



ACCREDITATION CERTIFICATE

019-LB-TEST

Emirates International Accreditation Centre

has accredited

LONESTAR TECHNICAL SERVICES LLC.

Building DY34, Inside Dubai Ship Docking, Yard, Al Jadaf

Dubai-United Arab Emirates

In accordance with the requirements of

ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories
to undertake the tests in the attached accreditation scope

This Accreditation is invalid without the attached accreditation scope and shall remain in force
within the validity period printed below, subject to continuing compliance with the requirements of
the accreditation criteria.

Validity: 12/11/2019 to 09/06/2021

Initial Accreditation Date: 10/06/2003




CHIEF EXECUTIVE OFFICER
APPROVAL



Accreditation Scope
Environmental Testing

019-LB-TEST

Lonestar Technical Services LLC.

Building DY34, Inside Dubai Ship Docking, Yard, Al Jadaf

Dubai-United Arab Emirates

Issue no.: 10

Date: 12-11-2019

Valid to: 09-06-2021

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	Sampling	APHA 1060 DM TGNO.35
		Temperature	US EPA 170.1
		Color	APHA 2120 B & C US EPA 110.1
		Chlorine (Residual)	APHA 4500 CI G US EPA 330.3
		pH	APHA 4500 H ⁺ B & US EPA 150.1
		Conductivity	APHA 2510 B & US EPA 120.1
		TDS	APHA 2540 C & US EPA 160.1
		Salinity	APHA 2520 B
		Turbidity	APHA 2130 B & US EPA 180.1
		Total hardness as CaCO ₃	APHA 2340 C & US EPA 130.2
		Total alkalinity as CaCO ₃	APHA 2320 B & US EPA 310.1
		Oil & grease	APHA 5520 A,B & US EPA 1664A

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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	Metals / ICP	
		Sodium (Na)	APHA 3120 B
		Calcium (Ca)	APHA 3120 B
		Magnesium (Mg)	APHA 3120 B
		Potassium (k)	APHA 3120 B
		Boron (B)	APHA 3120 B
		Silica (SiO ₂)	APHA 3120B & US EPA 200.7
		Aluminum (Al)	APHA 3120B & US EPA 200.7
		Antimony (Sb)	APHA 3120B & US EPA 200.7
		Arsenic (As)	APHA 3120B & US EPA 200.7
		Barium (Ba)	APHA 3120B & US EPA 200.7
		Beryllium (Be)	APHA 3120B & US EPA 200.7
		Boron (B)	APHA 3120B & US EPA 200.7
Calcium (Ca)	APHA 3120B & US EPA 200.7		

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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	Metals / ICP	
		Chromium (Cr)	APHA 3120B & US EPA 200.7
		Copper (Cu)	APHA 3120B & US EPA 200.7
		Iron (Fe)	APHA 3120B & US EPA 200.7
		Lead (Pb)	APHA 3120B & US EPA 200.7
		Magnesium (Mg)	APHA 3120B & US EPA 200.7
		Manganese (Mn)	APHA 3120B & US EPA 200.7
		Molybdenum (Mo)	APHA 3120B & US EPA 200.7
		Nickel (Ni)	APHA 3120B & US EPA 200.7
		Potassium (K)	APHA 3120B & US EPA 200.7
		Selenium (Se)	APHA 3120B & US EPA 200.7
		Silver (Ag)	APHA 3120B & US EPA 200.7
		Sodium (Na)	APHA 3120B & US EPA 200.7

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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	Metals / ICP	
		Thallium (TL)	APHA 3120B & US EPA 200.7
		Titanium (Ti)	APHA 3120B & US EPA 200.7
		Vanadium (V)	APHA 3120B & US EPA 200.7
		Zinc (Zn)	APHA 3120B & US EPA 200.7
		Anions / Ion Chromatography	
		Fluoride (f)	APHA 4110 B & US EPA 300.1
		Nitrates (NO3)	APHA 4110 B & US EPA 300.1
		Nitrites (NO2)	APHA 4110 B & US EPA 300.1
		Sulphates (SO4)	APHA 4110 B & US EPA 300.1
		Chlorides (Cl)	APHA 4110 B & US EPA 300.1
		Phosphate (PO4)	APHA 4110 B & US EPA 300.1
		Bromate	APHA 4110 B & US EPA 300.1

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Chemical	Drinking Water	Anions / Ion Chromatography	
		Chlorite	APHA 4110 B & US EPA 300.1
		Orthophosphate (PO ₄)	APHA 4110 B
		Total Cyanide	US EPA 335.3
		Perchlorate	US EPA 314
		Ammonia	APHA 4500-NH ₃ B & USEPA350.1
		Total Sulfides	APHA 4500 S ²⁻ F & US EPA 376.1
		N-Hexane Extractable Material (HEM, Oil and Grease) and Silica Gel reacted N-Hexane Extractable Material (SGT-HEM:Non-Polar Material) by Extraction and Gravimetry)	US EPA Method 1664A
Total Nitrites and Nitrates	US EPA 300.1		

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Type of Activity	Test Materials/Products	Test Name	Test Method		
Chemical	Wastewater	Sampling	APHA 1060 & DM TGNO.35		
		Temperature	US EPA 170.1		
		pH	APHA 4500 H ⁺ B		
		TDS	APHA 2540 C		
		TSS	APHA 2540 D		
		Oil & grease	APHA 5520 B		
		BOD (5 days)	APHA 5210 B		
		COD	APHA 5220 B		
		Nitrogen nitrates	APHA 4500 NO ₃ B		
		Nitrogen Nitrites	APHA 4500 NO ₂ B		
		Total nitrogen	APHA 4500 NC		
		Total Sulfides	APHA 4500 S ²⁻ F		
		Metals / ICP			
		Cadmium (Cd)		APHA 3120 B	
		Chromium (Cr)			

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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Wastewater	Metals / ICP	APHA 3120 B
		Cobalt (Co)	
		Copper (Cu)	
		Iron (Fe)	
		Lead (Pb)	
		Manganese (Mn)	
		Nickel (Ni)	
		Silver (Ag)	
		Zinc (Zn)	
	Sludge	Sampling	DMS11, DM TGNO.35 APHA 1060
Soil & sediments	N-Hexane Extractable Material (HEM) for sludge, Sediment and Solid Samples	US EPA Method 9071B	
Soils, Solids, Sludge, non aqueous liquids	pH	US EPA 9045D	
Soils, Solids, Sludge,	% Solids (Fixed, Volatile & Total)	US EPA 1684	
	Oil content	US EPA 9071B APHA 5520E	

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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	soils for civil engineering purposes	Moisture Content (%)	US EPA CE 81/1
		Chlorides	BS 1377-3
	Hazardous waste	Total Metals:	US EPA SW 846/ 6010 B
		Arsenic (As)	
		Cadmium (Cd)	
		Chromium (Cr)	
		Cobalt (Co)	
		Copper (Cu)	
		Lead (Pb)	
		Nickel (Ni)	
		Selenium (Se)	
		Tin (Sn)	
		Zinc (Zn)	
		Total Metals: Mercury (Hg)	

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Type of Activity	Test Materials/Products	Test Name	Test Method	
Chemical	Hazardous waste	Leachable Metals: Mercury (Hg)	US EPA SW 846/ 1311/ 6010B	
		Arsenic (As)		
		Cadmium (Cd)		
		Chromium (Cr)		
		Cobalt (Co)		
		Copper (Cu)		
		Lead (Pb)		
		Nickel (Ni)		
		Selenium (Se)		
		Tin (Sn)		US EPA SW 846/ 1311/ 6010B
	Zinc (Zn)			
			Mercury (Hg)	US EPA SW 846/ 1311/ 7471 A
		Plain Carbon & Low Alloy Steels	C, Si, Mn, P, S, Cr, Mo, Ni, Al, Cu, N, V, Nb, & Ti	In-House Reference Method CHM-SOP-117
	Stainless & High Alloy Steels	C, Si, Mn, P, S, Cr, Mo, Ni, Cu, N & V	In-House Reference Method CHM-SOP-138	
	Indoor Air Quality/ Ambient Atmosphere	Particulate Matter(PM 10)	MASA 501	

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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Indoor Air Quality/ Ambient Atmosphere	Total Suspended Particulates (TSP)	MASA 501
	Indoor Air Quality/ Ambient Atmosphere	Sulfur Dioxide (SO2)	MASA 704-A
	Indoor Air Quality/ Ambient Atmosphere	Oxide of Nitrogen (NOX)	MASA 408
	Indoor Air Quality/ Ambient Atmosphere	Ozone (O3)	MASA 411
	Indoor Air Quality/ Ambient Atmosphere	Carbon Monoxide (CO)	Multi-ray Gas Analyzer(Electrochemical Sensor)
	Indoor Air Quality/ Ambient Atmosphere	Noise	ISO 1996-2:2007 Acoustic Part 2
	Stack Emission	Particulate Matter (PM)	US EPA # 17, US EPA # 5
	Stack Emission	Carbon Monoxide (CO)	US EPA CTM 030/ CTM034
	Stack Emission	Oxide of Nitrogen (NOX)	US EPA CTM 030/ CTM034
	Stack Emission	Sulfur Dioxide (SO2)	US EPA # 6 C
	Stack Emission	Nitrogen Dioxide (NO2)	US EPA CTM 030/ CTM034

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Type of Activity	Test Materials/Products	Test Name	Test Method
Microbiology	Water / Waste Water	Heterotrophic Plate Count (TAB) : Pour Plate	APHA 9215B, 23 rd Edition
		Membrane Filtration	APHA 9215D, 23 rd Edition
		Total Coliforms (TC) by Membrane Filtration	APHA 9222B, 23 rd Edition
		Escherichia coli by Membrane Filtration	APHA 9222D and 9225D, 23 rd Ed.
		Faecal Coliforms by Membrane Filtration	APHA 9222D, 23 rd Ed.
		Faecal Streptococci and Enterococci by Membrane Filtration	APHA 9230C, 23 rd Ed.
	Potable Water, Process Water & Recreational Water.	Water quality Enumeration of Legionella	ISO 11731 Matrix A : procedures 5, 7, 8, 9 & 10. Matrix B : procedures 7, 8, 9 & 10

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Type of Activity	Test Materials/Products	Test Name	Test Method
Microbiology	Purified Water, Water for Dialysis, Ultra Pure Dialysis Fluid.	Endotoxin Enumeration	In House Method CHM-SOP-323-00 based on the Genscript Toxin Sensor Chromogenic Limulus Amoebocyte Lysate Assay Test Method

Accreditation History		
Issue no.	Details	Date
10	Extension in scope and first issuance under the name of EIAC (which was formerly known as DAC)	12/11/2019

Accreditation Scope
Air Quality Monitoring Testing

019-LB-TEST

Lonestar Technical Services LLC.

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Issue no.: 03

Date: 12-11-2019

Valid to: 09-06-2021

Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Indoor Air Quality	Methods for sampling and analysis of ambient air	ASNZS 3580 Method 12.1
		Method 12.1: Determination of light scattering - Integrating nephelometer method:	
		Respirable Suspended Particulate Matter (RSPM - PM 2.5)	
		* Respirable Suspended Particulate Matter (RSPM - PM 10)	
		Total Suspended Particulate Matter (TSPM)	
		Method for sampling and analysis of ambient air Part 15: Determination of gaseous pollutants in ambient air using differential optical absorption spectrometry (DOAS)- Direct-reading instrumental method: Carbon Monoxide (CO)	ASNZS 3580 Part 15

Accreditation Scope

Air Quality Monitoring Testing

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Issue no.: 03

Date: 12-11-2019

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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Indoor Air Quality	Method for sampling and analysis of ambient air	ASNZS 3580 Part 15
		Part 15: Determination of gaseous pollutants in ambient air using differential optical absorption spectrometry (DOAS)-	
		Direct-reading instrumental method:	
		Carbon Dioxide (CO ₂)	
		Oxygen (O ₂)	
		Formaldehyde (CH ₂ O)	
		Ozone (O ₃)	
		Sulphur Dioxide (SO ₂)	
		Nitrogen Dioxide (NO ₂)	
Total Volatile Organic Compounds (TVOC)			

Accreditation Scope
Air Quality Monitoring Testing

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Issue no.: 03

Date: 12-11-2019

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Type of Activity	Test Materials/Products	Test Name	Test Method
		Methods for sampling and analysis of ambient air Part 14: Meteorological monitoring for ambient air quality monitoring applications: - Temperature, °C - Relative humidity, %	ASNZS 3580 Part 14
Physical	Noise (Indoor & Workplace)	Acoustics — Description, measurement and assessment of environmental noise Part 2: Determination of sound pressure levels	ISO 1996 Part 2
	Luminosity (Indoor & Workplace)	Interior and workplace lighting Part 3: Measurement, calculation and presentation of photometric data	ANZS 1680 Part 3

Accreditation History

Accreditation Scope
Air Quality Monitoring Testing

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Issue no.: 03

Date: 12-11-2019

Valid to: 09-06-2021

Type of Activity	Test Materials/Products	Test Name	Test Method
Issue no.	Details		Date
03	First issuance under the name of EIAC (which was formerly known as DAC)		12/11/2019

Accreditation Scope
Metallurgical Testing
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Issue no.: 04

Date: 12-11-2019

Valid to: 09-06-2021

Type of Activity	Test Materials/Products	Test Name	Test Method
Mechanical	Carbon Steel for the reinforcement of concrete	Bend & Re-bend	BS 4449: 1997 + AMD 1
			BS 4449: 2005 + AMD 2
			BS EN ISO 15630 Part 1
		Tensile Test (Ambient Temperature)	BS 4449: 1997 + AMD 1
			BS 4449: 2005 + AMD 2
			BS EN ISO 15630 Part 1
Mechanical	Metals, Alloys and Metal Products	Charpy Impact (-196°C & -40°C to Ambient)	ASTM A370:18
			ASTM E23:16
			BS EN ISO 148-1:16
		Brinell Hardness (HBW 1/10, 1/30, & 2.5 /62.5)	ASTM E10:18
			BS EN ISO 6506-1:14
		Rockwell Hardness (HRBW & HRC)	ASTM E18:17
			BS EN ISO 6508-1:16
		Vickers Hardness (HV5, HV10 & HV30)	ASTM E92:17
			BS EN ISO 6507-1:18

Accreditation Scope
Metallurgical Testing
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Issue no.: 04

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Type of Activity	Test Materials/Products	Test Name	Test Method	
Mechanical	Metals, Alloys and Metal Products	Tensile Test (20 to 900 (Ambient Temperature))	ASTM A370:18	
			ASTM E8/E8M:16	
			BS EN ISO 6892-1:16	
	Weldments	Bend Test		ASME SEC IX:17
				ASTM E190:14
				AWS B4.0M:10
				AWS D1.1 / D1.1M:15
				API 1104, 21st Edition:16
				BS EN ISO 5173:11
		Charpy Impact (-196°C & -40°C to Ambient)		
AWS B4.0M:10				
AWS D1.1 / D1.1M:15				
API 1104, 21st Edition:16				
			BS EN ISO 9016:12	

Accreditation Scope
Metallurgical Testing
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Type of Activity	Test Materials/Products	Test Name	Test Method
Mechanical	Weldments	Fracture Test (Fillet & Nick Break)	ASME SEC IX:17
			AWS B4.0M:10
			AWS D1.1 / D1.1M:15
			API 1104, 21st Edition:16
			BS EN ISO 9017:18
		Vickers Hardness (HV5, HV10 & HV30)	ASME SEC IX:17
			AWS B4.0M:10
			AWS D1.1 / D1.1M:15
			BS EN ISO 9015-1:11
		Macro Examination	ASME SEC IX:17
			AWS D1.1 / D1.1M:15
			BS EN ISO 17639:13
		Micro Examination	ASME SEC IX:17
			AWS D1.1 / D1.1M:15
			BS EN ISO 17639:13

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Type of Activity	Test Materials/Products	Test Name	Test Method
Mechanical	Weldments	Tensile Test (Ambient Temperature)	ASME SEC IX:17
			AWS B4.0M:10
			AWS D1.1 / D1.1M:15
			API 1104, 21st Edition:16
			BS EN ISO 4136:12
Metallurgy	Nickel base and chromium bearing alloys	Critical Pitting Temperature	ASTM G48 Method C
	Metals, Alloys & Weldments	Corrosion Test: Sulfide Stress Cracking Cracking & Sulfide Stress Cracking	NACE TM0177 ASTM G39
	Pipe Line & Pressure Vessel Steels	Hydrogen Induced Cracking (HIC)	NACE TM0284
	Austenitic Stainless Steels	Inter-granular Corrosion	ASTM A262 A, B, C, and E
	Wrought Nickel and Chromium Bearing Alloys	Inter-granular Corrosion	ASTM G28 Method A
	Stainless Steels, Nickel Base and Chromium Bearing Alloys	Pitting Resistance	ASTM G48 Method A

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Type of Activity	Test Materials/Products	Test Name	Test Method
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Metallurgy	Stainless Steels	Critical Pitting Temperature	ASTM G48 Method E
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Accreditation History		
Issue no.	Details	Date
04	First issuance under the name of EIAC (which was formerly known as DAC)	12/11/2019