LABORATORY AND INSPECTION SERVICES

Lonestar Group Companies (Lonestar Dubai & Lonestar Abu Dhabi) are ISO/IEC 17025:2005 Accredited Testing Laboratories by DAC and ENAS in Accordance with the Laboratory Scope of Accreditation. Both Laboratories are also Certified to ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 by LRQA.
Lonestar Group Companies came into existence as a result of the demand that existed locally from various industries for a high-tech, multi-disciplinary testing and investigation facility that can deliver products on time and can stand international scrutiny.

In 1992 Mr. E. Keith Grigg and Mr. Syed S. Hussaini met the industry requirement by establishing Lonestar Technical Services in the emirate of Dubai in the United Arab Emirates.

Lonestar Group Companies are also certified to ISO 9001:2008 and OHSAS 18001:2007 and ISO 14001:2004, which maintains a rigorous QA/QC program, towards chain of custody, sample preparation and analysis. Quality management system is established along the guidelines of ISO IEC 17025:2005

Lonestar is registered and licensed as a laboratory with Dubai Municipality, the regulatory authority of the Emirate.

Quality Training
Lonestar has strong in-house quality training program. Continuous training is imparted to all the staff in their respective fields of exposure to meet the growing need of customers and international standards. The quality-training program is conducted and documented in accordance with ISO 9001.

The employees are trained in different disciplines and special training is provided for specific projects, when required.

QA / QC Areas
Detailed quality assurance manuals are available upon request. Careful attention to QA/QC is given to the following areas:

- Organization and Responsibility
  - Sampling Procedures
  - Analytical Procedures, Revisions and Validations
  - Internal Quality Control Checks
  - Internal Training Programs
  - Corrective Action (CARs)

- Calibration Checks and Frequencies
  - Reporting
  - Internal performance and system audits
  - Assessment of Precision and Accuracy
  - Non Conformance Reports (NCRs)
Lonestar Group Companies offer the most advanced and unique environmental sampling &
chemical analysis services in the Middle East / Gulf region.

- A full complement of routine analysis is conducted on air, water, marine life, sediment and soil

- Specific tests conducted include Heavy Metals, Petroleum Hydrocarbons, Polynuclear
  Aromatic Hydrocarbons, Pesticides, Poly Chlorinated Biphenyls, Volatile Organic
  Compounds, Semi Volatile Organic Compounds and a number of components of Petroleum
  Hydrocarbon origin.

- Ground coring, and sampling of Soil, Water, Effluent, Gases, and Air can be performed
  on site by our well trained field technicians.

- Lonestar utilizes equipment like Atomic Absorption Spectrophotometers with Graphite
  Furnace, Inductively Coupled Plasma spectrometer, Gas Chromatographs with various
  detectors (FID, PID, ECD, TCD), GC Mass Spectroscopy, Fourier Transform Infrared
  Spectrometer. Lonestar Group Companies provide our clients with sophisticated gas
  analysis to meet the demanding requirements of environmental analysis.

- Our facilities utilize EPA, NIOSH, MASA, APHA, HSE, BS, ASTM, and NACE analytical methods.

**Physicochemical constituents:** analysis of physical and chemical properties

**Metallic Constituents:** Heavy Metals, RCRA Metals, Welding Fumes/Dusts, Hexavalent Chromium, Lead
Fumes/Dusts

**Organic Constituents:** Aromatic Volatile Organics  BTEX, Chlorinated Hydrocarbons, Crude & Refined Product
Fingerprinting, Halogenated Volatile Organics, Herbicides and Pesticides, Nitroaromatic and Cyclic Ketones, Organics
and Volatile Acids, PCBs, Polynuclear Aromatic Hydrocarbons  PAH, Phthalate Esters, Phenols, Total Organic Halides, Total
Petroleum Hydrocarbons  DRO/GRO, Volatile Organic Compounds

Project specific Constituents: numerous additional constituents can be analyzed by Lonestar after reviewing project require-
ments.

Lonestar Group Companies has been providing testing services to the local industry for numerous years. The purpose of
testing may be for quality control or compliance monitoring to regulatory requirements of the Local, Municipal, or Federal
agencies or for license renewal of various manufacturing industries.
Lonestar Group Companies provides Compliance monitoring to Municipal, Federal and International standards. Our expertise is made possible by our integrated team of professionals in the field. Laboratory analysis of air sampling is performed using NIST or equivalent standards for accuracy. Our equipment is calibrated/inspected routinely to ensure maximum sensitivity and efficiency.

The needs for Stack Emissions Testing are changing, quickly and drastically. Industries from non-metallic mineral processors to synthetic organic chemical manufacturers and from clean fuel boilers to hazardous waste incinerators are experiencing new or revamped environmental regulations, that require routine scheduled third party testing for comparison & analysis.

"Criteria pollutants" are no longer the primary environmental concern. Now industries are also concerned with Hazardous Air Pollutants (HAPs), maximum achievable control technologies (MACT), Title V, metals, dioxins, furans, speciated organics and a population that is much more aware of Air Quality. As environmental regulations outpace method development and technology, sampling expertise and regulatory knowledge are paramount to a successful stack testing program.

Lonestar Group Companies Environmental Testing Division maintains a veteran stack testing staff that has the expertise to meet the needs of our clients in this dynamic environment. We specialize in innovative solutions to environmental challenges and continual improvement to routine methodologies. We are equipped with state of the art equipment and cutting edge technologies. Our philosophy is to work in partnership with our clients to meet regulatory commitments, optimize processes, and identify process improvements.

Monitoring Performed: Lonestar provides stack testing and ambient air monitoring services to solve many environmental challenges:

- Regulatory Compliance (Title V, MACT, BACT, NESHAP, NSPS, PSD, etc.)
- Control Equipment Specification/Performance/Acceptance
- Real-Time Process Evaluation and Optimization
- Worker and Public Safety / Air Quality
- CEMS/PEMS Certifications
- Emissions Surveys
- Waste Reduction
- Trial Burns

Monitoring Parameters: Gases are monitored both in the stack and ambient air. Our sampling expertise includes airborne contaminants and these routinely analyzed constituents:

- Particulates (Total, PM-10, Condensable, Size Fractioning)
- Heavy Metals including Low Level Mercury
- Semi-volatile Organics (PAHs, PCBs, POHCs)
- Volatile Organics (Speciated and Total)
- Dioxins and Furans
- Acid Gases (HCl, HF, H2SO4)
- Combustion Products (CO, SO2, NOx)
Industrial Hygiene

Lonestar Group Companies is capable of providing a wide variety of Industrial Hygiene Services for Occupational Exposure monitoring, Regulatory Agency Environmental compliance, ISO 14001 & OHSAS 18001 Internal/External Audit compliance, using state of the art equipment and depth of experience with NIOSH, MDHS, ISO, OSHA IH sampling method protocols and procedures.

Industrial Hygiene Monitoring Tests Conducted:
Airborne Contaminants

- Particulates (Total, PM 10, PM 5.0, PM 2.5) using continuous data logging equipment capable of over 14,000 data points
- Combustible / Hazardous Gases - Total Petroleum Hydrocarbon (TPH), NO, NO2, NOX, SOX, SO2
- Volatile Organic Compounds (VOCs) /Semi-Volatile Organic Compounds (SVOCs) / Total Volatile Organic Compounds (TVOCs)
- Total / Respirable Dusts & Fibers - establishing of personnel compliance with 8hr Time Weighted Average (TWA) regulatory method specifications for Permissible Exposure Limits (PELs)
- Heavy Metals / Welding Fumes and Metal or Welding Dusts, Fumes, Particulates in air: (Cd, Cu, Cr/Grill,Pb, Mn, Mo, Fe, Zn, Sn, Ni)
- Sound/Noise Level Monitoring - Threshold Limit Value (TLV) or 8hr TWA, 24hr Workplace exposure - utilizing Class I & Class II continuous data logging NLM equipment capable of measuring over 32,000 data points with user defined parameter settings.
- Asbestos Containing Materials (ACM) Inspection, and Bulk material sampling - includes Chrysotile, Amosite, Crocidolite, Anthophylite, Tremolite, Actinolite - Asbestos analysis of bulk material samples by Visual identification Polarized Light Microscopy (PLM) Dispersion Staining (DS).

NOTE: For suspect Asbestos Containing Materials (ACM) sampling & analysis projects, Lonestar utilizes trained inspectors & in-house permanent & mobile laboratory facility providing analysis and quantification of asbestos/non-asbestos fiber types & concentration

Typical Industrial Hygiene Monitoring is conducted to meet one or more of the following requirements:
- Municipal, Commercial, Industrial, Governmental regulatory agency requirements:
- Internal audit workplace monitoring for occupational exposure risk assessment:

Typical Monitoring is conducted at the following Locations:
- Industrial Facilities
- Ships and Offshore vessels
- Rigs and offshore platforms
- Fabrication Yards
- Commercial Facilities

www.lonestar-lab.com
Lonestar Group Companies leads the way in the GCC & Middle East with our Indoor Air Quality & Industrial Hygiene sampling services utilizing our dedicated team of field staff and the latest equipment. We are equipped to investigate airborne, bulk material, and surface type Chemical, Physical, Noise, and Microbiological exposure situations.

**IAQ Air Monitoring Services:**
- Surface & Airborne contaminants routinely sampled & analyzed are:
  - **Volatile Organic Compounds (VOCs) / Semi-Volatile Organic Compounds (SVOCs) / Total Volatile Organic Compounds (TVOCs)**
  - **Fungal / Mold Spore Identification / Quantification** - specific mold spore type(s) identification & quantification
  - **Total Suspended Particulates (TSP) / Inhaleable Particulates/Dust & Respirable Particulates/Dust**
  - **Total Fiber Concentration (TFC)** - remediation / removal of asbestos containing material or fibrous material
  - **Toxic Vapors & Gases:** Oxides of Nitrogen: NOX, NO2, NO
    - Oxides of Sulphur: SOX, SO2
    - Heavy Metals: Mercury, Hexavalent Chromium, Arsenic, Nickel
    - Formaldehyde, BTEX, TPAH, Total Volatile Organic Compounds (TVOC)
  - **Contaminant Vapors & Gases** - CO, CO2, O3 (Ozone), Temp, Relative Humidity (RH)
  - **Bacterial / Microbiological contamination** - Water, Surface & Airborne Identification Quantification of: Fecal Coliform, Total Plate Count, Legionella

**Typical Indoor Air Quality (IAQ) Surveys:**
- IAQ profile for preliminary building survey - Due diligence investigations prior to: purchase, occupancy, renovation, of premises.
- Baseline IAQ monitoring - Occupational Exposure Assessments
- Mold / Fungal Spore airborne contamination monitoring - forensic application to microbiological amplification
- Sick Building Syndrome - Occupational symptomatic sampling for contaminant source identification
- Municipal / Regulatory Compliance monitoring - Local, Municipal, Federal, Environmental regulatory agencies
- ISO 14001 / OHSAS 18001 EHS Compliance monitoring for critical response of environmental Personnel hazard

**Monitoring / Testing Locations:**
- Office Buildings, Hotels, Schools, Federal & Municipal Facilities, Commercial Facilities
Mechanical Testing

Lonestar Group Companies has the capability to cater to the physical testing requirements of a wide range of materials and products. The testing capability and experience are recognized by reputed classification societies and third party inspection agencies such as Lloyds Register of Shipping (LRS), American Bureau of Shipping (ABS), Bureau Veritas (BV), Det Norske Veritas (DNV), Germanischer Lloyd (GL) and Valosi TUV Bayern (TUV). Standardized methods, procedures, and testing equipment are utilized to determine the mechanical properties of materials.

Determining "how to weld" requires knowledge regarding the materials being welded and the welding process, among numerous other factors. Because of the huge number of variables involved, the knowledge of the welding engineer and the skill of the welder need to be validated by a series of tests. All this information is documented on Welding Procedure Specification (WPS), Procedure Qualification Record (PQR), Welder Qualification Test (WQT), and associated Test Reports.

Testing Protocols:
Tests are generally carried out to international standards set by ASTM, BS, ASME, AWS, ISO and others. All test equipment are calibrated with traceability to NIST or NAMAS certified standards. The Lonestar Group Companies M/T facilities are UKAS accredited to ISO 17025 standards for PQR & WQT testing procedures.

Lonestar has performed tests simultaneously incorporating Chemical Analysis, Hardness, Tensile Properties, Impact Properties, Macro/Micro Examinations on a wide array of products including raw plates, seamless pipe, weldments including: plates, pipes, joints, fabricated materials, and structural components. The testing may be part of a Quality Assurance program, manufacturing engineering program, failure analysis or materials research and development.

Lonestar Mechanical Testing capabilities include:

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The Mechanical Testing Department is well equipped to determine the compliance of materials to applicable standards and specifications. Departmental personnel have extensive experience with test design and procedures as well as the interpretation of results. Our fully equipped machine shop allows us to produce the custom fixtures required for product testing.

For accurate, and comprehensive analysis of elemental composition of samples, The Optical Emission Spectrometer (OES) is used for quantitative bulk analysis of most alloys and stainless steels. Lonestar provides comprehensive chemical analysis reports, with results for most elements at ppb levels for clients, based on this type of indispensable equipment.
Lonestar Group Companies performs a wide range of Corrosion and Stress Corrosion Tests in accordance with ASTM, NACE or client supplied specifications. A wide variety of routine tests can be undertaken to determine intergranular corrosion attack, weight loss corrosion, pitting corrosion, crevice corrosion and Sour Gas Service (SGS) corrosion tests for sulfide stress cracking (SSC), CSC, and hydrogen-induced cracking (HIC). These tests amplify types of corrosion typically found in oil & gas, power, construction, shipping, petrochemical and process industries.

**Test Conducted by Lonestar on metal specimens**

**Intergranular Corrosion Test (IGC) per ASTM A262 Practice A B C E & F.**
Intergranular corrosion in stainless steels may result from precipitation of carbides, nitrides or intermetallic phases. Only in the most highly oxidizing solutions can intergranular attack be caused by intermetallic phases. When a test is to be restricted to carbides, in a material containing nitrides or intermetallic phases, a less oxidizing solution is chosen.

**Hydrogen-Induced Cracking Test (HIC) as per NACE TM0284.**
Lonestar performs HIC test to evaluate the resistance of pipeline and pressure vessel plate steels to Hydrogen Induced Cracking caused by hydrogen sourced from aqueous sulfide solutions. The dimensions of hydrogen induced cracks, if any, are recorded and used to compute the values in percentage for Crack Length Ratio (CLR), Crack Thickness Ratio (CTR) and Crack Sensitivity Ratio (CSR), if applicable to the method, or required by the client.

**Pitting & Crevice Corrosion Tests per ASTM G48 Method A,B,C,D,E & F**
Lonestar Group Companies can implement procedures from specific methods for the testing of pitting and crevice corrosion. The corrosion resistance of stainless steel and related alloys in ferric chloride solution is reported for mass loss/unit area, pit depth, depth of crevice, number of attacked sites & CPT/CCT.

**Sulfide Stress Corrosion Cracking Test (SSCC) as per NACE TM0177.**
Sulfide stress corrosion cracking (SSC) is a form of hydrogen embrittlement cracking which occurs when a susceptible material is exposed to a corrosive environment containing water and H2S at a critical level of applied or residual tensile stress. Lonestar conducts the NACE TM0177 tests including Methods A and B for SSCC test, at our permanent corrosion testing laboratories for 96 hours or 720 hours.

Additional corrosion tests performed at Lonestar include the following:

- Chloride Stress Corrosion Test as per ASTM G36 Specification
- Corrosion test as per ASTM G35 specification
- Corrosion test as per ASTM A761 Specification
- Client Specific Corrosion Testing Methods
Crack Tip Opening Displacement (CTOD) Testing

More and more industries are choosing to be proactive in failure prevention by testing material properties beyond the normal testing requirements. One such test that goes beyond traditional material property analysis is the CTOD test, which is gaining popularity in the oil and gas industry. Crack Tip Opening Displacement (CTOD) is one of a family of fracture mechanics tests that measures the resistance of a material to crack growth.

Resistance to fracture of a material is known as its fracture toughness. Fracture toughness generally depends on temperature, environment, loading rate, composition of the material and microstructure, together with its geometric effects. These factors are of particular significance for welded joints, where metallurgical and geometric effects are complex.

Testing Methods:
- BS 7448: Parts 1-4 Fracture Mechanics Toughness Tests
- ASTM/BS/BSEN/ISO/Client specified Test Method for Fracture Toughness

Testing Suitability:
CTOD is particularly suited to pipeline, offshore structures and drilling equipment (pipes, plates, flanges, valves, tubes, beams, structural steel). CTOD test is used to determine the fracture mechanics properties of ductile materials and can be thought of as the simulated opening of a pre-existing fatigue crack prior to fracture. The data obtained can be used for critical defect assessment, in which the critical defect size can be determined.

Testing Process:
- Machining of the test specimen (Sample Preparation);
- Fatiguing of the specimen within specified limits (Pre-Cracking);
- Breaking of the specimen under controlled conditions (Fracture);
- Post analysis of specimen and data to obtain CTOD Value (Data Analysis)
Metallurgical / Component Failure Analysis

- **Metallurgy / Sample Testing** - We offer a full spectrum of metallurgical testing in conjunction with our engineering analysis tools to evaluate the root cause of component failure. We have the ability to perform corrosion investigations, surface condition studies, mechanical and fracture mechanics testing, and evaluations of weldments. Our testing includes: chemical and mechanical analyses, Micro & Macro metallographic examination, NDT, specimen corrosion (transverse/longitudinal), and hardness testing.

- **Component Failure Analysis** - Lonestar performs failure analysis by combining materials science with state-of-the-art Optical Microscopy and high resolution digital capture capabilities, thereby helping to determine the root cause of structural failure in metallic components. We investigate industrial materials and equipment involved with industrial accidents, fires & explosions, structural deformations, and structural failures.

- **Origins of Component Failure** - Accidents or failures often result from design and/or material imperfections, problems in manufacturing / assembly, component misuse, or corrosion. In high temperature applications, complicated failure modes may occur, such as creep ratcheting, rupture, and creep fatigue. Our investigations and recommendations will help to prevent costly recurrences, thus lowering operating costs and improving safety.

- **Metallurgical/Component Failure Report Documentation** - Lonestar will provide our clients with the most comprehensive analytical test results, for each of the requested procedures required by the test methods utilized, or requested by the client. If needed, high resolution photomicrographs, taken through our in-house state of the art Stereomicroscope/Metallurgical microscope optics & digital capture systems allow Lonestar to provide softcopy & hardcopy evidence of grain measurement / grain expansion / stress related creep damage / specimen crack length(s) / Ferrite measurement / approx. life expectancy.

**Positive Material Identification (PMI) & Metallurgical Replica Analysis (MRA) Division**

Positive Material Identification & Metallurgical Replica Analysis service is fast becoming an integral part of process safety management in the petroleum refining, petrochemical and electric power generation industries in the Middle East.

- **PMI Tests Conducted**: P.M.I provides elemental analysis and material grade identification for most alloys, metal powders, sintered alloys, metallic coatings, and precious metals. Our versatile, hand held, rapid analyzer employs multiple calibration and testing options with a built-in data library of over 2000 possible elemental compositions for on-the-spot, accurate material matching, identification, and analysis.

- **Metallurgical Replica Analysis**: The MRA utilizes lab grade clear adhesive transfer strips. Laboratory analysis is performed after replica sample is gold sputtered and prepared for high magnification optical microscope.

- **Testing Locations**: Pipe Yards, Scrap Yards, Drydock material holding areas, Fabrication Yards
**NDT Heat Treatment & Inspection**

Lonestar Group Companies has an independent NDT Inspection and Heat Treatment services Company providing full range of NDT and inspection services throughout United Arab Emirates and GCC countries. Our extensive list of technical services includes a full range of accepted NDT methods, QAQC function, welding & coating inspection. Lonestar offers a wide range of Non-Destructive Testing Services to cater to the diverse industrial requirements in the GCC & Middle East. Inspectors are qualified to ASNT Level III/AWS/CSWIP as required by client. All Lonestar NDT Technicians are qualified to ASNT Level II, or equivalent proficiency as required by client.

With Non-Destructive Testing, it is important that an object or a structure can be examined for possible faults without that object being destroyed or permanently deformed. Precisely because it causes no damage during examination, NDT is ideal for carrying out checks during production process and maintenance.

**Non Destructive & Inspection Services Offered:**

- Pipeline X-ray with crawler
- Ultrasonic Flaw Detection
- Liquid Penetrant Inspection
- Leak Testing
- Welding Inspection Services
- Tank Inspection
- Pipe Line Inspection
- Gamma & X-ray Radiography
- Magnetic Particle Inspection
- Specification Preparation
- Visual Inspection Services
- NDT Certification
- Holiday Detection
- Preparation of WPS/PQR

**Heat Treatment Services Offered:**

- On-Site Furnace heat treatment & local heat treatment with portable equipment

- Pre-heat
- Stress relieving
- Post weld heat treatment
- Normalizing
Civil Testing

Lonestar Technical and Industrial Services offers a wide range of Civil Construction Material Testing and Geotechnical services through our well experienced Management team and supporting technical crew, who undertake challenges of the industry.

Civil Construction Materials Testing Services:

Civil Construction Materials Testing facilities of LONESTAR Group companies possess the capabilities of testing Physical and Mechanical properties of CONSTRUCTION MATERIALS both field and laboratory to check the compliance with local/international/project specifications as per, ASTM, AASHTO, BS and DIN standards.

Offering services in the following area with a higher degree of professionalism and satisfaction to the client/contractor at an affordable rate, provided quality standards are not compromised.

- Investigation and testing of building and road construction materials
- Supervision of field concreting and quality control of projects.
- Installation, monitoring and reporting of heat of hydration of mass concrete, using thermo couples.
- Installation, setting up and maintenance of site laboratory based on projects.
- Laboratory and field characterization of soils and rocks
- Compliance of aggregate and cement to specifications
- Design concrete mixes to specific requirements
- Testing of existing structure, using non-destructive or destructive methods.
- Mechanical testing of metals, including reinforcement bars for Tensile, Bend and Re-bend.
- Chemical analysis of reinforcement bar.

Our Civil Engineering laboratories cover wide range of mechanical, physical and chemical testing of soil, aggregate, concrete, rock, cement, asphalt, blocks, marble, tiles, water and other construction materials. The lab provides a laboratory testing support to our Geotechnical Engineering department.

Our civil lab service may include: Testing of Laboratory and field compaction of soil, moisture content, Particle Size Distribution (Sieve/Hydrometer), Atterberg Limits (Liquid, Plastic Limits and plasticity Index), Plate Loading Test, California Bearing Ratio-CBR (Laboratory and In-situ), Chloride/Sulfate/Organic Matter, Soil resistivity measurements (wemner/Schlumberger method).

Compressive Strength (Cube and Cylinder), Compressive strength, dimension and water absorption of masonry/Paving Block, Tensile split strength, Coring and Core Compressive Strength, Water Absorption of concrete, Initial Surface Absorption, Chloride Permeability, Water Permeability, Chloride and Sulfate Content, Rebound Hammer Test, Ultra sonic pulse velocity measurements, Ultrasonic scanning for the reinforcement.

Particle Size Distribution, Rakiness and Elongation Index, Material finer than 75 Microns, Clay Lumps and Friable particles, Shell Content, 10% Fines Value, Aggregate Impact Value, Los Angeles abrasion, Specific Gravity and Water Absorption, Sand Equivalent Value, Soundness (Mgso4/No2so4), Sulphate/Chloride/Carbonate/Organic Content etc.
Geotechnical Engineering

Geotechnical service division of Lonestar Group Companies fully equipped with state-of-the-art equipments and technology to conduct soil investigation, on-shore and off-shore in the most efficient and accurate manner. The project management team of Lonestar is suitably qualified, professionally trained and has in excess of 10 years experience in the Middle Eastern Foundation Engineering.

Lonestar fleet of drilling rigs includes light cable percussion rigs and medium to heavy duty hydraulic rotary drilling rigs.

The scope of the geotechnical Investigation includes drilling, sampling, in-situ borehole testing, interpretation of field data, preparation of borehole log, preparation of factual; refine the design parameters, engineering report with bearing pressure recommendation, foundation type, foundation concrete and guidelines for ground improvement.

Lonestar Labs undertake onshore/offshore ground investigations for a wide variety of civil and industrial construction, infrastructure and pipeline projects. We pride ourselves by adopting the same professional approach to both large multi-disciplinary investigation projects as well as small simple structures. Our Investigation is supervised by highly qualified experienced geotechnical engineers and geologists.

Subsurface Investigation and Foundation Engineering

- Shallow Foundation Design
- Deep Foundation Design
- In-situ bore hole testing
- Surface/Subsurface Instrumentation
- Hydrogeological Investigations
- Slope Stability and Landslide Control
- Retaining Wall Design
- General Consultation
Lonestar Group Companies
- Dubai
- Abu Dhabi
- Oman
- Iraq (Erbil)

Lonestar Technical Services
P.O. Box 8817, Building # DY34
Located Inside Dubai Ship Docking Yard
Al Jadaf, Dubai – United Arab Emirates
Tel: +9714-324 3888
Fax: +9714-324 3682
Email: dubai@lonestar-lab.com

Lonestar Technical & Industrial Services
P.O. Box 6098, Building # 503 & 505
Inside Industrial City of Abu Dhabi (ICAD)
Abu Dhabi – United Arab Emirates
Tel: +9712-550 0767
Fax: +9712-550 0838
Email: abudhabi@lonestar-lab.com

Lonestar Alpha Laboratories
P.O. Box 1197, PC 130
Inside Gaia Industrial Estate
Muscat, Sultanate of Oman
Tel: +968 245 01524
Fax: +968 245 05590
Email: oman@lonestar-lab.com

Lonestar Technical Services - Erbil
Sofi Mall, Gullan Street
Erbil - Iraq
Tel: +964 750 1690901
Email: mrjambaz@mrjme.com

www.lonestar-lab.com