

Member of Mannai Corporation QPSC

# **GEOTECHNICAL INVESTIGATION SERVICES**

Supervised by highly qualified experienced geotechnical engineers and geologists, Gulf Laboratories undertakes ground investigations for a wide variety of civil and industrial construction, infrastructure and pipeline projects both onshore and nearshore. The company prides itself by adopting the same professional approach to both large multi- disciplinary investigation projects as well as small structures.

#### SERVICES

- Geotechnical Borehole drilling
- Trial pitting and trenching
- Cone penetration testing
- Probe-hole drilling
- Pumping tests and permeability testing
- Plate bearing tests and in-situ CBRs
- Desk studies
- Walkover surveys and geological mapping
- Laboratory testing
- Geophysical surveys
- Preparation of factual and interpretative reports Design and planning of ground investigations.

#### RESOURCES

- Multipurpose hydraulic drilling rigs
- Air compressors
- Cone penetration testing rigs (200kN)
- Shallow water jack-up drilling pontoon
- Jean Lutz drilling parameter measurement systems
- Electrical resistivity equipment
- Ground penetration radar
- Thermal resistivity testing equipment
- OYO Elastmeter (pressuremeter)
- Borehole packers
- Submersible pumps, flowmeters, V-notch weirs Pressure transducers / datalogger units.



# **DRILLING AND OTHER SERVICES**

### WATER WELL DRILLING

We have had over 35 years of experience in drilling water wells throughout Qatar. Steel or PVC well casing and well screen can be installed together with appropriate filter packs. We can also undertake pumping tests to assess well performance and advise on optimum well yields and pump selection. We can also perform complex discharge and injection testing programmes as part of hydrological investigations.

### GROUNDWATER MONITORING WELLS

We have undertaken the drilling and installation of numerous groundwater monitoring wells in association with environmental impact assessments and long term ground water monitoring programmes. Our drill crews and supervisory staff have a wide experience of decontamination procedures and sampling protocols to avoid cross contamination. We also undertake groundwater sampling together with measurement of field parameters and subsequent laboratory analysis.

### SOAKAWAY BOREHOLES

We regularly undertake soakaway borehole drilling as part of infrastructure drainage schemes, together with permeability testing to assess dissipation potential.

### OTHER DRILLING SERVICES

Other drilling services such as mineral exploration, earthing / cathodic protection boreholes, micropiles and probe hole surveys can also be undertaken.











# CHEMICAL AND ENVIRONMENTAL



Gulf Laboratories WLL has an extensive years of experience in laboratory testing that benefits the client on their laboratory testing requirements. The laboratory offers a wide range of laboratory services for the analysis of oil, sediment, ground water, waste water, and drinking water in support of environmental studies, EIA, regulatory requirements and other projects. The laboratory is utilizing internationally recognized industry methods such as ASTM, BS, EN, DIN, US EPA, and many other industry standards.

A full list of test parameters undertaken is available on request.

## Gulf Laboratories offers the following laboratory services:

- Environmental testing for water, waste water, soil, sediment and sludge
- Material Testing of Aggregates, Soil, Cement
- Asphalt, Limestone and Agricultural Soil used in the Construction Industry
- Portable Water chemical and microbiological testing in support of regulatory compliance monitoring
- Steel Chemical Testing







#### LABORATORY RESOURCES:

- Inductively Coupled Plasma Spectrometer Optical Emission Spectroscopy (ICP-OES)
- Gas Chromatography Mass Spectrometer (GC-MS Hypenated Method) with Purge and Trap Set Up
- Gas Chromatography Mass Spectrometer / FID (GC-MS/FID) with Dynamic Headspace Sampler
- UV-Vis Spectrophotometers
- HACH Spectrophotometers
- Kjeldahl Digestion and Distillation Equipment
- Soxhlet Equipment
- Cyanide Distillation Apparatus
- Total Organic Carbon (TOC) and Total Nitrogen (TN) Analyzers
- Rotary Evaporators
- BOD Incubators
- pH Meters
- COD Digestors
- Potentiometric Titrators
- Microwave Digestor
- Ion Chromatography System
- Dedicated Set Up for Microbiological Testing of Waste Water and Potable Water
- Arc Optical Emission Spectrometer

Gulf Laboratories is TL373- accredited Testing Laboratory

# FOOD TESTING SERVICES

Gulf Laboratories Co. WLL is dedicated in providing a comprehensive testing and analysis of food. Food testing provides independent assurance that a food safety management system has been effectively implemented and is used in monitoring potential sources of microbiological contamination.

Gulf Laboratories Co. WLL is committed in giving the best quality of service for our existing and potential clients in the food and beverage industry including:

- Hotels
- Restaurants
- Catering Services
- Manufacturing Companies
- Supermarkets and Hypermarkets
- Retail Shops
- Import & Export Food Stuff Co.
- Fastfood Chains



## DETECTION AND ENUMERATION OF PATHOGENS -OTHER QUANTITATIVE MICROBIAL TESTING







Our Food Microbiology Laboratory provides a wide range of services performing extensive routing testing for product quality, pathogen detection and identification in dairy, meats, seafoods, fresh produce and much more.

## Chemical Food Testing has also been added recently to our services portfolio.

Our vast experience in laboratory testing combined with stateof-the-art facilities, and aseptic practices ensure precise results in the shortest turn-around-time possible.

Our laboratory has a team of highly-qualified and competent microbiologist that are capable of obtaining reliable microbiological analysis of food, beverage, and other environmental samples,

Methods employed at our laboratory include: Camden and Chorleywood Research Association (CCFRA), American Public Health Association (APHA) FDA - Bacteriological Analytical Manual (BAM), American Organization of Analytical Chemists (AOAC), and Compendium of Methods for the Microbiological Examination of Foods (CMMEF).





### LABORATORY PHYSICAL TESTING

### PHYSICAL PROPOPERTIES TESTING

Our physical properties laboratory is fully equipped to carry out testing that is required to complement the drilling and in-situ testing performed during our geotechnical investigation works as well as testing ASTM standard. Concrete testing facilities include automatic compressive strength machines, as well as offering a full range of BS tests for concrete mix design and trial mix testing.

Gulf Laboratories carries out a full range of aggregate testing as required by BS 812, ASTM standards, and Qatar National Construction Specification (QCS). We also have a vast experience in performing asphalt testing using British and American standards, as well as the Marshall mix designs preparation and verification.

The fully equipped soil and rock testing facilities are capable of performing consolidation, triaxial, shear test, elastic modules and strenght characteristics analysis.

Establishment and operation of site-based laboratories and in-situ testing services are also provided.

A full list of test parameters undertaken is available on request.







## **OIL TESTING SERVICES**





#### **OIL ANALYSIS SERVICES**

Our laboratories are staffed by master chemists, highly trained technicians and laboratory management with a wealth of industry knowledge and experience.

Weofferawiderangeofservicesthat can be customized to meet the customer's exact requirements, from a comprehensive laboratory program or individual testing of samples for:

- Laboratory outsourcing and management;
- Submitted sample testing projects;
- Product quality control;
- Research and development projects;
- Routine laboratory testing;
- Consultancy utilizing our highly trained experts.

We are equipped to perform testing and analysis in various New and Used Oils includes Mineral or Synthetic Insulating Oils, Base Oils, Lubrication Oils, Gear Oils, Hydraulic Oils and Marine Gas Oils.

Gulf Labs strictly adheres to the Quality Control Procedures as per ISO/IEC 17025:2017 and deliver their best services to the existing and potential clients in State of Qatar includes,

- Electrical Utilities
- Power Plants
- Oil & Gas Companies
- Ship Management Companies
- Facility Maintenance

Gulf Labs has the expertise in Condition Assessment and Remaining Life Analysis of Electrical and Mechanical Equipment.

#### **OIL SAMPLING**

As the sampling of insulating fluids is vital to ensure the accuracy of test results, a good sampling method is to be followed. Our technicians are highly trained in taking oil samples from Oil filled equipment. We offer a complete portfolio of services for our clients including sampling kits and on-site services, analytical testing, data analysis & reporting, and advisory and consulting services.



## ABOUT US

For the past 45 years Gulf Laboratories has been dedicated to supply high quality laboratory, geotechnical investigation and borehole drilling services to both local and international clients. Established in the mid-1970's, Gulf Laboratories has contributed greatly to a large proportion of civil engineering, mineral resource, groundwater resource and development projects in the State of Qatar. Operations has also been undertaken in Bahrain. The company employs a team of professionally qualified geologist, geotechnical engineers, asphalt specialists, chemists and laboratory technicians. All have had considerable experience working in the Gulf region as well as in Europe and Asia.

Gulf Laboratories' Quality and HSE Management Systems have been certified to the following International standards;

#### ISO 9001:2015 / ISO 45001:2018 / ISO 14001:2015



#### General requirements for the competence of Testing and Calibration Laboratories



#### **Gulf Laboratories Co. WLL**

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