencies, training, licenses and authorisation to carry out the scope of work
 - Inventory of all drums or boxes fully labelled prior to transportation including strapping.
 - Any leaking drums or boxes (after repacking shall be repaired or replaced. Old drums shall either be cleaned or repackaged for transporting to ADNOC NORM Treatment Facility.
 - Provision of operations plans, risk assessments, regulatory licenses & approvals, emergency response plans and contingency plans.
- **Characteristics and Technical Data**
 - With approx. NORM-contaminated 400 steel drums stored in DOT and contents are generally a mixture of oil, water, sludge, PPE and plastic materials from offshore facilities
 - Repacking as per ADNOC requirements. Liquid and solids should be segregated and repackaged into new 200 or 210 litre standard UN Approved drums (as per ADNOC requirements). Liquid can be directly packaged in the drums however solids (such as PPE or plastic debris) should first be double contained in thick plastic bags and sealed before being placed into new drums or burnable boxes (thick ply cardboard). All repackages, drums or burnable cardboard boxes shall be labelled and secured on plastic pallets ready to be loaded into 20" or 40" containers
 - Service provided shall be conducted in accordance with all relevant UAE Federal Laws (particularly FANR Regulations 23 and 24) and Regulation, Dubai Local Orders, Dubai Municipality requirements, best practices specified in the International Atomic Energy Agency Guidelines and equivalent internationally recognized standards, DPE Policies and International Radiation best practices.

Client

Dubai Petroleum Establishment (DPE)

Value

Confidential

Execution

April 2023 – February 2024

Place

Jebel Ali, Dubai, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Survey and Assessment

- Services
 - Perform NORM survey, sampling and characterization of radionuclides on the NORM-suspected RTP pipes
 - Provide radiological measurements (count rate and dose)
 - Laboratory analysis of NORM samples
 - Preparation of the report with recommendations
- Characteristics and Technical Data
 - Contaminants: NORM (radionuclides)

Client

Liwa Petroleum & Industrial Supplies LLC

Execution

January 2024

Value

Confidential

Place

Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Services at ADNOC Offshore Locations

- Mobilization of personnel and equipment to the rig/platform for a period of maximum 10 days, alternatively 15 if required with an adjusted price listed in the schedule of rates.
- Taking over mineral debris generated by Halliburton rig crew from opening and cleaning the rock catcher – cyclone filter, particularly from the thunderbox, provided by the client
- Providing radiological measurements (count rate and dose) in the cleaning area, if required, but also along the boundary limits of the barricaded work area
- Providing receptacles as per Arzanah1 and BeAAT NORM transfer protocol and transferring safely the debris into the transport and storage container and cleaning filter candles into the receptacle, accordingly.
- Ensuring that the receptacles can be easily emptied and cleaned easily, later by providing a specific inliner for the receptacle if required (not a BeAAT requirement).
- Taking representative samples from the debris, in adequate sample bottles, properly labelling for shipment to onshore location (ADNOC supply boat) – Mussafah base.
- Preparing/packaging samples to UN requirements for dispatch (up to 5 samples).
- Organising of the laboratory (gamma spec.) to receive samples, conduct analysis for the preparation of reports by BEE NORM expert, experienced particularly in ADNOC onshore projects and almost 20 years experience with the oil & gas industry in the UAE.
- Properly sealing and labelling of the NORM receptacles and strapping them securely on pallets (as per BeAAT requirement) and handing the package over to the client/ADNOC for shipment for interim storage on Arzanah Island.
- Perform a NORM Survey of the packed material and the package as per UN regulations applied.
- Providing the NORM batch delivery request (to be signed by rig supervisor/manager) and approved by ADNOC – offshore HSE for the shipment to Arzanah.
- Demobilization of the BEE crew from the rig platform
- Preparing final report by our NORM department, including all data, analysis, outlook and suggestions for further improvement and optimization, accordingly.

Client

Halliburton Worldwide Limited

Value

Confidential

Execution

May 2023 – August 2023

Place

Asseifiya Island, Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



Provision of NORM Handling and Water Treatment Services

- To assist and support Halliburton in preparing NORM cleaning procedure, job safety analysis, risk assessments, and other documents required to submit to Federal Authority for Nuclear Regulation (FANR)
- Providing a personnel decontamination Unit
- Providing a specific NORM Water treatment facility
- Handling and packing of NORM residues
- Evaluation of NORM contamination, safe working areas, and decontamination success
- Providing training to client's personnel
- Sampling and analyses services

Client

Halliburton Worldwide Limited

Execution

June 2023 – August 2023

Value

Confidential

Place

Drydocks, Dubai, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Services at ADNOC Offshore Locations

- Radiation survey during operations around the well test area and critical spots (staff working spots/areas)
- Handling the NORM scales from the Sandbox (Thunder-Box) and packing the debris in adequate ADNOC/BeAAT - approved receptacles. will be in a range of about 100 kg up to max. 0.5 metric tons
- Potential manual handling of the big scales from the Plug and Trash Catcher (only to be used if absolutely necessary) – Packing the material from cleaning the rock catcher – cyclone filter into approved receptacles.
- Treatment of contaminated flushing water from receiving water tank by a specific NORM-particle filtration plant. The capacity of the storage tank is 500 bbls. (80m³). The flushing water amount at the well-site is normally at around 20bbls. The backwashed collected residuals, where excessive radiation detected will be also collected and packed for further transport into adequate ADNOC/BeAAT - approved receptacles.
- Providing radiological measurements (count rate and dose) in the cleaning area and ensure by measurements with handheld devices that the dose rate at the areas where the SLB personnel is operating is within the exempt limits of the FANR.
- Providing receptacles as per Arzanah and BeAAT NORM transfer protocol and transferring safely the debris into the transport and storage container and cleaning filter candles into the receptacle, accordingly.
- Taking representative samples from the debris, in adequate sample bottles, properly labelling for shipment to onshore location (ADNOC supply boat) – Mussafah base.
- Preparing/packaging samples to UN requirements for dispatch (up to 5 samples).
- Organising of the laboratory (gamma spec.) to receive samples, conduct analysis for the preparation of reports
- Properly sealing and labelling of the NORM receptacles and strapping them securely on pallets (as per BeAAT requirement) and handing the package over to the client/ADNOC for the shipment for interim storage on Arzanah Island.
- After the operation, to perform a radiation survey along all the relevant equipment to check for any NORM scales residuals left inside.
- Flush/Clean the equipment in case of contamination detected. In case of the flushing would not work - full disassembly of contaminated SWT equipment, clean from radiation residuals and assembly
- Perform a NORM Survey of the packed material and the package as per UN regulations applied.
- Providing the NORM batch delivery request (to be signed by rig supervisor/manager) and approved by ADNOC – offshore HSE for the shipment to Arzanah.
- Preparing final trial report by our NORM department, including all data, analysis, outlook and suggestions for further improvement and optimization, accordingly.

Client

Schlumberger Middle East, S.A. (Abu Dhabi Branch) (SLB)

Value

Confidential

Execution

August 2023

Place

Ettouk Island, Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Survey, Sampling Analysis & Assessment Services

- **Project Description**
Determination and segregation of 60,000+ NORM suspected tubings and casings currently stored at Bab13.
- **Services**
 - Site survey and engineering
 - Mobilization/Demobilization
 - Training - NORM Specialist will provide a specific field training at the site.
 - Provision of technical expertise (specialist manpower support) with associated devices for the inspection and supervision of segregation activity
 - Provision of PPE for all personnel involved in the segregation activity – this includes manpower from BAUER and the support staff provided by Bab13.
- **Characteristics and Technical Data**
 - Contaminants: NORM (radionuclides) from ADNOC Onshore activities
 - Segregation of NORM contaminated and non-contaminated tubulars in the following categories:
 - Tubulars that are not contaminated and can be disposed as scrap.
 - Tubulars that are less contaminated and can be treated / cleaned at Bab13 and then can be disposed as scrap as a second phase of this project.
 - Tubulars that require further laboratory analysis (if essential).
 - Tubulars that are highly contaminated and need to be dispatched to the ADNOC BeAAT facility.

Client

ADNOC Onshore

Execution

June 2022 – May 2023

Value

Confidential

Place

Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



Descaling of NORM Tubulars at Arzanah NORM Facility

- **Services:**
 - Completion of procedures and “Radiation Impact Assessment” (RIA) for FANR Licensing
 - Designing an efficient and economic descaling process using moderate pressure and recycle the wash water in a closed loop with a minimum impact to the operating personnel and to the environment
 - Mobilization/Demobilization of the descaling equipment and accessories in the island
 - Assembling and commissioning of descaling arrangement such as equipment and auxiliary units:
 - Including Water filtration system
 - Power supply
 - Black and white decontamination cabin
 - Manual descaling set-up
 - Wet mechanical descaling of 19,000 tubulars
 - Up to 70 tubulars per day
 - 450+ tubulars per week (2000+ tubulars per month)
 - Collection of scale in drums for disposal
 - Pre-selection and categorization of tubulars
 - Sampling and radiological analyses (scale, metal & surface contamination)
 - Dismantling and decontamination of system and return to original condition
- **Characteristics and Technical Data:**
 - Contaminants: NORM (radionuclides) from ADNOC Offshore activities

Client

ADNOC Offshore

Execution

January 2020 – September 2022

Value

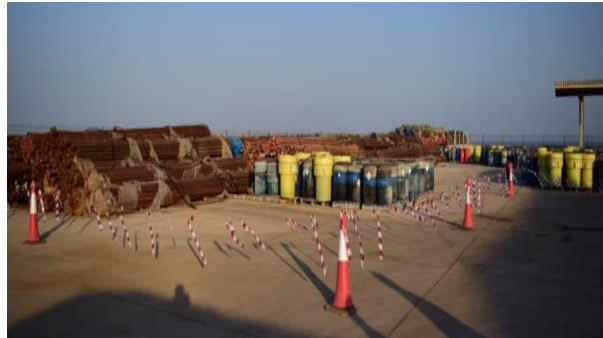
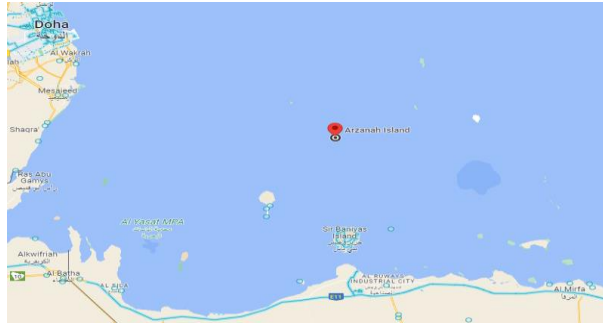
Confidential

Place

Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



Operation and Management at Arzanah NORM Facility

- **Project Description**
The NORM Storage Area at Arzanah Island handles NORM contaminated wastes being generated from Offshore Group OPCOs. ADNOC Offshore seeks the services of a specialized and competent company that will aid the operation and management of the facility in line with ADNOC Group NORM Waste Management System.
- **Services**
 - Administration of the NORM Waste Management System
 - Review sender's notification forms for approval/ rejection purposes.
 - Inspection of waste shipment on vessel prior to offloading to ensure adherence to packaging & labelling requirement & ensure integrity of the packaging material.
 - Supervision of the lifting operation (offloading & loading from vessel to jetty & from truck to final destination within Arzanah Island)
 - Transportation of NORM waste shipments from Jetty to the current temporary storage facility within Arzanah Island or the new facility under EPC tender, including any relocation requirements
 - Decontamination, if required, of the delivery vessel
 - Preparation of stored NORM materials for shipment to the ADNOC Refining NORM treatment facility, as required
 - Quantify all received waste against each type and source.
 - Maintaining an inventory for all received shipments per senders
 - Conducting regular inspection and monitoring for all NORM waste within the facility to ensure intactness of shipments integrity.
 - Conduct regular monitoring around the storage facility & Island to ensure there is no spread of NORM contamination.
 - Assess the capacity of the storage facility against received and to be received NORM Waste from all sources.
 - Operation of dedicated handling equipment, i.e., truck and trailer, forklift, pick up & power generator.
 - Maintenance of dedicated handling equipment, i.e., truck and trailer, forklift, pick up & power generator.
 - Decontamination of all equipment used in NORM handling, e.g., cranes, truck and trailers, forklift, and pick up.
 - Ensuring storage facility is off limit but to authorized and trained personnel only.
 - Conduct regular NORM awareness and NORM waste management sessions to Arzanah Island population.
 - Sampling and analysis of NORM waste, as and when needed within Arzanah Island.
 - Supply of NORM protection PPE to all concerned and affected personnel.
- **Characteristics and Technical Data**
 - Design and construction of NORM Waste Storage Facility
 - Development of a NORM Waste Management System
 - Contaminants: NORM (radionuclides) from ADNOC Offshore sites.

Client

ADNOC Offshore

Value

Confidential

Execution

Nov. 2013 – September 2022

Place

Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



Radiological Screening & Evaluation of Marine Shallow Sub-Sea Sediment Samples

- Project Description
 - Fugro Survey ME Ltd., requested the technical support of the “Competence Center NORM” in BAUER Resources in order to carry-out a radiation survey, analysis and classification on NORM-suspected sea sediment samples. The sediment samples were obtained from the seabed by using a Van Veen Grab, used by FUGRO on the majority of environmental surveys in the Middle and far East and as a back-up on FUGRO vessels in the North Sea
 - Provision of consultancy service including initial radiological monitoring, sediment samples analysis, radiological analysis and report preparation
- Characteristics and Technical Data
 - Silty and clayish sediments but also carbonate sands with minor natural radiation
 - Contaminants: various Naturally Occurring Radionuclides of the Uranium, Thorium and Actinium Decay Series

Client

Fugro Survey (Middle East) Ltd.

Execution

April 2018 and April 2020

Value

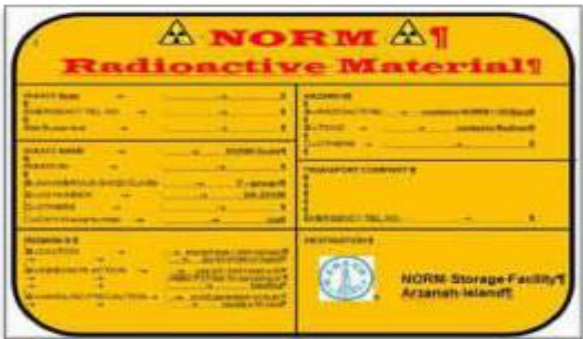
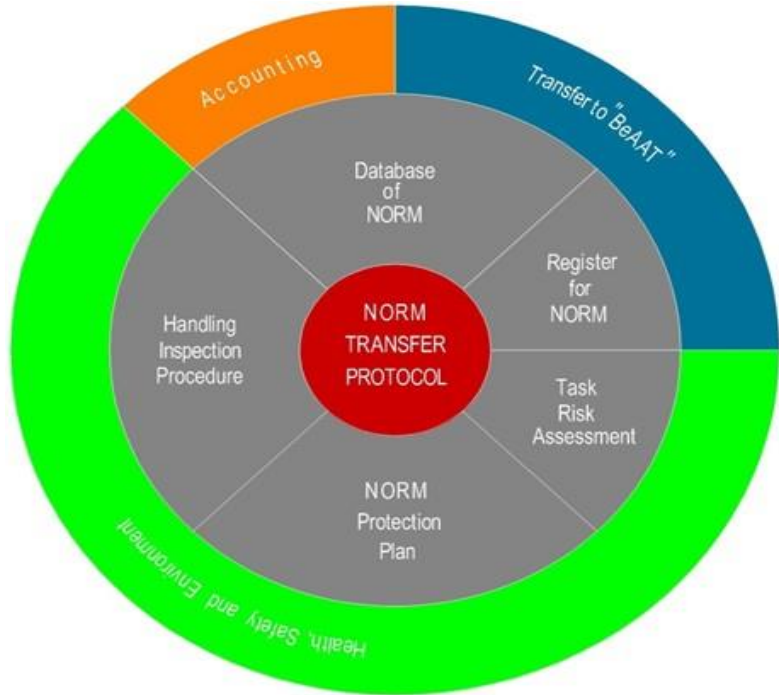
Confidential

Place

Doha, Qatar

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Storage, Gulf Region

- Project Description
 - Development of a NORM Management System
 - Regulative framework
 - Record register
 - NORM protection plan
 - Accounting aystem
 - NORM analysis
- Characteristics and Technical Data
 - The project comprises the safe and secure handling of the entirely off-shore generated oil and gas NORM waste in the Emirate of Abu Dhabi. It includes packing, shipping receiving and the proper interim storage of various types of NORM waste.
 - Contaminants: All Radionuclides from the 238-Uranium, 232- Thorium and from the 235-Uranium Decay Series but also ⁴⁰K

Client

ADNOC Offshore

Execution

2014 - 2016

Value

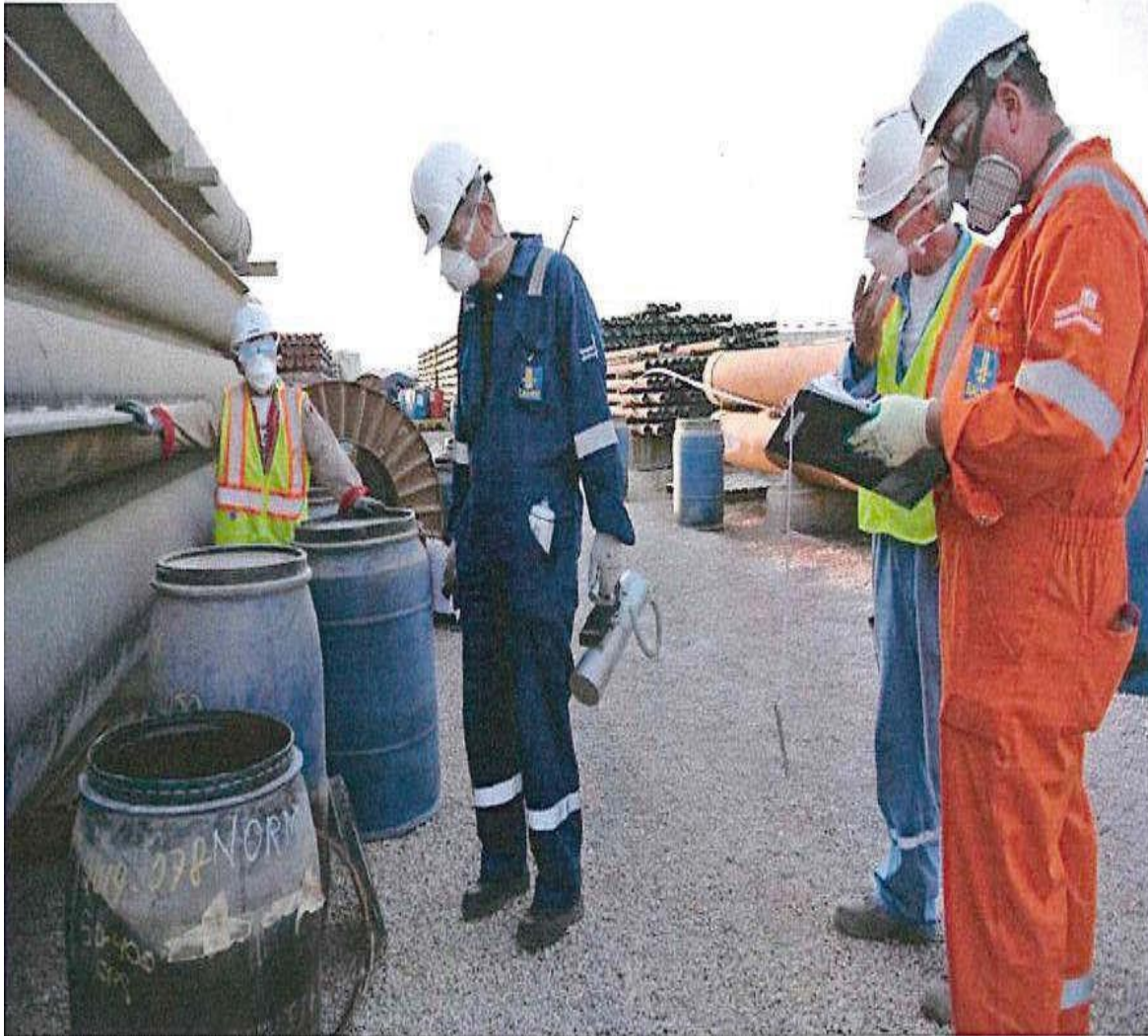
Confidential

Place

Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Handling, Treatment and Disposal Project at BeAAT

- Project Description
 - Sampling and analysis of NORM wastes works
 - NORM survey
 - Field measurements
 - Sampling
 - Laboratory radiological analytics
 - Classification of NORM contamination
 - Documentation
- Characteristics and Technical Data
 - Naturally Occurring Radionuclides from the 238-Uranium and 232- Thorium Decay Series but also Potassium-40
 - The survey was performed on typical oil and gas off-shore NORM waste such as scale and separator sludge in order to achieve data for the commissioning and operation of the BeAAT NORM waste treatment facility.
 - Contaminants: ^{226}Ra , ^{228}Ra (^{228}Ac), ^{210}Pb (^{210}Po), ^{40}K

Client

Intecsa Industrial Abu Dhabi

Value

Confidential

Execution

Nov. 2014 – Sept. 2015

Place

Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



NORM Handling, Treatment and Disposal Project at BeAAT

- Project Description
 - Design, manufacturing, supply, inspection, testing, sea packing and/or preparation for transportation, transport and insurance up to delivery of the Package Unit Descaling Pipe Cleaner with final destination to project site in Abu Dhabi, United Arab Emirates
 - Installation and commissioning of the NORM descaling plant
 - Training
- Characteristics and Technical data
 - Naturally Occurring Radionuclides from the 238-Uranium, 232- Thorium and partially from the 235-Uranium Decay Series
 - The unit uses high pressure water jet cleaning for the removal of radioactive scales from tubular and well completion strings. The descaler is part of a NORM waste treatment center, which comprises several other treatment units such as incineration & encapsulation
 - Contaminants: ^{226}Ra , ^{228}Ra (^{228}Ac), ^{228}Th (^{212}Pb), ^{210}Pb (^{210}Po)

Client

Intecsa Industrial Abu Dhabi

Execution

Oct. 2014 – Sept. 2015

Value

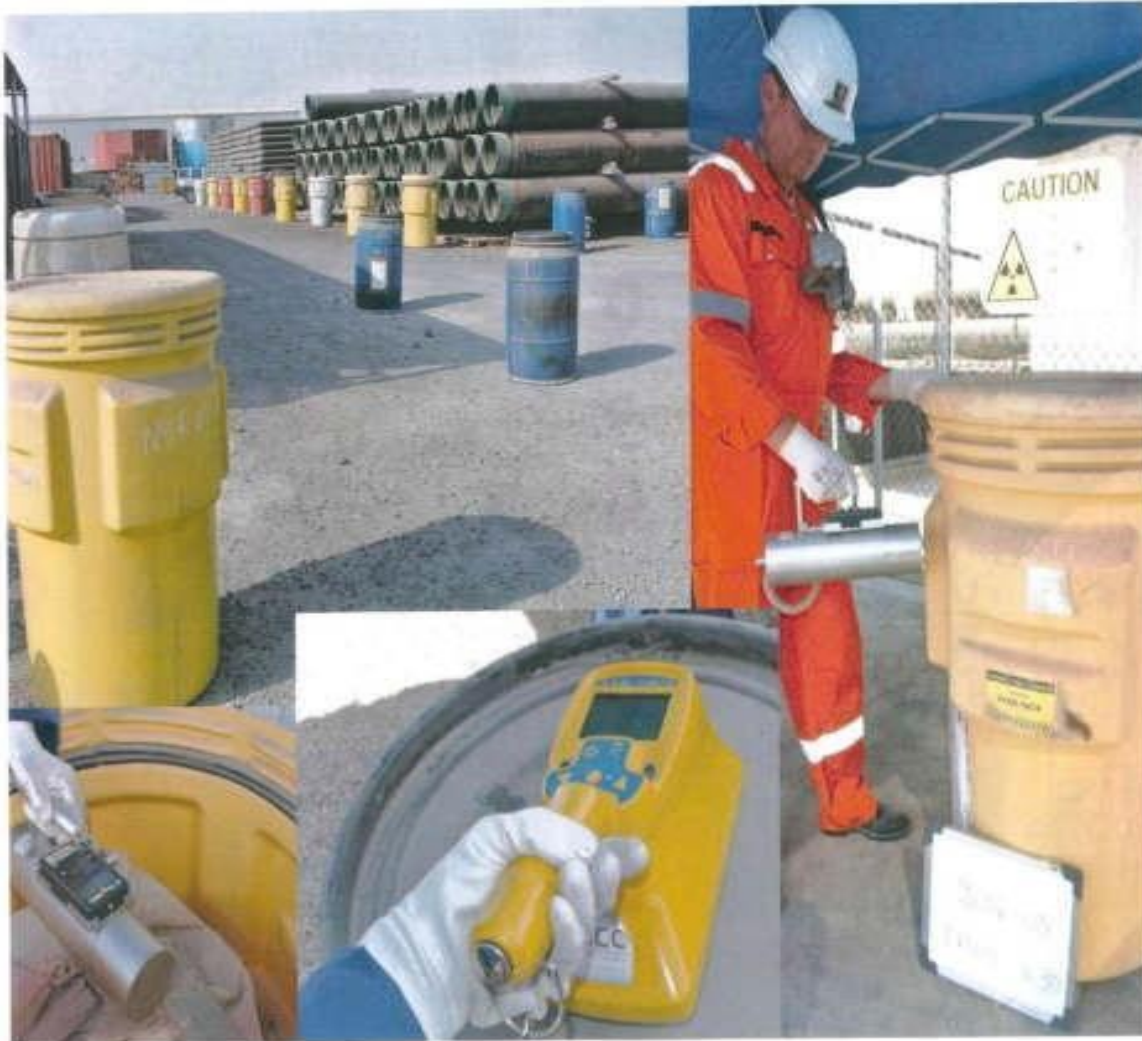
Confidential

Place

Abu Dhabi, U.A.E.

Management and Handling of Radioactive Materials

Naturally Occurring Radioactive Materials (NORM)



Radiological Analysis & Assessment of NORM Sludge and Offshore Deep-Well Injection

- Project Description
 - Assessing available information with respect to the origin of the sludge (age, technological origin and composition of the sludge, etc.) and initial site visit
 - Radiological survey and classification of the approx. 100 drums; sampling of probes for subsequent radiological analyses in a certified laboratory
 - Radiological and non-radiological (treatment tests) analysis of the collected samples
 - Assessment of results and reporting on the feasibility for disposal
 - Recommendation for further strategy and cost implications
- Characteristics and Technical data
 - The NORM waste survey was executed on scale and separator sludge stored in drums to verify “NORM suspect” (exclusion of non- NORM) and to evaluate an adequate disposal option.
 - Contaminants: ^{226}Ra , ^{228}Ra (^{228}Ac), ^{210}Pb (^{210}Po), ^{40}K , ^{227}Ac

Client

Occidental Petroleum of Qatar Ltd.

Execution

Oct. 2014 – June 2015

Value

Confidential

Place

Ras Laffan Industrial City, Doha, Qatar



Remediation/Treatment, Contaminated Soil and Groundwater

Management and Handling of Radioactive Materials

Consultancy, Soil and Groundwater Remediation Work



Technical Consultancy for Soil and Groundwater Remediation Abu Dhabi Refinery (ADR) Closure Project

- **Services**
 - Review and endorse all the Contractor deliverables to ensure the works carried out by them is as per Agreement requirements
 - Recommend any opportunities to optimize the works
 - Review and verification of site activities for successful completion of the project and handing-over the land to concerned authorities for future residential purposes
- **Characteristics and Technical Data**
 - Detail site assessment for soil and groundwater by sapling in line with Environmental Agency - Abu Dhabi (EAD) before applying remediation techniques and after completion of the job.
 - Contaminated soil and standing water remediation plan as per the required environmental standards and ADNOC standards
 - Environmental risk management plan in line with EAD guidelines and ADNOC standards
 - Soil remediation HSE studies
 - Environmental engineering deliverables
 - Soil and groundwater remediation procedures and method statements
 - Waste management plan
 - Review of soil and groundwater remediation engineering, quality assurance and process deliverables
 - Inspection and verification of day-to-day activities related to soil remediation
 - Soil investigation reports prior and post soil remediation works
 - Handover procedure and final documentation
 - Site handover dossier in line the project requirements
 - Project completion and remediation assurance to declare residential standard as per EAD guidelines
 - Post remediation liabilities and monitoring plan
 - Any other documents required for the successful completion of soil and groundwater decontamination

Client

ADNOC Refining

Execution

March – August 2025

Value

Confidential

Place

Abu Dhabi, U.A.E.



EGA Ground Water Remediation System (Leak 2)

- Project Description
 - Site assessment and investigation
 - Installation of site infrastructure (Wells, Treatment Plants),
 - Phase removal
 - Groundwater remediation
 - Soil remediation
 - Monitoring
 - Documentation
- Characteristics and Technical Data
 - Installation and operation of treatment plant
 - Phase recovery
 - Water treatment
 - In cooperation with BAUER International FZE
 - Contaminants: Total Petroleum Hydrocarbon (TPH), TPH-Gasoline Range (C5-C10), TPH-Diesel range (C11 to C28), TPH-Heavy fraction (>C28)

Client

Emirates Global Aluminium PJSC

Execution

May 2017 – April 2020

Value

Confidential

Location

Al Taweelah, KIZAD, Abu Dhabi, U.A.E.



EGA Power Plant, Diesel Contaminated Site (Leak 1)

- Project Description
 - Site assessment and investigation
 - Remediation design
 - Installation of site infrastructure (Wells, Treatment Plants)
 - Phase removal
 - Groundwater remediation
 - Soil remediation
 - Monitoring
 - Documentation
- Characteristics and Technical Data
 - Installation and operation of treatment plant
 - Phase recovery
 - Water treatment
 - Contaminants: Hydrocarbons (C5 to >C28), PAH

Client

Emirates Global Aluminium PJSC

Execution

November 2015 – April 2020

Value

Confidential

Location

Al Taweelah, KIZAD, Abu Dhabi, U.A.E.



Ground Water and Soil Remediation Services

- Project Description
 - Engineering, procurement, construction and operation of remediation system
 - Development of remediation strategy
 - Monthly reporting to client including sampling
 - Drilling up to 20 remediation wells and carrying out pump tests
 - Treating extracted ground water and discharge it into environment
 - Removal of free phase and dissolved phase hydrocarbons
- Characteristics and Technical Data
 - Capacity of water treatment system: up to 20m³/h
 - Contaminants: Diesel, Naphtha and (limited) BTEX

Client

Oryx GTL Limited

Execution

Feb. 2013 – Dec. 2016

Value

Confidential

Location

Ras Laffan Industrial City, Doha, Qatar



Removal of Contaminants

- Project Description
 - Consultancy
 - Supply of equipment - AP4 Pumps
 - Installation and commissioning
 - Training
 - Contaminant: Hydrocarbon

Client

Bureau Veritas

Value

Confidential

Execution

2018

Location

Yanbu, Kingdom of Saudi Arabia



Sharjah National Oil Corporation Condensate Terminal

Project Description

- System monitoring and maintenance in quarterly visit: Includes Well Dipping from 11 well, Product phase recharge test, Adjustment of the level, timing and Allocation for the free product skimmers and LNAPL Skimmers as per development of remediation strategy

- Reporting to client and documentation

Characteristics and Technical Data

- 5 nos. Xitech ADJ1005 skimmers
- 1 no. Air compressor with 90 l air receiver
- 1 no. One-inch flame arrestor
- 1 no. 10,000 l double skinned oil tank
- Operating pressure: 10 bar
- Contaminant: Hydrocarbon compound

Client

3. Sharjah National Oil Corp. (SNOC)
2. Petrofac International (UAE) LLC
1. BP Sharjah Ltd.

Value

Confidential

Execution

3. Nov. 2015 – Nov. 2018
2. Feb. 2013 – Nov. 2015
1. 2010 – Feb. 2013

Location

Sharjah, U.A.E.



Al Ain Hospital, Removal of Diesel Contaminated Water Offsite – Produced Water

- Project Description
 - Design, mobilization, supply, operation (24 hours), maintenance and demobilization of rental water treatment system for the pumping and treatment of ground water contaminated with hydrocarbons from 3 dewatering wells
 - Supply, filling and disposal of water and air phase carbon
 - Treating extracted ground water and discharge it into environment
 - Removal of free phase and dissolved phase hydrocarbons
- Characteristics and Technical Data
 - Capacity of Water Treatment System: up to 5m³/h
 - 3 nos. AP3 Top loading Pump
 - 1 no. Air compressor with 90 l air receiver
 - 1 no. 200l double skinned oil tank
 - Operating pressure: 10 bar
 - Contaminant: Diesel

Client

2. Arabtec San Jose Joint Venture
1. Strabag Abu Dhabi LLC

Value

Confidential

Execution

2. May 2014 – August 2015
1. 2011 – April 2014

Location

Al Ain, Abu Dhabi, U.A.E.



Summerland Hotel, Oil Spill Recovery

Project Description

During the execution of foundation works for a prestigious hotel complex in Beirut a diesel oil spill was discovered. Due to a leak in an underground diesel storage tank free phase had developed on the groundwater surface and was then penetrating into the secant pile wall. The following measures were taken:

- Site Investigation and collection of water samples
- Installation of extraction and monitoring wells in and outside the excavation pit
- Design, Build and Installation of a groundwater treatment and oil skimming system and subsequent operation

Characteristics and Technical Data

- Throughput up to 650 m³/d (approx. 25 m³/h) groundwater + infiltration
- 2-stage vertical biofilter system with pulsing feed-in
- Contaminants: MTBE, BTEX, TPH, minor Fe, Ammonium

Client

Société Générale d'Entreprises
Touristiques

Value

Confidential

Execution

2011 - 2014

Location

Beirut, Lebanon



Removal of Contaminants

- Project Description
 - Consultancy
 - Supply of equipment: 4" high performance smartskimmer pumps and specific remote control station
- Characteristics and Technical Data
 - Contaminant: Oil

Client

URS Saudi Arabia

Value

Confidential

Execution

2015

Location

Yanbu, Kingdom of Saudi Arabia



Removal of Contaminants

- Project Description
 - Consultancy
 - Supply of equipment: AP4 pumps and AP3 pumps
- Characteristics and Technical Data
 - Contaminant: Hydrocarbon

Client

URS Saudi Arabia

Value

Confidential

Execution

2013

Location

Kingdom of Saudi Arabia



Yanbu Oil Recovery Pilot Project

- Project Description
 - System design
 - Supply of equipment
 - Maintenance
 - Reporting
- Characteristics and Technical Data
 - Filtration technology: Xitech oil skimmers, AP4 pumps and 10 belt skimmers
 - Contaminant: Oil

Client

URS (Saudi Arabian Dames & Moore)

Value

Confidential

Execution

2011 - 2012

Location

Yanbu, Kingdom of Saudi Arabia



Archirodon, Wash Down Oily Water Treatment

- Project Description
 - Design, installation and commissioning of the treatment plant for wash down water
 - Training of client's personnel for operation and maintenance
 - Preparation of Instruction manual for operating the system
 - Report and documentation
- Characteristics and Technical Data
 - Plant built into a 20' container, insulated
 - Phase extraction pump (to be installed in existing tank, manual activation)
 - Separation vessel, 400l including sight glass, manual drain valves
 - Submersible pump, 2m³/h, manual activation, dry running protection
 - Bag filter to remove particles
 - 2xSAK 1000 aqueous phase activated carbon filter, 1000l each, installed in series, including first filling with new activated carbon
 - Filtration Technology: Activated Carbon
 - Contaminant: Industrial waste water with oil

Client

Archirodon Construction (Overseas)
Co. S.A.

Value

Confidential

Execution

2011

Location

Ras Al Khaimah, U.A.E.



Jubail Benzene 2

- Project Description
 - Design of the system - stripping benzenated compounds from water
 - Supply of equipment
 - Maintenance
 - Reporting
- Characteristics and Technical Data
 - Filtration Technology: Aqueous Phase Activated Carbon Filtration and Sand Filtration
 - Influent Flow Rate: 50m³/hr
 - Contaminant: Benzene

Client

Environment Development Co. Ltd.

Value

Confidential

Execution

2011

Location

Jubail, Kingdom of Saudi Arabia



International Paints Soil Vapor Extraction System

- Project Description
 - Delivery, installation, commissioning, supervising, operation and maintenance of SVE System installed in a 20' container
- Characteristics and Technical Data
 - Technology: Soil Vapor Extraction (SVE)

Client

URS Corporation

Execution

2007 - 2008

Value

Confidential

Location

Dubai, U.A.E.



Al Shaab Filling Station Phase III Groundwater Remediation

- Project Description
 - Supply of a phase recovery unit:
 - Design of phase recovery system
 - Fabrication of system
 - Pre-testing of equipment
 - Freight and transport to site
 - Clearance at Doha Customs
 - Excavation of trenches and Installation of a underground pipe work systems to connect the phase recovery unit to the existing monitoring and recovery wells on site.
 - Commissioning and operation of the recovery unit.
 - Free phase collection/storage.
- Characteristics and Technical Data
 - Contaminant: Hydrocarbon

Client

Supreme Council of Environmental and Natural Reserves (SCENR)

Value

Confidential

Execution

2006 - 2007

Location

Old Ghanim, Doha, Qatar



Falaj Al Qubail Gas Station, Pump and Treat

- Project Description
 - Groundwater and waste air treatment plant for a filling station to carry out pump and treat following leak from an underground oil storage tank
- Activities included:
 - Design and manufacture of ground water and air treatment covering: oil separator, collection tank aeration, compact stripper, activated carbon filter
 - Commissioning
 - Operation and maintenance



Client

HMR Environmental Engineering
Consultants

Value

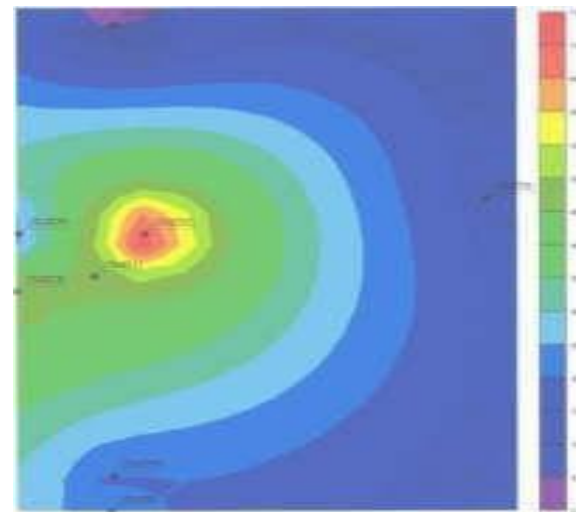
Confidential

Execution

2007

Location

Sohar, Oman



Old Al Ghanim, Petrol Station Remediation

Project Description

Site investigation, contamination modelling and recovery of free phase petroleum from the underground contamination floating on the groundwater

Characteristics and Technical Data

- Installation of 7 recovery and monitoring wells up to 15 m deep
- No. 4 durham skimmer pumps
- Fully automated system
- No. 4 sand filters
- No. 4 activated carbon filters
- Contaminants: BTEX, Diesel

Client

Supreme Council for the Environment
& Natural Reserves

Value

Confidential

Execution

2006

Location

Doha, Qatar



Phase Recovery Plant

- Project Description

BAUER designed, manufactured, installed and commissioned system with a view to carry out in-situ phase extraction / separation and soil vapour extraction.

- Ground water treatment plant included:

- Vacuum separator
- Collection tank

- Soil vapour treatment plant included:

- Cooling
- Water separation
- Activated carbon filter
- Explosive protection

Client

REDA Ltd.

Value

Confidential

Execution

2005

Location

Ras Al Khaimah, U.A.E.



Constructed Wetlands and ReedBox, Wastewater Treatment



ReedBox at KIZAD, a Sustainable Water Treatment Solution

- Project Description
 - Treatment and reuse of sewage water from KIZAD Head Quarter office building
- Service
 - Supply, installation, operation & maintenance of ReedBox with the capacity to treat raw sewage for from 60-80 persons
- Characteristics/Technical Data
 - Number of ReedBox Unit: 1 no., 40-foot
 - Flow Rate: Up to 15 m³/d
 - Water reuse for landscaping around the office building
 - Nature based wastewater treatment concept
 - Meeting Environment Authority standard
 - Contaminants: Domestic sewage; black & grey

Customer

Abu Dhabi Ports Company

Execution

2021 – Ongoing

Order value

Confidential

Place

Abu Dhabi, U.A.E.



ReedBox Demonstration Project

- Project description:
 - Treatment and reuse of sewage water from an ADNOC Drilling camp located in an onshore oil & gas concession during a 3-month period
 - Supply, installation, operation & maintenance of ReedBox with the capacity to treat raw sewage for from 120 persons
- Characteristics/Technical data:
 - Number of ReedBox Units: 2 nos., 40-foot
 - Flow Rate: Up to 30 m³/d
 - Water reuse for irrigation and desert discharge
 - Nature-based wastewater treatment concept
 - Meeting ADNOC / Environment Authority standard
 - Contaminants: Domestic sewage; black & grey

Customer

ADNOC Drilling

Execution

2022 - 2023

Order value

Pilot Project

Place

Habshan, Abu Dhabi, U.A.E.



ReedBox, Onsite Domestic Grey and Black Wastewater Treatment

- Project Description
 - Sewage Water Treatment and reuse from ALDAR Noya Project Site Office
- Service
 - Supply, installation, operation & maintenance of ReedBox with the capacity to treat raw sewage for from 20 persons
- Characteristics/Technical Data
 - Number of ReedBox Unit: 1 no., 20-foot
 - Flow Rate: Up to 7 m³/d
 - Water reuse for landscaping around the project office
 - Nature based wastewater treatment concept
 - Meeting Department of Energy Standard
 - Contaminants: Domestic sewage; black & grey wastewater

Customer

ALDAR Properties PJSC

Execution

2022 - 2023

Order value

Pilot Project

Place

Yas Island, Abu Dhabi



Masdar Pond Rehabilitation & Pipe Repairing Works

Project Description

The Seawater Energy and Agriculture System (SEAS), is a large scale research program on alternative fuels derived from halophytic (saltwater tolerant) plants, which is implemented by Sustainable Bioenergy Research Consortium (SBRC).

Pond rehabilitation

- Supply and installation of material/lining and equipment
- Underground improvement works and concrete works for a stable basement
- Removing of the existing damaged liner, cut area of approx. 21m x 17m
- Earthworks
- Cleaning and reinstalling of the existing pipes at the bottom of the pond

Pipe repairing

- Supply and installation of pipes and fittings/connections
- Changing current PVC sections into HDPE
- Conduct proper welding connections by a certified welder

Client

Khalifa University

Value

Confidential

Execution

Nov. 2018 – Sept. 2019

Place

Masdar City, Abu Dhabi, U.A.E.



Al Dhaid Project, Phase 1B, Reed Bed Sewage Treatment

- **Project Description**
Treatment of the sewage generated from the labour accommodation, currently with 150 tenants and the objective is to utilize the treated sewage for irrigation purposes.
- **Services**
 - Design, engineering and construction of a wetland system
 - Topographic and soil investigation
 - Earth works, civil works, start-up and commissioning
 - Waste removal from site
 - Project management, supervision, operation and maintenance
 - Report and documentation
- **Characteristics and Technical data**
 - The Constructed Wetland was designed with integrated sludge treatment during the first stage and an aerated second stage for tertiary cleaning
 - Stage 1 – Vertical Flow with 3 filter beds
 - Stage 2 – Aerated Horizontal Flow Wetland
 - Land area for Reed Bed Treatment System, 750m²
 - Daily water consumption per PE, 100-120 litres/day
 - Daily amount of sewage, 18m³/day
 - Contaminant: Domestic sewage, black and gray

Client

Environmental Protected Areas Authority (EPAA) and H.H. Ruler's Office, Government of Sharjah

Value

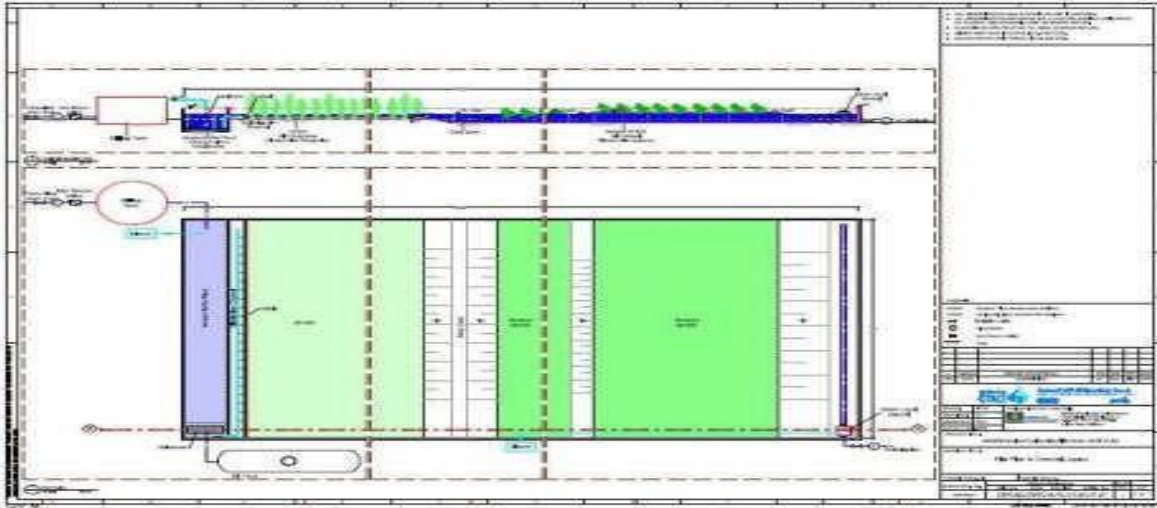
Confidential

Execution

March 2017 – March 2018

Place

Al Dhaid, Sharjah, U.A.E.



FEED for Wetland Engineering Pilot Study at Asab-0

- Project Description
 - Deliver Front End Engineering Design (FEED) for a Pilot Constructed Wetland Water Treatment Plant to treat 150m³/day of produced water to a standard for reuse.
 - Delivery of FEED services includes; characterization of produced water, Identification and Specification of Treatment Processes.
- Characteristics and Technical Data
 - Buffer Pond with Skimmer
 - Stage 1 - Surface Flow
 - Stage 2 - Aerated Horizontal Flow
 - Capacity: 150m³/day
 - Contaminant: Gas production plant produced water

Client

ADNOC Gas Processing (prev. GASCO)

Execution

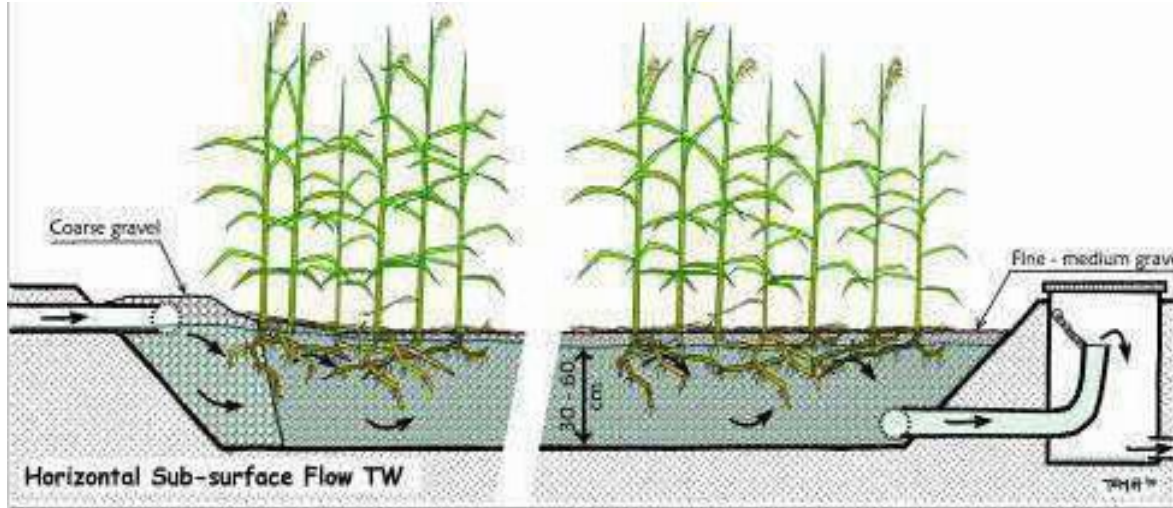
2016 - 2017

Value

Confidential

Place

Asab Oil Field, Abu Dhabi, U.A.E.



Disi Water Supply Project Camp

Project Description

Conceptual and detailed design of a subsurface flow treatment wetland system for treating 60 m³/day of sewage from a construction camp

Characteristics and Technical Data

- With the wetland system the client would be able to treat the sewage water to a secondary quality standard (BOD < 30mg/L, TSS < 30 mg/L).
- Capacity: 60m³/day
- Contaminant: Sewage and sludge

Client

SITE Group for Services and Well Drilling Ltd.

Order Value

Confidential

Execution

2012

Place

Disi, Jordan



Ziggy Bay – Six Senses Water Treatment

- Project Description
 - Design of an Activated Sludge Process Sewage Treatment Plant
 - Supply, delivery, installation, commissioning
 - Site management (supervising and maintenance of STP & Reed bed)
 - Reporting and documentation
 - Training
- Characteristics and Technical Data
 - Capacity: 4.5 m³/day
 - Contaminant: Sewage and sludge

Client

Intermass Engineering & Contracting
LLC

Value

Confidential

Execution

2009 - 2010

Place

Dibba, Oman



Block 60 Abu Butabul Camp Water Treatment

- Project Description
 - Design of the Pure Reed Bed Sewage Treatment Plant (PURE-RSTP)
 - Application of all required permits
 - Delivery/supply, construction, installation
 - Commissioning of the equipment and plants
 - Site management (supervision, operation and maintenance of the system)
 - Mobilisation and demobilisation
 - Training for local operators and maintenance personnel
 - Documentation
- Characteristics and Technical Data
 - Flowrate: 60 m³/d
 - Reed bed is designed as a combined sludge mineralization and waste water treatment facility handling waste water for around 250 person equivalents
 - Contaminant: Domestic sewage and sludge



Client

British Gas (BG) Oman

Value

Confidential

Execution

2007 - 2008

Location

Abu Butabul, Oman



Workshop Sewage Treatment

- Project Description
 - Natural Sewage Treatment System with integrated sludge removal
 - BAUER was responsible for conceptual and detailed design, procurement of materials, construction and commissioning
- Characteristics and Technical Data
 - System consisted of a vertical sludge filter and a horizontal biological filter
 - The project made use of local reed plants and a variety of available ornamental plants
 - Capacity: 15 m³/day
 - Contaminant: Industrial sewage and sludge

Client

BAUER International Qatar LLC

Execution

2007

Value

Pilot Project

Location

Al Shahaniya, Qatar



Construction Camp Sewage Treatment Plant

- Project Description
 - Construction Camp Sewage Treatment Plant based on Wetland Technology with integrated sludge treatment system
 - BAUER was responsible for conceptual and detailed design, procurement of construction materials, construction and commissioning.
- Technical data
 - Flow Rate: 300m³/d
 - 5 Vertical filters followed by 1 Horizontal Filter
 - Contaminant: Domestic sewage and sludge

Client

Al Jazi Real Estate

Execution

2006 - 2007

Value

Confidential

Place

Al Shahaniya, Qatar



Industrial Dismantling/Demolition

Industrial Dismantling and Enabling Works



Mugharraq Port, DRM Building Demolition, Enabling Works for Storage Facility Modification of Existing Facilities, Markings and Other Works

- Services
 - Site inspection, pre-commencement surveys, site clearance
 - Obtaining all required permits to work, permission and any other processes necessary for the works
 - Removal of existing buildings
 - Removal and proper disposal of waste and materials demolished
 - Design, engineering, supply and installation of new DRM building and associated infrastructure works
 - Pavement works for the proposed truck parking, road marking and road/wayfinding signs and new streetlights
 - Protection of existing TRANSCO lines
 - Design and Construction of French drain (soakaway) storm water system.
 - Installation of potable water connection, LV connection, telecom connection, PSS/CCTV duct connectivity.
 - Installation of fire alarm and firefighting system.
 - Construction of sewage holding tank and sewage connection for the new building.
 - Enabling works for storage facility.
 - Installation of underground ducts of the parking area.
 - Installation of boom barrier.
 - Widening and modification of existing roundabout 1 including removal and reinstatement of curbs
 - Site grading works

Client

Abu Dhabi Ports Group

Value

Confidential

Execution

July 2021 – February 2023

Place

Mugharraq Port, Abu Dhabi, U.A.E.



Mugharraq Port Site Clearance & Enabling Works

- **Project Description**
Expansion of Mugharraq Port to meet the growing demand on port infrastructure
- **Services**
 - Site inspection and general site clearance
 - Demolition of existing building and structures
 - Site hoarding and signboards
 - Relocation of accommodation facilities
 - CICPA, DOT and Safeen accommodation plot preparation / ADNOC and CICPA pontoon plot preparation
 - Installation of site access roads (10m wide and leveled and graded with 150mm thick compacted subbase)
 - Removal from site of any equipment/materials demolished.
 - Site grading
 - Obtaining all required permits to work, permissions and any other processes necessary for the works
 - Removal and disposal of asbestos sheets performed by specialized and as per Abu Dhabi Municipality requirements
 - Conduct pre-commencement surveys may include as applicable but not limited to topographical, photographic, condition, existing utility including bat survey, of the work area prior to commencing demolition and submission of final report on topographic and photographic surveys
- **Characteristics and Technical Data**
 - Mugharraq Port is located 185 km west of Abu Dhabi City and plays a vital role as a regional transport node linking several important island communities and offshore commercial operations to the Abu Dhabi mainland
 - It comprises of a rectangular basin approx. 300m wide and 450m long with an average depth between -6.0m LAT and -7.0m LAT and includes the following main infrastructure: a quay wall of 200m with 6 ramps for landing crafts, a quay wall of 85m for general vessels, floating pontoons for CICPA and ADNOC, and a launch ramp for small boats
 - It is serviced by two dredged entrance channels with an average depth between -5.0m LAT and -6.0m LAT
 - Contaminant: Asbestos

Client

Abu Dhabi Ports Company

Value

Confidential

Execution

March 2019 – Sept. 2019 and
January 2021 – June 2021

Place

Abu Dhabi, U.A.E.



Demolition & Sale of Facilities at Jarn Yaphour

- Project Description
 - Approval procedure (permits, license, approvals, etc. from all relevant authorities) for disconnecting and terminating of the existing utilities
 - Demolition of complete installations at each installation including mechanical equipment, piping, pipeline/flow line, valves, electrical and instrument components, steel structures, buildings, sheds, foundations, roads, etc.
 - Isolation, de-mothballing and dismantling all above ground and underground installations which includes drain piping, trenches, pits and flow lines
 - Removal of peripheral fence around the wellhead/s facility
 - Removal from site of any equipment/materials demolished
 - Rehabilitation of the site
- Characteristics and Technical Data
 - The JY manifold station is with approximate plot size of 300m x 200m and it contains above ground installation that are common to oil and gas manifold station
 - 13 nos. of JY wells surface facilities, flow lines between above mentioned wells and the manifold station and 2 nos. of HT wells surface facilities

Client

ADNOC Onshore

Value

Confidential

Execution

July 2018 – Oct. 2019

Place

Al Watba, Abu Dhabi, U.A.E.



Offshore Demolition of Ras Ghurab Service Station # 813

- Project Description
 - Dismantling design for service station on Island
 - Approval procedure (permits, approvals, license etc. from all relevant authorities).
 - Demolition of buildings, structures and infrastructure
 - Removal of substructure, foundations, basements
 - Disassembling of installations (generators, dispensers, etc.) & provision for client's reuse
 - Demolition of reinforced concrete structures (ramps, foundations, etc.)
 - Removal of surface and subsurface infrastructure (tanks, piping system, etc.)
 - Demolition of the jetty and access gangway
 - Transport of demolition waste from offshore to approved disposal in Abu Dhabi
 - Delivery of clean granular soils, backfilling and compaction
- Characteristics and Technical Data
 - Offshore demolition
 - 2 nos. of 5000 IG aboveground fuel steel tanks and air compressors 200L to be dismantled and shifted at Mussafah

Client

ADNOC Distribution

Value

Confidential

Execution

Oct. 2015 – Dec. 2015

Place

Ras Ghurab, Abu Dhabi, U.A.E.



Demolition Works of the 201 Office Blocks

- Project Description
 - Dismantling Design
 - Approval Procedure (permits, approvals, license etc. from all relevant authorities)
 - Demolition of buildings and structures
 - Removal of substructure, foundations, basements
 - Disposal of Demolition Waste
 - Delivery, Backfilling and Compaction with clean granular soils
- Characteristics and Technical Data
 - Demolition of 2 office blocks incl. utilities/structures
 - Demolition of 2 communication towers with overhead water tank
 - Demolition of power supply station and electrical substation
 - Removal and disposal 6 tanks
 - Removal of 2 earth tanks
 - Removal of septic tank and infrastructure

Client

Abu Dhabi Ports Company

Value

Confidential

Execution

Aug. 2015 – Sept. 2015

Place

Al Taweelah, Abu Dhabi, U.A.E.



Dismantling of Cement Bag Filling Plant at Mina Zayed

- Project Description
 - Demolition, removal and disposal of cladding, spot welded plats, small girders, wind braces, stairs, steel frames, pipe work and all internal and external electric light fittings leaving the floor of the factory
 - Dismantling and removal of main structure elements and all process related machines
 - All machines and main structure elements will be kept in shape that can be re-used by the client
 - Breaking of concrete ground slab up to 50cm thick and transportation of the material to the storage area on site for crushing
 - Preparing a packing list for each storage container (provided by client). The listing will be for machinery and recovered structural items as a list of dismantling sequence with proper numbering for the different parts of the plant
 - Disposal of all construction waste, cement waste which is with the equipment by a certified waste disposal company
 - Disposal of remaining steel
- Characteristics and Technical Data
 - Progressive demolition (type of top down demolition)
 - Contaminant: Cement waste

Client

Abu Dhabi Ports Company

Value

Confidential

Execution

Sept. 2014 – Feb. 2015

Place

Mina Zayed, Abu Dhabi, U.A.E.



Demolition & Removal of Warehouse 15 and Open Transit Shed 15

- Project Description
 - Demolition and disposal of internal concrete walls
 - Dismantle and disposal of steel framed partition wall
 - Dismantle and disposal of all pipework and mechanical air vents from roof of shed.
 - Dismantle and removal of all pairs of sliding steel frame doors which are mounted externally on the shed.
 - Dismantle and disposal of all internal and external electric light fittings and any external or internal fixtures, leaving steel frame and concrete floor slab in a clean and safe condition
 - Removal and disposal of all aluminum cladding sheets from exterior of the shed, taking care not to damage the steel frame support
- Characteristics and Technical Data
 - Demolition and disposal of steel structured open shed with dimension of around 135 x 54 meters
 - Demolition and disposal of associated structures; temporary mosque, concrete toilet, security fence and spill containment area from under the open shed

Client

Abu Dhabi Ports Company

Execution

July 2014 – Dec. 2014

Value

Confidential

Place

Abu Dhabi, U.A.E.



Disposal of Warehouses 52-55 at Zayed Port Free Zone

- Project Description
 - Dismantle and removal from site all aluminum sheeting, steel frame supports, internal and external fixtures, windows, doors, frames and any other scrap or debris that are in various states of condition due to the fire within the structures, leaving only the concrete floor slab in a clean and safe condition. All ramps and driveways to the concrete slab to remain in place
 - Dismantling, packing, loading and transportation of the surplus material from the site
- Characteristics and Technical Data
 - 4 nos. of warehouse at Zayed Port Free Zone
 - Contaminant: Debris on the site due to fire

Client

Abu Dhabi Ports Company

Value

Confidential

Execution

July 2014 – Nov. 2014

Place

Abu Dhabi, U.A.E.



Demolition & Disposal of Marine Workshop Warehouse

- Project Description
 - Perform a comprehensive survey to the demolition site condition
 - Provision of necessary temporary services, equipment, etc.
 - Secure the site boundaries with the needed hoarding, fencing, barriers, diversions and warning signs, etc. as required
 - Demolition, dismantling, and removal of warehouse structure along with associated attached structures and components (such as parking canopy, toilet, annexed blocks and all accessories/internal blocks/partitions/loose materials/flooring and other amenities) including any footer, foundation, stem wall or other related structures that cannot be cut-off or terminated at ground level
 - Removal and disposal of roofing and siding asbestos sheets performed by specialized and duly certified staff
 - Disposal of hazardous/non-hazardous wastes as per Abu Dhabi Municipality Requirements
 - Disconnecting and terminating of the existing utilities (i.e. water, electricity, sewer, telephone, etc.) that currently provide service to the warehouse at or near the foot print limits of the structure as per the concerned authority (ADM, ADDC, ADWEC, ADNOC, Etisalat) requirements
 - Carefully, neatly and safely carting away of all debris out the site to an approved tipping area as per Abu Dhabi Waste Management Centre regulations
 - Cleaning and compacting the soil surface which shall match the existing pavement level strictly in accordance with the instructions, directions and approval of the Client
- Characteristics and Technical Data
 - Warehouse structure size of 55m x 19m long
 - Roofing and siding are categorized as asbestos sheets of about 1,800m² which weigh circa 40 ton
 - Contaminant: Asbestos

Client

Abu Dhabi Ports Company

Execution

April 2014 – May 2014

Value

Confidential

Place

Mina, Abu Dhabi, U.A.E.



Mina Zayed Lube Base Oil Depot Demolition

- Project Description
 - Decommissioning, demolition and disposal of all fixed assets at Mina Zayed Lube Oil/Gas Depot and restoration of the property for handing over ready for alternate use to the Urban Planning Council
 - Disposal of hazardous/non-hazardous wastes as per Abu Dhabi Municipality Requirements
 - Decommissioning and cleaning of oil pipeline of 10" DIA and 2 KM long by pigging
- Characteristics and Technical Data
 - **Won First Price for HSE Award in Operations Category within ADNOC Distribution**
 - The project execution follow the four phases:
 - Phase 1: The exercise shall begin with flushing out the pipeline and making it sufficient free of residual oil. All tanks and internal piping shall be cleaned of sludge and repeatedly flushed till all traces of hydrocarbon are removed and tanks are declared safe for entry. Phase 1 will be deemed to be completed when 2 10" pipelines are terminated and capped off outside the boundary wall and the entire premises are declared hydrocarbon free
 - Phase 2: The demolition of tanks and pipelines including fire water piping, steel structures such as the loading bays, pumps, etc. will be carried out on this phase
 - Phase 3: Demolition of civil structures particularly the tank dykes which is substantial will be carried out. The last part of the demolition after all recovered material are transported out or safely secured shall be the demolition of the boundary walls, internal roads and the office building
 - Phase 4: The last phase will be the restoration of the entire plot. This involved removal of any large chunks of concrete and other debris, levelling the entire plot area, removal of any soil visibly contaminated by oil/petroleum products and replenishing them with fresh soil. Disconnection of servicing power and water will be carried out towards the end of this phase
 - Contaminant: Hydrocarbon

Client

Abu Dhabi National Oil Co. (ADNOC)

Execution

Sept. 2013 – Dec. 2013

Value

Confidential

Place

Abu Dhabi, U.A.E.



Others



Mugharraq Port, 132kV Cable Mapping Survey Works

- Project Description
 - Determining accurate location of 132kV TRANSCO cables located within the Mugharraq Port basin
- Characteristics and Technical Data
 - Gyro mapping survey conducted as part of the 132kV TRANSCO line protection.
 - Gyro Mapping Survey conducted between two Link Box/Pit Joints, with the gyro mapping probe passing thru four pipes below sea level
 - Obtaining accurate geospatial data of existing and new subsurface utilities to minimize damage risk to existing infrastructure, thus optimizing uninterrupted service delivery to the client.
 - The high-frequency logging rate enables accurate measurement of the bend radius or inclination along a segment of a pipe or duct.
 - Technique consists of multiple passes for a more accurate reading
 - On-site data collection and reading. Immediate results.

Client

Abu Dhabi Ports Group

Execution

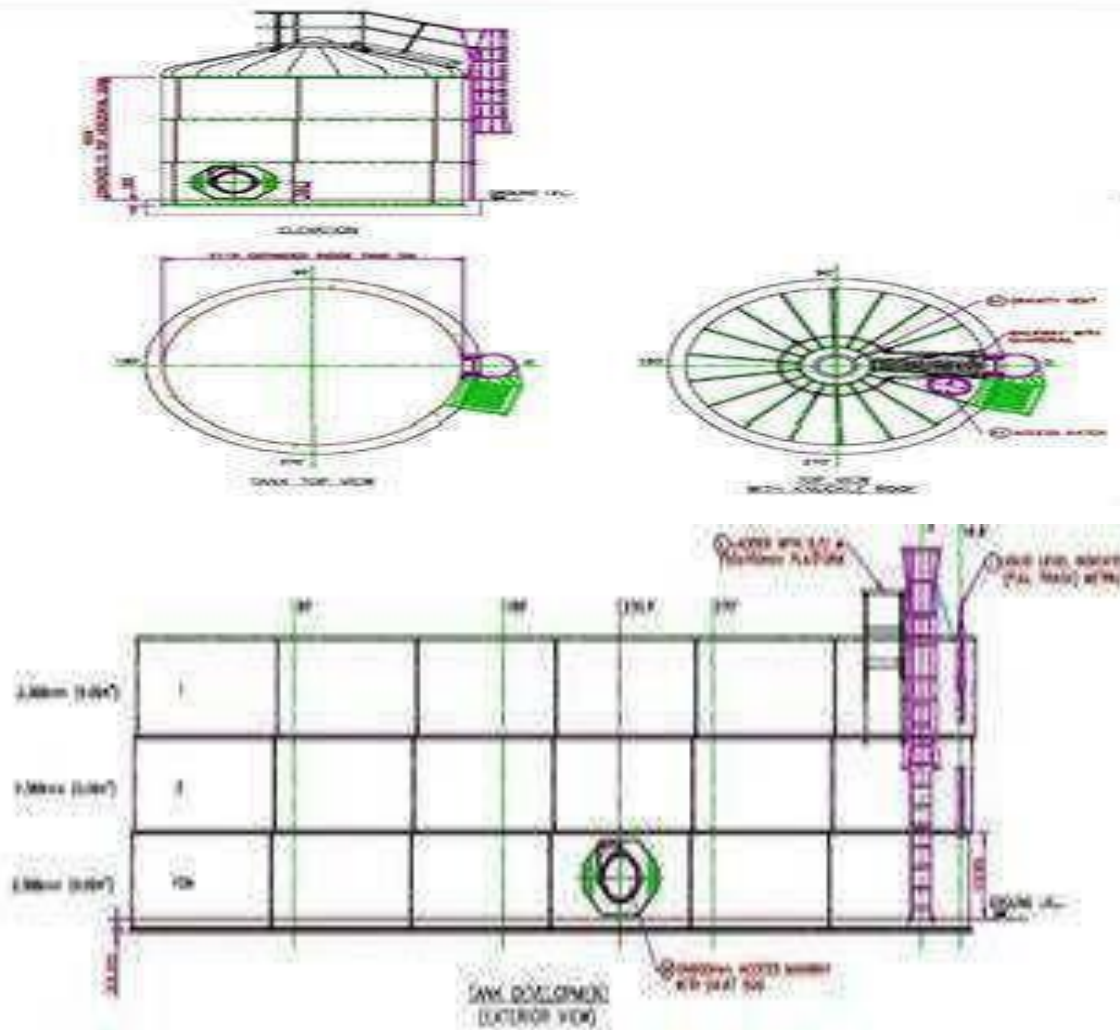
August 2022

Value

Confidential

Place

Mugharraq Port, Abu Dhabi, U.A.E.



Masdar, Sea Water Tank Emergency Repair Works

Project Description

Khalifa University awarded BAUER Emirates Environment Technologies and Services LLC (BEE) to perform an emergency repair works on a bolted seawater tank (5.116 m dia. and 4.054 m height to eave) with knuckle roof. The seawater tank, equipped with a cathodic protection system (sacrificial Mg anodes), shows visible pitting corrosion in the bottom area of the tank.

- Inspection of the tank plate condition (wall thickness, measurements, strength testing etc.)
- Pre Coating Preparation including (but not limited to); Grinding, Cutting out corroded area
- Replace pitting corrosion affected area by welding patches or equal
- Mechanical and chemical rust removal in the bottom and side wall areas of the tank (sand blasting is not recommended owing to minor wall thickness)
- Coating of blank steel surface by Zinc Rich Primer
- Coating the bottom area (with Epoxy-Resin-Grid)
- Full coating inside of the tank with Epoxy Coating (or equal – depending on existing coating system)
- Installation of a sacrificial anode

Client

Khalifa University

Execution

November 2018

Value

Confidential

Place

Masdar City, Abu Dhabi, U.A.E.



Masdar, Sea Water Tank Installation of an Alternative Bypass

Project Description

The current seawater pipeline (150 mm UPVC) is directly connected to the seawater blend tank. In order to take the tank out of service for repair and maintenance, an alternative seawater bypass line for the tank is required.

- It involves making a cut in the UPVC pipeline supplying the seawater blend tank
- Install a T-joint at the site of the cut; and installing two manual intermediate flange butterfly valves
- Routing the pipeline around the perimeter of the tank (running in between both GLS tanks)
- Connecting the bypass pipe to the effluent pipe leaving the blend tank via T-joint and installation of another manual butterfly valve to isolate the bypass pipeline
- Painting all UPVC parts with UV-resistant coating
- Support foundation blocks for the pipeline around the perimeter

Client

Khalifa University

Execution

November 2018

Value

Confidential

Place

Masdar City, Abu Dhabi, U.A.E.

Contact

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