



Lusail Real Estate Development Company

Health, Safety, Security, Environment, Logistics & Quality Department

LUSAIL DEVELOPMENT PROJECT CONSTRUCTION – HSE GENERAL REQUIREMENTS

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COMPANY PROPRIETARY INFORMATION

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Amendment Record

This document is reviewed to ensure its continuing relevance to the systems and process that it describes. A record of contextual additions or omissions is given below:

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9	(Pg.5) Sec.1.3 – Compliance with these requirements	HSE Working Group	Bernard Lim	Uwe Krueger	16 th February 2014
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9	(Pg. 32-33) Sec. 13.1 - General	HSE Working Group	Bernard Lim	Uwe Krueger	16 th February 2014
9	(Pg.34) Performance Deductions	HSE Working Group	Bernard Lim	Uwe Krueger	16 th February 2014
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10	(Pg. 31) Sec. 11.2 - Scaffolds	HSE Working Group	Bernard Lim	Uwe Krueger	2 nd March 2014
11	(Pg. 14) Sec. 4.1 - Staff Qualifications & Staffing: Health & Safety Manager & Environmental Manager	HSE Working Group	Michael Ford	Uwe Krueger	11 th February 2015
11	(Pg. 15) Sec. 4.1 - Staff Qualifications & Staffing: Occupational Health Staff	HSE Working Group	Michael Ford	Uwe Krueger	11 th February 2015
11	(Pg. 11) Sec. 4.4 - Health & Safety Supplies & Equipment (Not Applicable to Developers)	HSE Working Group	Michael Ford	Uwe Krueger	11 th February 2015
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12	(Pg. 2) Revised Amendment Table	HSE Working Group	Michael Ford	Uwe Krueger	1 st April 2015
13	Section 14.2 added on legal advice	HSE Working Group	Michael Ford	Uwe Krueger	4 th May 2015

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1.0 POLICY SCOPE & LIMITATIONS

1.1. DEFINITION & ACRONYMS

ANSI	American National Standards Institute
Approval	means prior written assent of the Master Developer and/or LREDC. The term “Approval” shall in no way be construed as relieving the CONTRACTOR of any of its obligations, responsibilities or liabilities. “Approve” or “Approved” shall be construed accordingly
CAP	means Corrective Action Plan
Competent	means displaying practical and theoretical knowledge and actual experience of the work activities that they are required. A person's competence will, in some cases, be tangibly demonstrated by the award of a qualification or other recognition of training received
CONTRACTOR	means any CONTRACTOR appointed by LREDC or a developer and CONTRACTOR shall also include CONTRACTOR’s contractors/sub-contractors of any tier, consultants/sub-consultants of any tier, personnel, material, men, agents, vendors, suppliers, and permitted successors and assigns
dBa	means Decibels A- scale
EMT	means Emergency Medical Technician
HASP	means Health & Safety Plan
HSE	means Health Safety, Environmental & Fire
JHA	means Job Hazard Analysis
LREDC	means Lusail Real Estate Development Company, its representatives, successors, delegates, and/or assigns
LREDC REPRESENTATIVE	means the person who shall be appointed by LREDC as their nominated representative whom LREDC may change from time to time and who shall be as notified by LREDC to the CONTRACTOR, and may include LREDC’s HSE Department, Supervising Consultant and/or Engineer.
LREDC Project	means the project known as Lusail City and any other project that LREDC is involved in from time to time
MSDS	means Material Safety Data Sheet
OHSAS 18001	means the international Occupational Health and Safety Management System referred to as BS OHSAS 18001
PPE	means Personal Protective Equipment
QCS	means Qatar Construction Specifications (most current revision)
Requirements	means the requirements contained within this document being the General Requirements for LREDC Construction Health & Safety as may be updated and notified to the CONTRACTOR from time to time

Reasonably Practicable	means where a legal requirement is qualified by the term ‘reasonably practicable’, the cost (in terms of money, time and inconvenience) of taking precautions may be balanced against the risk being considered
RIDDOR	means the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995
Risk & Assessment	means the process of hazard, aspect, impact, identification, assessment of the risk and identification of the controls required to manage the risk to an acceptable level to ensure the health and safety of those affected by the activity and the protection of the environment from harm
WEL	means Workplace Exposure Limit
Work at height	means work in any place, including a place at or below ground level, along with access there to and egress there from (except by a staircase in a permanent workplace) where, if the measures required by all applicable health and safety regulations were not taken, a person could fall a distance liable to cause personal injury

1.2. ZERO INCIDENT MANAGEMENT POLICY

LREDC adheres to and implements a “Zero Incident Policy” with the goal of being recognized as a leading standard in the Region for excellence in construction health and safety. It is LREDC’s requirement that all CONTRACTORS adopt this policy and strive for zero incident performance through proper pre-work activity planning, management participation and support, employee training, and continual assessment for improvement of their programs.

1.3. COMPLIANCE WITH THESE REQUIREMENTS

The purpose of the Requirements is to provide the CONTRACTOR with LREDC Construction HSE General Requirements the minimum requirements to which CONTRACTOR must comply when conducting work on or in connection with the LREDC Project.

CONTRACTORS working on the Lusail Project site shall comply with these Requirements, LREDC Construction Safety Management Procedures, latest government approved QCS , and all other applicable Qatari laws including but not limited to labour, environmental, health and safety standards (“Qatar Laws”). If a conflict arises between the Requirements and applicable regulatory requirements, the most stringent shall apply.

All CONTRACTORS shall comply with all written or verbal instruction regarding safety and health issued pursuant to these Requirements by the LREDC REPRESENTATIVE.

In instances where the CONTRACTOR must obtain Approvals from LREDC REPRESENTATIVE shall not relieve the CONTRACTOR of its obligations risks or liabilities under the CONTRACT.

All CONTRACTORS working on the LREDC Project can obtain a copy of LREDC Construction Safety Management Procedures and related forms from LREDC website, HSSELQ, Contracts Department upon request.

Certain Performance Deductions are set out at Section 13.2. This list of Performance Deductions is non exhaustive. Further compensation may be required to be paid, where cost to LREDC and other affected party(ies) exceed the amounts referred to in Section 13.2. The amounts set out in Section 13.2 are in addition to any amount that may be prescribed under contract, Qatari law or other regulations which may be collected by LREDC or any competent authority.

The table set out in Section 13.2 has specifically remained silent on other health and safety violations that may occur. Those will be dealt with using the remedies available under the specific construction contract or sale and purchase agreement as relevant.

1.4. LIMITS OF THESE REQUIREMENTS

Where these Requirements do not adequately address CONTRACTOR activities, the CONTRACTOR is required to comply with all aspects of latest government approved QCS and any other Qatar Laws, their internal company health and safety policies and procedures, the project-specific Health and Safety Plan (HASP) and all applicable health and safety laws standards and guidelines from internationally recognized health and safety agencies, organizations and associations.

As these Requirements cannot address every possible condition, work activity or situation which may arise on site, the CONTRACTOR is required and expected to exhibit Competence, exercise best management and safe work practices with regard to the health and safety of their workers and work activities. Omission or failure to mention a specific issue in these Requirements in relation to any activity being conducted on the LREDC Project does not relieve the CONTRACTOR from its obligations under its contract.

2.0 HEALTH & SAFETY - GENERAL

The following are the minimum requirements that the CONTRACTOR shall comply with for all health and safety issues relating to work activities associated with their CONTRACT.

For environmental and sustainability requirements, the CONTRACTOR shall refer to the latest version of the LREDC OCEMP (LUS-HSEWG3-446-055.01)

2.1. GENERAL

The CONTRACTOR shall:

- as a minimum, implement an occupational health and safety management system meeting the requirements of BS OHSAS 18001;
- have full regard for the health and safety of all personnel under his responsibility. The CONTRACTOR shall not expose personnel to unsafe work conditions or practices;
- provide and maintain plant, equipment including spares and systems of work that are safe and without risk to health;
- ensure safety and absence of risks in the use, handling, storage and transportation of materials and hazardous substances;
- provide adequate supervision and training, as is necessary and implement necessary procedures to ensure the health and safety of their employees and safe operation of plant and equipment ;
- provide and maintain adequate welfare facilities and arrangements for welfare at work;
- ensure, as far as is **Reasonably Practicable**, that the conduct of their activities does not endanger persons either within or outside their employment who may be affected by operations under their control, for example third party developers or the public;
- identify and understand all Qatar Laws governing his activities, along with all site rules and hazards created by adjacent CONTRACTORS, to which his personnel may be exposed;
- foster and support a health and safety program where all personnel are responsible for safety;
- ensure that these Requirements are enforced and followed by all personnel under their care and responsibility. The CONTRACTOR shall provide all necessary resources for full compliance with these Requirements. Any failure by CONTRACTOR personnel to adhere to these Requirements will be viewed as a failure by CONTRACTOR;
- ensure that safe access and egress is provided to the LREDC REPRESENTATIVE for the purposes of regular visits including but not limited to site inspection, assessment or audit;

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- implement a “Disciplinary Action Program” designed to hold personnel accountable to Health and Safety and other company requirements while working at the LREDC Project;
 - report all incidents, regardless of severity to the LREDC REPRESENTATIVE;
 - not “Hoard Off” any site area(s) belonging to or intended for other site CONTRACTORS;
 - provide adequate lighting and clear access to and on all paths of travel; and
 - work shifts shall not exceed 10 hours per shift. Workers shall not work for more than five (5) hours without a break, which shall be not less than one (1) hour in duration.

2.2. PERSONAL PROTECTIVE EQUIPMENT (PPE)

The CONTRACTOR shall:

- provide, at no cost to employees, all Personal Protective Equipment (PPE) necessary for the safe conduct of the work, as determined by Qatar Law, the LREDC REPRESENTATIVE, the CONTRACTOR HASP, and LREDC Construction Safety management Procedures. PPE shall be rated per a recognized testing laboratory (ANSI, EU) and Approved for use by the LREDC REPRESENTATIVE(s);
- ensure that all PPE is checked at regular intervals to ensure that it remains fit for purpose;
- not permit the modification of any PPE item for any purpose;
- enforce all PPE requirements per the CONTRACTOR HASP and LREDC Construction Safety Management Procedures;
- make available and provide, upon request by LREDC, PPE items and safety equipment as identified in the contract documents along with any records relating to them;
- provide CONTRACTOR HSE personnel with red overalls and hard hats with the company name clearly marked on the overalls; and
- display signage detailing requirements for mandatory PPE throughout the worksite. Signage shall be in a format that is easily recognizable to all persons onsite regardless of their preferred language.

2.3. WELFARE

The CONTRACTOR shall:

- supply adequate quantities of potable drinking water in the immediate work area for all workers. Minimum quantity requirement per worker is 6 liters/ 10 hours shift;
- provide workers with single-use individual containers, or other approved method, for worker consumption of drinking water;
- supply adequate toilet and washing facilities with hot and cold running water. Separate facilities shall be provided for male and female workers, and shall be located within close proximity to the work area. A minimum of one (1) toilet shall be provided per twenty (20) workers assuming weekly servicing of the units;
- provide adequate residential accommodation in accordance with the LREDC policy on minimum labor camp standards which shall be provided with smoke detectors and fire alarms per Qatar Civil Defence Fire Safety Handbook;
- ensure that transportation shall be provided between accommodation and work areas for all personnel; and
- ensure that multiple loading and unloading areas shall be designated to minimize foot travel along site roads.

2.4. ADMINISTRATION

- Notices, signs, records, monitoring data, emergency contact information, etc. shall be prominently displayed in the English and Arabic language, and all other languages common to the workforce.
- The CONTRACTOR shall provide a minimum of one Site Health & Safety Signboard upon which is posted all health and safety data and information pertinent to the project site, incident rates, man hours, etc.
- Information posted on board(s) shall be updated by the CONTRACTOR as information changes. The CONTRACTOR shall maintain a minimum of one (1) copy of the CONTRACTOR HASP on site at all times.

2.5. EMERGENCY MEASURES

- The CONTRACTOR shall develop and implement comprehensive emergency response procedures specific to site work areas and activities occurring. All related equipment and supplies for implementation of the written plan shall be provided by the CONTRACTOR.
- The CONTRACTOR HASP shall contain the site-specific Emergency Response Plan.
- All personnel shall be regularly (not less than annually) trained on emergency response procedures, and their role in response activities. All personnel shall be informed of and be expected to know who their emergency responders are and have the contact information for all pertinent responders.
- The CONTRACTOR shall conduct a minimum of one (1) emergency drill every three (3) months (quarterly). Drills shall be coordinated with LREDC REPRESENTATIVE, and shall incorporate LREDC Project site emergency services.
- The CONTRACTOR shall prominently display all emergency contact information in all active work areas, on the Site Health & Safety Signboard, and in areas common to their personnel.
- The CONTRACTOR shall participate in the LREDC Emergency Response Committee for planning and coordination of the LREDC Crisis Management Plan.

2.6. TEMPORARY FACILITIES

The CONTRACTOR shall:

- submit plans of temporary construction buildings, facility fencing, access routes, and anchoring systems for temporary structures to the LREDC Representative for review and approval. The use of concrete masonry block to build any temporary facilities is strictly prohibited; and
- anchor trailers and other temporary structures used as field offices, as personal housing, or for storage with rods and cables or by steel straps to ground anchors. The anchor system is designed to withstand winds and must meet applicable state or local standards for anchoring mobile trailer homes.

2.7. SITE SECURITY

The CONTRACTOR shall:

- comply with all LREDC security and logistics plans when accessing and working on site. Requirements include personnel badging, vehicle passes, and health and safety induction for visitors and new employees;
- be responsible for those personnel entering the LREDC Project site on the CONTRACTOR'S behalf. The CONTRACTOR shall ensure that only authorized persons and vehicles enter the site;
- ensure that visitors and vendors shall be provided with temporary vehicle passes by Security Staff, which are valid for one (1) work day. The CONTRACTOR shall ensure that personnel are provided with a photo ID badge;

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- immediately rectify situations involving violation of LREDC Security Requirements. Unauthorized workers or vehicles having no Approved pass shall immediately be escorted to Gate #2 by the CONTRACTOR for verification of Approval to be on site;
 - be responsible for properly securing all Company-owned tools, equipment and materials when not in use to prevent theft. To this effect, CONTRACTOR shall clearly demarcate and identify their office, work, and storage locations with Company name;
 - label or placard all tools, equipment and materials in order to verify ownership should disputes arise;
 - prohibit all personnel from bringing firearms, weapons, alcohol, or controlled substances onto the project site; and
 - prohibit personnel observed to be under the influence of alcohol or drugs from entering and/ or working on site. Such cases shall be immediately reported to the LREDC REPRESENTATIVE.

2.8. VEHICLES & TRAFFIC MANAGEMENT

The CONTRACTOR shall:

- ensure that all company personnel who are operating motor vehicles on the LREDC Project site roads comply with all requirements as stated in the LREDC Construction Traffic Management Site Transport & Control Plan. The LREDC Plan implements and complies with all Qatari traffic laws, and the CONTRACTOR shall operate with the understanding that such laws apply to all LREDC Project site roads;
- ensure that all personnel are licensed/ trained/ competent to operate the vehicle(s) assigned to them as part of their scope of work. The CONTRACTOR shall not permit reckless driving or horseplay in vehicles;
- ensure that vehicle operators are conducting regular vehicle safety inspections and notifying management of identified deficiencies;
- ensure that all CONTRACTOR drivers shall obey all posted speed limits, road signs, traffic rules, and flagmen instruction when driving on all site roads. Vehicle operators and all passengers shall wear seat belts at all times;
- ensure that drivers allow pedestrians the right of way at all times;
- ensure that all vehicle operators shall report accidents immediately in accordance with Section 7.0 of these Requirements;
- ensure that flagmen are provided for activities which impact site road conveyance and/ or traffic flow; and
- ensure Vehicle operators shall notify the LREDC REPRESENTATIVE immediately to report observations of damaged or missing traffic controls, signs, etc. or reckless driving.

LREDC will station “Speed Monitors” randomly throughout the site road system to monitor vehicle speeds, as well as compliance with all traffic rules. Motorists found to be in violation of posted speed limits will be subject to disciplinary actions as outlined below:

At the discretion of the LREDC HSELQ Department, disciplinary action can be taken by LREDC including termination of the service of offending person(s) found speeding and/or reporting to the relevant police department or authority.

2.9. WORKING IN PUBLIC AREAS

The CONTRACTOR shall:

- carry out all work activities conducted in areas accessible to the public in a manner that minimizes, to the maximum extent possible, the impact and level of risk to the public;

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- post notices of planned/ scheduled work activities a minimum of fifteen (15) days prior to the proposed start of work at the work area and the CONTRACTOR site office;
 - ensures work activities shall be appropriately barricaded to provide physical separation between construction activities and the public;
 - safeguard the public from hazards prone to affect persons at distances; such as: arc flash, airborne contaminants, excessive noise, and construction vehicle traffic;
 - ensure all necessary security measures shall be provided by the CONTRACTOR to secure work areas during times when CONTRACTOR personnel are not present; and
 - ensure that additional safety and security measures shall be implemented by the CONTRACTOR as required by the Qatari Civil Defence and/ or Qatari Police.

2.10. WORKING AT NIGHT

The CONTRACTOR shall:

- conduct a risk assessment and develop a method statement unique to night work activities;
- provide specific night shift induction and safety awareness talks to workers and ensure that all workers comply with the same;
- ensure all access ways are lighted, are of good standard and free of materials; and
- provide continuous (24/7) health and safety coverage by a qualified HSE representative.

2.11 SUMMER WORKING CONDITIONS

- During the period from June 15th until August 31st, work under direct sunlight is prohibited from 11:30 am to 3:00 pm unless special arrangement is taken by the CONTRACTOR to control and ease effect of the direct sun on the workers. This arrangement shall be approved by the LREDC HSE Department and shall be agreed upon before implementation.
- The CONTRACTOR shall provide shaded rest areas, rest periods, and cool drinking water supplies for all persons on the worksite.
- The CONTRACTOR shall provide work wear that covers the skin for employees working in direct sunlight.

2.12 FIRE PREVENTION

- CONTRACTOR shall comply with these Requirements, the Qatar Dept. of Civil Defense Fire Safety Handbook, and all additional requirements specified in the LREDC Construction Safety Management Procedures.
- Copies of the Fire Safety Handbook shall be provided at CONTRACTORS main office, field workshops, chemical storage areas, on each marine vessel, and in areas where a substantial volume of hot work is occurring.
- CONTRACTOR shall designate a Competent person who shall be responsible for the fire prevention program and ensure that it is carried out through completion of the project.
- CONTRACTOR shall provide for mechanical ventilation in work areas where potential exists for accumulation of combustible or flammable vapors.
- A Fire Prevention Plan shall be prepared and implemented throughout the course of CONTRACTORS scope of work. Personnel shall be trained on a regular basis, but not less than annually.
- CONTRACTOR shall provide all necessary fire prevention and protection equipment based on their scope of work.

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- Fire extinguishers, type ABC dry chemical, shall be provided in all active work areas. Units shall be sized and spaced according to work activity occurring, quantities of combustible and flammable materials in the work area, and level of potential for fires.
 - Temporary enclosures shall be equipped with a minimum of one fire extinguisher suitable for all classes of fires that are expected inside the enclosure.
 - Extinguishers shall be inspected not less than monthly for functionality by a qualified person(s) and professionally serviced at least annually by a licensed agency/ entity.
 - Smoking shall be restricted to authorized locations only. Smoking shall not be permitted inside structures, office buildings or tunnels, or within twenty (20) meters of combustible or flammable materials storage areas.
 - CONTRACTOR shall prohibit open fires on site.
 - CONTRACTOR shall treat fires of all sizes seriously and shall adhere to incident reporting policies and procedures. Refer to Section 7.0.
 - Fuel storage shall be in accordance with these Requirements, the Fire Safety Handbook, and relevant consensus standards with regard to combustible and flammable liquids storage; i.e., National Fire Protection Association.
 - CONTRACTOR shall not construct or place an accommodation within a ten (10) meter radius of any building or structure forming part of the permanent works. Where this cannot be avoided, prior Approval shall be gained from LREDC REPRESENTATIVE.
 - All permit requirements for hot work activities shall be followed. Refer to Section 10.3.

CONTRACTOR shall provide information and warning signs at the following locations or areas:

- Flammable materials stores
- Combustible materials stores
- Temporary fire systems
- Portable fire extinguishers
- Fire escape routes, exits, and assembly areas.

Internal combustion engines and associated equipment, such as air compressors, hoists, derricks, pumps and similar devices, shall be located so that the exhausts discharge a safe distance away from combustible materials.

CONTRACTOR shall provide 'UL' listed safety containers for Gasoline and other flammable liquids to be stored in and dispensed from in conformance.

CONTRACTOR shall maintain that combustible debris, rubbish and waste material are removed from buildings at the end of each shift of work.

CONTRACTOR shall ensure that combustible debris, rubbish and waste material are disposed of properly.

CONTRACTOR shall ensure that adequate and unimpeded means of egress from all parts of the works, is available at all times in case fire.

If exits become obstructed during construction, the CONTRACTOR shall provide alternate exit routes during each phase of construction and identify the alternate routes on the construction drawings.

CONTRACTOR shall ensure temporary wiring for electrical power and lighting installations used in connection with the construction comply with NFPA 70

CONTRACTOR shall provide readily accessible emergency telephone facilities at an Approved location at the construction site. The street address of the construction site and the emergency telephone number of the fire department shall be posted adjacent to the telephone

CONTRATOR shall maintain adequate vehicle access for fire fighting to construction site. Vehicle access shall be provided to within 30m of temporary or permanent fire department connections (FDC and Fire Hydrant). Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.

CONTRATOR shall maintain that the FDC and Fire Hydrant serving the construction site are free and clear from obstruction and damage and readily available to the fire department.

Operation of temporary sprinkler and hydrant control valves shall be allowed only by properly authorized personnel. When the sprinkler protection is being regularly turned off and on to facilitate of newly completed construction, the sprinkler control valves shall be checked at the end of each work period to ascertain that protection is in service.

CONTRATOR shall provide tarpaulins used during construction which are made of material, which is resistant to fire, water and weather. Tarpaulins shall have 'UL' approval.

For dedicated onsite storage and staging areas, the CONTRACTOR shall provide detailed information in regards to the commodity, packing method and volumes expected during normal operations; and submit a plan layout which indicates the location and type of portable extinguishing equipment and the location of the nearest Fire Hydrant.

3.0 CONSTRUCTION HEALTH & SAFETY PLAN (HASP)

3.1 CONTRACTOR OCCUPATIONAL HASP

All CONTRACTORS (at all levels) shall produce and implement a site-specific HASP which adequately summarizes their scope of works under their contract (whether at tier 1 or tier 2), all safety and health hazards to which his personnel will or may be exposed, and methods which will be employed to control and/or mitigate those hazards to an acceptable level of risk. The HASP shall be site-specific to the LREDC Project.

The HASP shall be submitted to the LREDC REPRESENTATIVE within thirty (30) days of their contract award. The CONTRACTORS HASP, once Approved by the LREDC REPRESENTATIVE shall be deemed a part of these Requirements.

CONTRACTOR shall undertake a full formal review of the HASP annually on the date of contract award and submit it to the LREDC Representative within fourteen (14) days of the review with an amended plan should any amendment be required. The HASP shall also be revised when conditions or operations require. All revisions and amendments shall be submitted to the LREDC REPRESENTATIVE for review.

CONTRACTOR shall have sole responsibility for enforcement of requirements under this HASP. The HASP shall illustrate adherence to these Requirements, adherence to Qatari Laws and regulations, and LATEST GOVERNMENT APPROVED QCS and shall provide their personnel and LREDC with an understanding of the means and methods that the CONTRACTOR will employ in achieving compliance with these Requirements and the programs referenced herein.

The minimum information required to be contained in the CONTRACTOR HASP includes:

- Front Cover
- Table of Contents
- OHSAS 18001 Certificate (if applicable)
- CONTRACTOR health and safety policy statement
- Project Scope, Requirements and Occupational Health and Safety Objectives
- Subcontractor Occupational Health and Safety
- Management structure, organization chart, and key personnel responsibilities
- PPE requirements

- Training requirements
- Hazard Communication Program
- Occupational Health Program
- Emergency Response Program
- Incident Notification and Investigation
- Safety Meeting Details
- Site Security Procedure
- Air/ noise/ dust monitoring procedures
- Permit to Work Program
- Procedure for inspections, corrective and preventative actions
- Method Statements
- Risk Assessment and Job/Activity Hazard Analyses
- Key Performance Indicators and Continual Improvement
- Reference to and listing of pertinent Company HSE Policies & Procedures
- Appendices
- Reference Documentation

Additional Occupational HASP requirements can be found in QCS 2010 Section 1 Part 10.2 CONTRACTOR OCCUPATIONAL HEALTH AND SAFETY PLAN.

4.0 HEALTH, SAFETY & ENVIRONMENT (HSE) MANAGEMENT

4.1 STAFF QUALIFICATIONS & STAFFING

CONTRACTOR shall ensure that all personnel serving in the health, safety, and environmental management role on the LREDC Project are qualified with regard to education, certification, and construction safety and health experience on projects of similar size and scope. The CONTRACTOR shall appoint the following HSE Staff who shall meet the following minimum education, certification and experience criteria to serve in the health and safety capacity on the LREDC Project.

Note: HSE Staff, in excess of specifications outlined below, may be required at LREDC's discretion should high risk activities warrant, in the opinion of LREDC, such additional manpower.

HEALTH & SAFETY MANAGER:

- The Health and Safety Manager shall hold a degree to include a professional HSE Diploma or its equivalent in a health and safety discipline to an International Recognized Standard, with a minimum of ten (10) years of construction health and safety management experience on projects of similar size and scope.
- Be certified by a body of internationally recognised safety professionals as a minimum.
- The CONTRACTOR shall provide a minimum of one (1) qualified HSE Manager under each of their contracts.

DEPUTY HEALTH & SAFETY MANAGER

- The Deputy Health and Safety Manager shall be capable of performing all of the duties of the Health and Safety Manager.
- The minimum education shall be in accordance with the latest government approved QCS .

HEALTH & SAFETY REPRESENTATIVES (SUPERVISORS/ OFFICERS/ etc.):

- The Health and Safety Representative shall have a minimum of five (5) years of construction safety and health management experience on projects of similar size and scope AND the Health and Safety Representative shall be educated/ certified through internationally recognized schools/ agencies as having received comprehensive training in construction safety and health.
- Health and Safety Representatives shall be current in First Aid certification.
- CONTRACTOR shall provide a minimum of one (1) qualified HSE Representative for every fifty (50) workers assigned under each of their contracts.

OCCUPATIONAL HEALTH STAFF:

- CONTRACTOR shall provide qualified health (medical) staff with at least three (3) years relevant professional experience and qualifications in the organization/provision of clinical (including emergency medicine), occupational, and public health at construction projects of similar size and scope. In addition, candidates shall have knowledge of local health facilities.
- All Medical staff will have completed “Intermediate Life Support” training and will be required to complete refresher training, as necessary.
- All Medical staff shall have a current license in their country of origin, and have receipt to proof application to obtain license from the Qatar Supreme Council of Health. This application shall be initiated within one (1) month of arrival in Qatar.
- CONTRACTOR shall provide, at a minimum, occupational health/ medical personnel according to the following table:

<i>No. of employees</i>	<i>No. of qualified staff per shift (work area)</i>	<i>No. of qualified staff per shift (accommodation)</i>
Less than 5	1 First Aider	1 First Aider
>5	At least one first aider per 25 employees	1 First Aider
100 – 500	1 Nurse	1 Nurse
500 +	1 Nurse or EMT + 1 Doctor	1 Nurse

EMT: Emergency Medical Technician

- CONTRACTOR shall make its own independent assessment of the staffing level and arrangement for staffing a medical facility or first aid station based on a risk assessment. The staffing plan shall be documented and submitted to the LREDC REPRESENTATIVE for review before implementation.
- CONTRACTORS’ senior medical representatives on site or “Health Advisors” will also act as the ‘Health Focal Point’ for the CONTRACTOR and shall report directly to the CONTRACTOR Health and Safety Manager. The medical staff shall not be engaged until such time as the LREDC REPRESENTATIVE has reviewed and accepted the plan and candidates’ suitability for the post.

ENVIRONMENTAL MANAGER

- Hold a University Degree and/or professional Environmental Diploma or its equivalent in environmental engineering or a similar discipline, with a minimum of ten (10) years of construction environment management experience on projects of similar size and scope, OR;

- Hold a certification as a Chartered Environmentalist (CEnv) or equivalent (e.g. IEMA, CIWEM) from an internationally recognized professional institution and having a minimum of twelve (12) years of construction environment management experience on projects of similar size and scope.
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ENVIRONMENTAL REPRESENTATIVE / OFFICER:

- A minimum of three (3) years of construction environment management experience on projects of similar size and scope
- Educated/ certified through internationally recognized schools/ agencies as having received comprehensive training in construction environment (e.g. NEBOSH Certificate in Environment management, ISO 14001:2004 internal auditor, or similar).

4.2 REVIEW & APPROVAL OF STAFF QUALIFICATIONS

CONTRACTOR shall submit an Occupational Health and Safety Organization Plan to the LREDC REPRESENTATIVE thirty (30) days prior to starting work at the LREDC Project for review and Approval.

This requirement includes subcontractor personnel proposed to serve as Subcontractor Health and Safety Staff. The LREDC REPRESENTATIVE will reply back to the CONTRACTORS within seventy two (72) hours with a determination on personnel suitability for the HSE position.

4.3 HEALTH & SAFETY STAFF RESPONSIBILITIES

HSE Staff shall be competent to fully implement all facets of the CONTRACTOR health and safety program. HSE Staff shall have a genuine regard for the health and welfare of the LREDC Project site worker and shall exercise that regard in his or her daily activities. HSE Staff shall never compromise worker safety in the interests of schedule and budget, or for fear of management reprisal. HSE Staff shall work hand in hand with the LREDC REPRESENTATIVE with the common goal of providing the highest level of safety to the worker.

Health and Safety Staff shall have the authority to stop work activities when it is deemed that an imminent danger situation or condition exists and personnel are exposed to the situation or condition. CONTRACTOR shall ensure that all personnel making up CONTRACTOR Management team understand the authorities provided to the Health and Safety Staff and that said personnel shall adhere to instructions given by the Health and Safety Staff.

Health and Safety Staff shall be provided with the resources necessary for successful implementation of work area hazard controls and corrective/ preventive measures. Health and Safety Staff shall be trained and qualified to use monitoring instrumentation and shall understand the limitations of that equipment. Staff shall be provided with transportation and a cellular phone for implementation of their duties.

Health and Safety Staff shall respond to the CONTRACTOR and the LREDC REPRESENTATIVE requests and directives. Staff shall participate in project-wide HSE programs as directed by LREDC. Health and Safety Staff members shall attend all Health and Safety Staff meetings as scheduled by the LREDC REPRESENTATIVE.

HSE Staff personnel shall be distinguishable from site workers by use of the red colored hard hat. Only HSE Staff shall wear red hard hats on the LREDC Project. Hard hats shall be marked with the words "Safety" printed in white letters. HSE Staff traffic vests shall be marked with the word "Safety" in black letters. HSE Staff shall also label their hard hats with their name.

Refer to attached LREDC Occupational Health Management Program for specific CONTRACTOR Occupational Health Staff responsibilities.

4.4 HEALTH & SAFETY SUPPLIES & EQUIPMENT (NOT APPLICABLE TO DEVELOPERS)

In support of LREDC Health and Safety Department, the CONTRACTOR shall at the request of the LREDC REPRESENTATIVE provide to the following supplies and equipment but not limited to:

- Handheld Global Positioning devices (GPS) – 4 each

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- Digital Cameras with GPS – 6 each
 - Type 2 Reflective Vest with Lusail Safety and Logo – 60 each
 - ANSI or CE approved Hard Hats with Lusail Logo – 60 each
 - Safety Glasses dark – 100 each
 - Safety Glasses clear – 20 each
 - Safety Boots with Steel toe– 60 pair
 - HSE Induction Stickers (5000 pcs)
 - Rechargeable Flashlights with batteries – 30 each
 - Defibrillators (AED) – 1 unit

5.0 OCCUPATIONAL HEALTH MANAGEMENT

CONTRACTOR shall provide the following to all CONTRACTOR personnel of all tiers, Vendor representatives and other visitors to site as the case may be:

- A tiered “Medical Emergency Response Plan” that integrates with local services, covering medical treatment for emergency first aid assessments, treatment, stabilization, and on-going transfer/referral
- Local medical evacuation
- Primary health care (including vaccination program) and on-going specialist referral
- Public health care and welfare covering all accommodation, living environment, catering facilities, etc.
- Occupational health care
- Baseline medical screening for any employee working on the Lusail Project
- A minimum one (1) centralized medical facility in proportion to the number of personnel and level of risk associated with the scope of work

All of the above shall be coordinated with, and be in conformance to minimum LREDC Occupational Health Program specifications, Hamad Medical Corporation requirements, and local legislation with regard to the provision of medical services.

The CONTRACTOR shall be responsible for:

- Hospitalization and specialist treatment
- Overseas medi-vac and repatriation
- The provision of medical treatment for employees during leave days.

CONTRACTOR shall provide a central medical facility (near the work site), and the establishment of satellite “First Aid Stations” at the site equipped in accordance with minimum specifications in accordance with LREDC policies. Workers requiring hospital care or treatment of chronic illnesses will be referred to local medical facilities. Quality assurance of the retainer clinics is the responsibility of the CONTRACTOR.

All personnel mobilized to the LREDC Project for construction work activities shall be medically capable to perform all required tasks as part of their scope of work. Personnel shall be medically evaluated prior to starting work on site. The CONTRACTOR shall develop facilities and arrangements to administer a “fitness to work” process for both manual and office project employees. This includes initial and on-going screening. Personnel shall be provided with ready access to medical services and should be evaluated for fitness at a minimum every two (2) years.

Refer to the LREDC Occupational Health Management Program for additional CONTRACTOR occupation health and wellness requirements on the Lusail Project.

6.0 ENVIRONMENTAL & SUSTAINABILITY MANAGEMENT

LREDC developed an Overall Construction Environmental Management Plan (OCEMP) for the Project in order to communicate the environmental requirements (including monitoring and mitigation measures) to all.

The OCEMP shall apply as framework for the Contactors who will be involved in the implementation of the Lusail Development Master Plan to maintain environmental compliance with the MoE requirements. It shall guide the preparation of single Construction Environmental Management Plans (CEMP) for the individual construction projects to be pursued by each contractor/developer. It is also one of the key requirements for approval of the related projects by MoE.

Each Contractor / Developer will appoint full-time Environmental Personnel (as a minimum this entails the appointment of one Environmental Manager and one Environmental Officer, based full-time on the Lusail Project) to ensure the implementation of the Project Environmental Program on each respective construction project.

Each Contractor/ Developer is requested to adapt mandatorily the Lusail Environmental & Sustainability requirements as set out in the respective latest OCEMP revision.

BESIDES AN INTRODUCTION TO THE LUSAIL PROJECT THE OCEMP GIVES FULL GUIDANCE AND SETS OUT ALL LREDC REQUIREMENTS AS TO THE FOLLOWING TOPICS:

- Environmental Baseline Conditions
- Legal and Regulatory Requirements
- Roles and Responsibility
- Environmental Awareness and Training
- Communication
- Document and Records Control
- Operational Control
- Inspections and Audits
- Environmental Incidents and Emergency Preparedness
- Monitoring and Reporting
- Air Quality Control
- Noise and Vibration Control
- Light Pollution and Visual Impact Control
- Sustainability in Construction
- Waste Management Control
- Erosion and Sediment Control
- Soil and Earthworks Control
- Groundwater and Dewatering Control
- Vehicle Maintenance, Washing and Refuelling Control
- Concrete Batching and Truck Management

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- Fuel and Chemical Storage Control
 - Spillage Prevention and Control
 - Terrestrial Ecology Control
 - Water Quality and Marine Ecology Control
 - Welfare Facilities, Offices and Laydown Control
 - Socio-cultural and Archaeology Control

7.0 ASSESSMENT, MONITORING & CORRECTIVE ACTIONS

7.1 HEALTH & SAFETY ASSESSMENT

CONTRACTOR shall conduct visual assessment for safe work conditions, actions, and behaviours on a daily basis. All CONTRACTOR personnel are responsible for safety. All Managers shall manage safety issues throughout their activities on site and shall take the necessary action when sub-standard work conditions or actions are identified. In most cases, daily safety and health monitoring shall be documented and retained in the CONTRACTOR'S files.

CONTRACTOR shall schedule and perform regular documented assessments of all work areas, worker actions, equipment, and methods for compliance with the CONTRACTOR and LREDC Construction Safety Management Procedures requirements and general safe work practices. Documented assessments of all said areas shall be conducted not less than weekly.

Forms/ records used by the CONTRACTORS to record assessments shall be Approved by the LREDC REPRESENTATIVE. Forms/ records used must comprehensively identify and explain all sub-standard or deficient work conditions, activities and/ or hazards encountered during the assessment. The CONTRACTORS' assessment reports shall indicate a schedule for completion of corrective actions planned in response to assessment items encountered. Completed HSE assessments shall be provided to the LREDC REPRESENTATIVE within twenty four (24) hours following the assessment.

7.2 CORRECTIVE ACTION

CONTRACTOR shall immediately rectify any situation or condition that poses an imminently dangerous safety and/ or health risk to personnel. Should the condition not be correctable immediately, the CONTRACTOR shall provide temporary measures as necessary for the protection of personnel and shall immediately suspend all work which exposes personnel to imminent danger situations or conditions. Work shall not resume until the situation or condition is adequately corrected.

Non-compliant issues, situations or conditions (non-imminent danger), for which an immediate correction is not available, shall be documented on the CONTRACTORS assessment/ inspection record. The CONTRACTOR shall begin immediate corrective action planning and implementation with the goal of rectifying the condition or issue as soon as possible. A CAP which summarizes the corrective actions taken by the CONTRACTOR shall be submitted to the LREDC REPRESENTATIVE within seventy two (72) hours of the assessment. CAPs shall identify verbally and visually the corrections taken/ implemented, and subsequently closed.

CONTRACTOR shall review on a monthly basis all outstanding deficiencies for which adequate corrective action has not been completed/ implemented. Outstanding issues shall be summarized in a report which shall be submitted to the LREDC REPRESENTATIVE for review.

CONTRACTORS shall re-focus their efforts and exercise the utmost urgency with the goal of closing out any long-term outstanding deficiencies.

7.3 EQUIPMENT INSPECTION

CONTRACTOR shall ensure that tools, equipment and machinery mobilized to and used on the LREDC Project are in proper working condition, per manufacturer's guidelines. Equipment shall be properly handled, used and stored. The CONTRACTORS must provide for the security of their equipment at all times. LREDC will not be liable for CONTRACTOR neglect resulting in damage loss or theft of CONTRACTOR tools, equipment and/or machinery.

All equipment shall be inspected daily prior to use by the user, operator, or other qualified inspector. Inspections shall be documented. Tools or equipment found to be deficient or unsafe shall be taken out of service, tagged as such, and sent to the pertinent repair facility. Only qualified persons shall make repairs to tools, power tools, and equipment. Heavy equipment shall be serviced/ repaired only by the owner of the equipment.

CONTRACTOR shall regularly evaluate inspection records to identify deficiencies which are not being addressed in a timely manner, as well as trends in equipment damage or deficiency indicating the need for worker training, modification of methods, etc. Equipment inspection records shall be retained on file and made available for inspection at any time by the LREDC REPRESENTATIVE.

7.4 MONITORING OF WORKER EXPOSURE

CONTRACTOR shall provide equipment for sampling and monitoring noise levels and airborne contaminants. The CONTRACTOR shall ensure that all monitoring equipment is calibrated per manufacturer's instructions and operated by qualified personnel only.

Noise surveys shall be carried out as part of the daily site assessment and shall cover all areas of the site where noise hazards exist. The CONTRACTOR shall implement components of a Hearing Conservation Program (HCP) when noise levels reach 80 dBA.

Should noise levels reach an 8 hour time-weighted average of 85 dBA then the CONTRACTOR shall implement a complete HCP. Noise monitoring results shall be documented and made available to the LREDC REPRESENTATIVE, and all CONTRACTOR personnel who are/ may be exposed to excessive noise levels.

CONTRACTOR Health and Safety shall conduct a thorough daily monitoring program for airborne contaminants or air deficiency as required per work activities, presence of confined spaces, or use of hazardous materials. Monitoring results indicating oxygen deficiency (<19.5%), flammable gas concentrations in air greater than 10 % lower explosive limit, or in excess of applicable safe exposure levels (PEL, REL, or TLV) shall warrant an immediate stop work.

CONTRACTOR shall evaluate feasible engineering controls and/ or respiratory protection when sustained measurements of half the safe exposure level (action level) are reached. Air contaminant monitoring results shall be documented and made available to the LREDC REPRESENTATIVE, and all CONTRACTOR personnel who are/ may be exposed to airborne contaminants.

CONTRACTOR Health and Safety shall ensure that safe exposure levels and health effects of all hazardous materials in use are communicated to and understood by all personnel. Material Safety Data Sheets (MSDS) for all hazardous materials shall be provided in the work area. Personnel shall be advised of the location of all MSDS.

7.5 REGULATORY AGENCY INSPECTION

CONTRACTOR shall ensure that its personnel are aware of and comply with the procedures to be taken in the event of a government or regulatory agency inspection of any type. The CONTRACTOR shall notify the LREDC REPRESENTATIVE should a request for inspection be received by any regulatory agency.

Following any regulatory agency inspection the CONTRACTOR shall submit a written report to the LREDC REPRESENTATIVE detailing all aspects of the inspection. This report shall be submitted within twenty four (24) hours following the inspection.

8.0 INCIDENT REPORTING & INVESTIGATION

CONTRACTOR shall IMMEDIATELY provide verbal notification to the LREDC REPRESENTATIVE for all incidents, accidents, injuries, illnesses, and near miss incidents.

The CONTRACTOR shall follow up with documented notification to all aforementioned entities within twelve (12) hours. Where warranted due to the severity or nature of the incident, the CONTRACTOR shall complete all required notifications and reports to statutory entities. Work shall be halted at incident scenes, where necessary, in order to begin the incident investigation in an un-tampered environment.

All incidents shall be thoroughly investigated by the CONTRACTOR and relevant parties to determine all root and supporting cause(s). All witnesses to the incident shall provide statements and all data, monitoring records, medical reports, etc. pertinent to the incident or the suspected cause(s) shall be taken into account and included in the investigation report. CONTRACTORS shall be cautious to adhere to privacy requirements when attaching medical records to investigation reports.

Within twenty four (24) hours of the incident, the CONTRACTOR shall schedule and conduct an Incident Review Board (IRB) Meeting wherein the incident is examined to identify cause(s) and corrective actions/ measures required. The CONTRACTOR shall extend invitation to the IRB, to the LREDC REPRESENTATIVE, the CONTRACTOR Project Manager, direct manager of the injured/ involved, involved personnel, and witnesses.

Complete incident investigation reports shall be submitted to the LREDC REPRESENTATIVE within seventy two (72) hours of the incident occurrence. Reports shall include a schedule for completion of identified and agreed upon corrective actions and/ or measures.

CONTRACTOR shall track incident rates (metrics) using an Accident Register Book.

All notified accidents shall be entered in the CONTRACTOR's accident book including all employees, contractors, visitors to site and accidents to members of the public.

Specifically, CONTRACTORS shall track:

- Total incidents
- Incidents by type
- Incidents involving medical treatment
- Incidents involving a work restriction
- Incidents involving lost time

The CONTRACTOR shall use the following formulas to measure and trend injury work case rates:

$$\text{Accident Frequency Rate} = \frac{\text{number of lost time accidents (>3 days)} \times 100,000}{\text{Number of man hours worked}}$$

$$\text{Accident Incident Rate} = \frac{\text{number of RIDDOR injuries work related injuries} \times 100,000}{\text{Average No of persons employed}}$$

CONTRACTOR shall maintain up to date records of all incidents and make all records available for review by the LREDC REPRESENTATIVE. Records must be retained for at least five (5) years from the date of the last entry in the book. The records must be sent to archive at the end of the contract with the rest of the contract documents. Lessons learned and corrective actions planned following incident investigations must be shared with all site personnel and implemented in all work areas where similar activities are occurring.

In accordance with QCS 2010 Section 11 Part 2, the following must be reported immediately to the appropriate Qatar Administrative Authority by the quickest practical method (usually by telephone) and a report submitted on the approved form (e.g. F100, F100A) within 10 days:

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- Fatalities and major injuries
 - Injuries resulting in incapacity for more than three days when linked to certain work activities
 - Specified diseases
 - Dangerous occurrences.

A description of the above listed incident types which are reportable to the Qatar Administrative Authority has been provided below:

FATALITY

The death of any person, whether or not they are at work, if it results from an accident arising out of or in connection with work.

MAJOR INJURY

Defined injury, which requires immediate notification to Enforcing Authority under RIDDOR.

Specifically;

- a) Any fracture, other than to the finger, thumb or toe
- b) Any amputation
- c) Dislocation of the shoulder, hip, knee, or spine
- d) Loss of sight (whether temporary or permanent)
- e) A chemical or hot metal burn to the eye or penetrating injury to the eye
- f) Any injury resulting from an electric shock or electric burn, leading to unconsciousness or requiring resuscitation, or admittance to hospital for more than 24 hours
- g) Any other injury
 - i. Leading to hypothermia, heat induced illness or to unconsciousness
 - ii. Requiring resuscitation
 - iii. Requiring admittance to hospital for more than 24 hours
 - iv. Loss of consciousness caused by asphyxia or by exposure to a harmful substance or biological agent
 - v. Acute illness or loss of consciousness resulting from the absorption of any substance by inhalation, ingestion or through the skin
 - vi. Acute illness which requires medical treatment where there is reason to believe that this resulted from exposure to a biological agent or its toxins or infected material.

OVER 3-DAY LT OR RESTRICTED / MODIFIED CASE

An Injury not being a major injury that results in a person either missing 3 or more consecutive days from work (not counting the day of the accident) or being unable to fulfil his/her normal duties for 3 or more consecutive days, including non-working days i.e.- weekends.

SPECIFIED DISEASE

Where any person suffers from any of the occupational diseases specified in RIDDOR and their work involves one of the activities noted. All instances where it is suspected that it may be necessary to report an Occupational Disease should be referred to the LREDC HSELQ Dept.

DANGEROUS OCCURRENCE

An occurrence, which arises out of or in connection with work and contained in RIDDOR, specifically for construction works, this would include:

- a) The collapse of overturning of, or the failure of any load bearing part of any lift, hoist, crane, derrick, MEWP, access cradle, excavator, pile-driving frame or rig (over 7m in height) or fork lift truck.
- b) Any unintentional incident in which plant or equipment comes into contact with or causes an electrical discharge by coming into near proximity of an overhead electrical line exceeding 200 volts
- c) Electrical short circuit or overload attended by fire or explosion and stops the plant for more than 24 hours or has the potential for death.
- d) Collapse of:
 - i. Scaffolding over 5m in height
 - ii. Scaffolding erected near to water, which could have resulted in a drowning incident
 - iii. The suspension arrangements of any slung scaffold
 - iv. Incidents involving pipelines or pipeline works including unintentional escapes, damage, etc.
- e) Collapse of:
 - i. A building or structure under construction, alteration, demolition etc that involves the fall of more than 5 tons of material.
 - ii. Any floor or wall of a building used as a work place
 - iii. Any false work
- f) The escape of flammable substances, including specific quantities of liquids or gas
- g) The escape of any substances in sufficient quantities to death or major injury or damage to health.

9.0 HAZARD AWARENESS**9.1 RISK ASSESSMENTS**

Contractors shall use the process of risk management to identify hazards, evaluate risk and determine appropriate control measures to reduce the risk to an acceptable level and monitor the adequacy and effectiveness of such risk control systems.

Risk assessments shall be carried out by Competent person(s) and shall consider the potential risks to the health and/or safety of anyone who may be adversely affected, which may include employees, the employees of other contractors, site visitors, members of the public, etc.

Risk assessments and control measures shall be reviewed at regular intervals and immediately if:

- (a) There is reason to believe that it is no longer valid
- (b) There has been a significant change in the work to which the assessment applies

Contractors shall provide information, instruction and training to employees as is suitable and sufficient to ensure they know the risks to health and safety, and the precautions which should be taken.

9.2 METHOD STATEMENTS

CONTRACTOR shall complete Method Statements for each substantial work process in each work area. All personnel involved in execution of the work process shall be educated on the Method Statement and its requirements. Method Statements shall include, at a minimum:

- General scope description of the Works and methodology of how it will be performed safely
- Location and identification of the work covered by the method statement

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- Permits and Licenses Required
 - Specific Occupational Health and Safety Issues including Risk Assessments and Job
 - Hazard Analysis
 - Assessment of potential risks to the environment and associated mitigation measures
 - Responsibilities
 - Details of the availability of necessary resources to complete the work
 - Program schedule broken down to individual tasks
 - Details of measures in place to minimize disturbance to the public (if applicable)
 - Drawings and Sketches
 - Reference Documentation

CONTRACTOR shall submit Method Statements minimum of (5) business days prior to plan start of work.

CONTRACTOR shall not commence work, including temporary works, until Method Statement(s) have been approved by LUSAIL REPRESENTATIVE.

Method statements shall be reviewed and approved by the Contractor's Health Safety Manager prior to submission to the LUSAIL REPRESENTATIVE. Method statements shall be approved by the Engineer before commencing Work.

Method Statements shall be updated/ revised as scope of work or project schedule changes.

9.3 JOB HAZARD ANALYSIS

CONTRACTOR shall prepare and submit to LUSAIL REPRESENTATIVE a JHA which adequately addresses all tasks that will be performed within the scope of work under this CONTRACT. The JHA shall be included as an integral part of every method statement that is submitted.

CONTRACTOR shall prepare and submit to the LREDC REPRESENTATIVE a JHA which adequately addresses all tasks that will be performed within the scope of work under their contract. The JHA shall be prepared for each individual job that requires a method statement.

The JHA shall identify all steps required to complete the job, including all tools, equipment and materials required. The JHA shall then identify all hazards associated with each identified job step. The JHA continues to explain what controls or measures will be implemented, or are in place, to minimize the risk associated with each identified hazard. Lastly, the JHA shall identify the personnel or department responsible for completing/ implementing the identified control.

JHAs shall be submitted to the the LREDC REPRESENTATIVE a minimum of five (5) days prior to planned start of work. The CONTRACTOR may begin work upon verification that all required JHAs have been submitted.

9.4 HAZARDOUS MATERIALS & SUBSTANCES

Prior to any material or substance defined as "Hazardous" being brought onto the LREDC Project, the CONTRACTOR shall adhere to the following requirements:

- The Material Safety Data Sheet (MSDS) for ALL hazardous materials shall be provided to the LREDC REPRESENTATIVE for review and Approval.
- The MSDS shall precede the arrival of the material shipment by a minimum of five (5) days.
- Only upon Approval by the the LREDC REPRESENTATIVE shall the hazardous material be brought onto the Lusail Project.

CONTRACTOR shall manage all hazardous materials and substances in accordance with the manufacturer's use, storage and handling guidelines. The CONTRACTOR HSE Department shall be consulted to ensure that

factors such as compatibility, spill containment, grounding/ bonding, and hazard communication are properly addressed in material storage areas.

CONTRACTOR shall implement a comprehensive Hazard Communication Program which complies with the LREDC HSE Hazard Communication Program and all relevant Qatari labor laws. The program shall include such components as:

- Chemical inventory of all hazardous materials and substances in specific work area(s)
- MSDS availability in all work areas where materials and substances are stored/ used
- Marking/ labeling of containers used to store/ hold materials and substances (includes temporary containers)
- Signs posted to indicate hazardous materials and substances use/ storage areas
- Employee training on hazards associated with hazardous materials and substances in their work area(s) and controls in place and required for use and handling of hazardous materials and substances.

CONTRACTOR shall ensure that all workers who could potentially be exposed to hazardous materials and substances stored or in use in any work area are advised of the materials and substances and the hazards associated with each. Personnel shall be advised of the health effects which are expected from over-exposure to the hazardous materials and substances on site. All training shall be documented with copies provided to the LREDC REPRESENTATIVE.

CONTRACTOR shall confer with the LREDC REPRESENTATIVE when uncertain of a materials or substance hazard classification. The CONTRACTOR shall never assume that an unknown material is “non-hazardous” and shall not mobilize the material to the site until determination is gained.

The Lusail Construction Safety Management Procedures include additional requirements pertaining to storage, handling and use of hazardous materials and substances on the Lusail Project.

10.0 TRAINING & INDUCTION

CONTRACTOR shall establish and implement a health and safety training program and shall provide the resources necessary to ensure adequate and effective training is provided to personnel as required. Site personnel shall be provided training on the hazards associated with the tasks they will be conducting and the controls available and/ or required by the CONTRACTOR to perform the work safely. The CONTRACTOR shall prepare a training safety budget to ensure personnel have adequate knowledge of hazard recognition and how best to protect them self. A portion of this budget shall be utilized as determined by the LREDC REPRESENTATIVES.

Should the LREDC REPRESENTATIVE provide training for CONTRACTOR personnel, the CONTRACTOR shall allocate the budget necessary to conduct the training, including time and materials, to the LREDC REPRESENTATIVE.

Training must be implemented by instructors who are properly qualified and experienced to instruct and teach the topics being presented. All health and safety training shall be conducted in languages understood by all personnel participating in the training.

All health and safety training shall be documented. Personnel records shall indicate what specific health and safety training each worker has received, when the training occurred, expiration date (if applicable) and the identity of the trainer(s). Personnel training shall be updated/ refreshed as required. Personnel shall be provided health and safety training when their job scope changes, or when new processes or substances are introduced into the work area. Training records shall be made available to the LREDC REPRESENTATIVE upon request.

All persons, including visitors and vendors, who have not received required health and safety training shall be escorted by personnel authorized by the CONTRACTOR at all times while on the LREDC Project. The CONTRACTOR shall plan for and allocate the necessary time in their project schedules for personnel training.

10.1 LREDC PROJECT SITE INDUCTION

CONTRACTOR key personnel, supervisors, managers, Health and Safety personnel, Project Manager, etc shall attend the LREDC Construction Health Safety & Environmental Orientation/Induction.

CONTRACTOR shall ensure that all personnel, visitors, vendors, etc. are provided with project site health and safety “Induction” on their first day of employment/ visit to the LREDC Project. Induction training shall be designed and delivered to adequately address all potential work scenarios and hazards that a worker/ visitor may be exposed to during their employment/ visit at the LREDC Project. As a minimum the Induction shall be at least two hours in duration and comprehensively address all components of THE CONTRACTOR and the LREDC Construction Safety Management Procedures, and include instruction on LREDC site-wide programs which may affect the employee or visitor. Such induction training will be reviewed, revised, and repeated for all persons that enter the LREDC Project at periods not exceeding 6 months throughout the duration of the project.

All personnel who have completed Induction training shall be provided with some means of clear identification of such. The manner in which this is accomplished is at the CONTRACTORS discretion and shall be Approve by the LREDC REPRESENTATIVE.

Personnel identified in the work area without evidence of completion of Induction training shall be removed from the work area managed accordingly by the CONTRACTOR.

CONTRACTORS shall provide all personnel with individually unique contract specific photo identify cards. Such cards shall be made available to any LREDC Representative upon request. The CONTRACTOR shall not permit any CONTRACTOR personnel to access the worksite unless they have been issued with their individually unique photo identify card.

10.2 SPECIALIZED HEALTH & SAFETY TRAINING

CONTRACTOR shall ensure that a minimum of one (1) certified “First Aider” is provided for every twenty five (25) workers on site. All HSE Staff are required to be current in First Aider training. Preferably, training acquired includes the practice of Cardio-Pulmonary Resuscitation. All First Aiders are required to maintain record of their certification on their person. The CONTRACTOR shall ensure that all personnel are aware of the identity and contact information for CONTRACTOR First Aiders.

CONTRACTOR shall ensure that specialized health and safety training is provided to personnel using, implementing or operating the following:

- Mobile Elevated Work Platforms
- Powder Actuated Tools
- Heavy Equipment
- Forklifts
- Vehicle Drivers
- Vessels
- Permit to Work Activities
- Traffic Control

Safe Driver Training (prerequisite for CONTRACTOR onsite vehicle driver) Note: training provider shall be pre-approved by LREDC)

11.0 PERMIT TO WORK ACTIVITIES

Specific work activities at the LREDC Project are permit required activities. CONTRACTORS shall comply with all Requirements specified below and shall refer to the LREDC Construction Safety Management Procedures for additional requirements for each type of permitted work activity listed below.

11.1 EXCAVATION & TRENCHING

Prior to commencing excavation or trenching activities of **ANY DEPTH GREATER THAN 1.0 METER**, CONTRACTOR shall:

- conduct a thorough investigation for sub-surface utilities and below-grade infrastructure;
- Review all existing “As Built” drawings from all relevant sources; if “As Built” drawings are not available or accuracy is in question, CONTRACTOR shall conduct surveys, using industry standard technologies, to identify the presence, type, and location of buried utilities;
- where buried utilities are identified within the limits of proposed excavation, notify and obtain permissions from known utility owners prior to digging.
- provide a minimum of one (1) qualified “soils competent person” responsible for evaluating and classifying the soil characteristics. The soils competent persons shall evaluate **EVERY** proposed excavation location before excavation starts;
- not generally classify the soils at all excavation locations within their scope of work as being of one type or classification; regardless of historical data;
- adhere to guidance provided by the soils competent person with regard to excavation protective systems required; and
- Request an “Excavation Permit to Dig” through the LREDC REPRESENTATIVE. As part of the permitting process, the CONTRACTOR shall “walk-down” the proposed excavation area with the LREDC REPRESENTATIVE prior to being issued a permit to dig.
- Provide the necessary soil stability calculations as requested by LREDC using computer aided software to ensure that displacement of excavation does not exceed Lusail approved permissible limits.

Note: Displacement will be monitored during excavation activities until appropriately backfilled in accordance with all standards. All incurred costs to be borne by the CONTRACTOR.

During and following excavation activities, the CONTRACTOR shall:

- ensure that all open trenches and excavations deeper than five (5') into which personnel plan to work are inspected **DAILY** by a soils competent person(s) or other qualified inspector(s);
- ensure that excavation inspections shall be documented and made available for review by the LREDC REPRESENTATIVE;
- not require any person to enter an excavation or trench that has been determined “unsafe” by the soils competent person;
- provide and maintain adequate safeguards and barriers to prevent workers inside excavations from surface hazards, as well as to provide pedestrians and motorists with safeguards which prevent falling, walking or driving into open excavations. This Requirement pertains to any excavation within twenty (20) meters of a pedestrian walkway or road;
- provide all necessary safeguards, supports, etc for stabilizing structures and/ or encumbrances which are adjacent to the excavation as the excavation proceeds;
- place solid barriers around all excavations over 1.2m deep at a distance at least 1.2m. Where night time pedestrian or vehicle access is adjacent to excavation then all solid barriers will be fitted with warning lights; and

- ensure that permits shall be valid for a maximum of thirty (30) days. Excavations remaining open beyond this timeframe shall be re-evaluated and re-permitted by the LREDC REPRESENTATIVE.

11.2. CONFINED SPACE ENTRY (CSE)

CONTRACTOR shall identify all work areas or spaces which meet the definition of a “confined space.” Determination shall be made by the CONTRACTOR HSE Manager or other qualified person(s). Confined spaces shall be designated as “permit required” or “non-permit required.” All permit required confined spaces shall be sign posted as such by the CONTRACTOR. The CONTRACTOR shall request a CSE permit from the LREDC REPRESENTATIVE prior to any entry or work inside a permit required confined space. There are no exceptions to this Requirement.

CONTRACTOR shall adhere to all facets of their internal CSE program and the LREDC CSE Procedure, and shall ensure that the following basic requirements have been addressed:

- CONTRACTOR shall ensure that personnel involved with CSE have received the required training and that all emergency equipment is available.
- Adequate measures shall be in place to control access.
- The CONTRACTOR shall prepare and implement an LREDC site-specific CSE emergency response plan and ensure that a team is fully trained and prepared to handle any emergency foreseeable in CONTRACTOR confined spaces.
- Air monitoring for hazardous atmospheres shall be conducted as required for all potential deprivations and/or contaminants.
- Sufficient mechanical ventilation is provided.
- Lockout and Tagout of all utilities affecting the space is implemented. See section 10.4 below for further details.
- Retrieval equipment and plan is in place.
- Communications system shall be provided for both entrants and attendants.
- Evaluation of the need for explosion-safe equipment shall be conducted by a qualified person.
- PPE requirements, including respiratory protection, have been evaluated and are implemented.

CSE Permits shall be posted at the space entry and shall be valid for one (1) shift only. Permits shall be closed out by the LREDC REPRESENTATIVE when work has been completed or the shift ends, whichever comes first. Work activities exceeding one shift in duration will require re-evaluation and re-permitting by the LREDC REPRESENTATIVE prior to the commencement of each shift.

11.3 HOT WORK

“Hot Work” means any flame, spark, or high heat producing activity. This includes such activities as welding, torch cutting, use of chop saws, and pipe sweating. The CONTRACTOR shall request a hot work permit through the LREDC REPRESENTATIVE for all activities falling within the definition of Hot Work.

Prior to conducting Hot Work, the CONTRACTOR shall ensure that all combustible and/ or flammable materials within 10 meters of the work area have been removed or covered with fire retardant blankets. A designated “Fire Watch” shall be identified and posted in the Hot Work area. Personnel serving as fire watch shall have no other duties. The fire watch shall remain in the Hot Work area for a minimum of thirty (30) minutes following completion of the Hot Work. The fire watch shall be trained to use fire extinguishers and shall know the emergency response procedures and contact information for advanced fire response services.

Hot Work permits shall be posted in the immediate Hot Work area. Each Hot Work area shall be permitted. Should multiple workers be performing Hot Work within the same area in relation to one CONTRACTOR; i.e., within radius of thirty (30) meters, one (1) Hot Work permit shall be issued for each 100 meter radius area.

Hot Work permits shall be valid for one (1) shift only. CONTRACTOR may request that hot work permits be extended for longer durations or issued to cover a greater number of days. Review and Approval of such requests shall be provided by the LREDC REPRESENTATIVE. Under no circumstances shall any Hot Work permit be issued for longer than seven (7) days.

CONTRACTOR shall have the following controls in place while performing Hot Work and welding operations at height:

- All work activity shall be coordinated with other activities in areas below
- Areas below will be cleared of all combustible and flammable materials
- Fire blanket/fire retardant material shall be used to cover any combustible materials that cannot be cleared
- Fire blanket/fire retardant material shall be removed after Hot Work and welding activities are completed

11.4. CONTROL OF HAZARDOUS ENERGY (LO/TO)

CONTRACTOR shall produce and implement a comprehensive procedure/ program for the Control of Hazardous Energy, also known as “Lockout/ Tagout.” The CONTRACTOR’S program shall meet or exceed the LREDC Construction Safety Management Procedure for Lockout/ Tagout.

Typical forms of energy which may require isolation and control include the following. Please note that work activities involving multiple forms of energy may require control.

- Electrical
- Mechanical
- Pneumatic
- Steam/ Thermal
- Hydraulic
- Potential

CONTRACTOR shall request for a permit for activities requiring control of hazardous energy through the LREDC REPRESENTATIVE. Work shall not start until the permit has been authorized.

CONTRACTOR shall ensure all personnel involved in work activities where hazardous energy is required to be controlled shall be adequately trained on CONTRACTOR and LREDC procedures. Personnel attaching energy control devices (locks) shall be qualified for such tasks. Only certified electricians shall perform work on electrical equipment; energized or de-energized.

Work shall be performed on energized electrical equipment (> 50 volts) only in specific situations, and where the CONTRACTOR has obtained all Approvals and permits from the LREDC REPRESENTATIVE. Otherwise, there shall be no energized electrical work permitted on the LREDC Project.

11.5. PRESSURIZED LINE TESTING

CONTRACTOR shall have a comprehensive procedure or program for pressurized line testing which meets or exceeds requirements set forth in this specification and the LREDC Construction Safety Management Procedures. Only trained and qualified personnel shall be involved in pressurized system tests.

CONTRACTOR shall request a Pressurized Line Testing Permit prior to pressurizing any closed system pipe works. Permits shall be requested through the LREDC REPRESENTATIVE. The criteria for determination of permit requirements shall be as follows:

- Any test involving hydraulic pressures in excess of sixty (60) pounds per square inch gauge
- Any test involving pneumatic pressure of any value

CONTRACTOR'S Program shall include twenty four (24) hour prior test notification to the LREDC REPRESENTATIVE. The CONTRACTOR shall visually communicate the parameters of the test (duration and pressure(s)) prior to and during the test at all points along the line under test. Line testing permits shall be valid only for the duration of the test, but shall not exceed seventy two (72) hours.

11.6. CRANE SUSPENDED MAN BASKETS

CONTRACTOR shall exhaust all available options prior to selecting crane suspended man baskets as a work platform option. Where no alternative is available or feasible, the CONTRACTOR shall ensure that prior to the start of any work activities involving suspended work platforms, a comprehensive program or procedure has been provided to and Approved by the LREDC REPRESENTATIVE. Suspended baskets shall be designed and assembled by qualified personnel only, as designated by the CONTRACTOR, via training documents and records.

Prior to commencing work, the CONTRACTOR shall request for a permit for crane suspended man baskets from the LREDC REPRESENTATIVE. Extensive worker training shall be completed prior to a permit being issued. The LREDC REPRESENTATIVE shall issue a permit only after all concerns have been addressed. Permits shall be valid for one (1) shift only.

12.0 HIGH RISK ACTIVITIES

12.1 WORKING NEAR WATER

CONTRACTOR shall ensure that all personnel performing work activities on or within five (5) meters of bodies of water are provided with and wearing approved life preservers in addition to all other required PPE. Lifebuoys shall be provided for each worker with exposure to drowning. Lifebuoys shall be located on land and be provided with a minimum of thirty (30) meters of lifeline. All personnel exposed to drowning hazards shall be trained on the use of life preservers and procedures for working near water.

Marine vessels shall be sea worthy and used for their intended purpose only. Vessels shall be operated only by trained, qualified operators who are approved by the CONTRACTOR. The CONTRACTOR must ensure that vessels are provided with suitable life saving equipment, lighting, communications, and fire-fighting equipment. Means of adequate and appropriate communication between the vessel and land shall be provided. The vessel shall have occupancy requirements which shall never exceed the manufacturer's recommendations and the CONTRACTOR shall ensure that these are adhered to. The CONTRACTOR shall provide a dedicated rescue vessel which is equipped with emergency and communications equipment.

CONTRACTOR shall provide and implement a "Spill Prevention Controls & Countermeasures" plan for all work activities on or near water where hazardous materials are in use. The Plan shall be submitted to the LREDC REPRESENTATIVE for review. A designated spill response team shall be established by the CONTRACTOR and regular, but not less than annual, training for spill response emergencies shall be conducted.

A thorough inspection of marine equipment, tools and emergency equipment shall be conducted not less than monthly. Inspections shall be documented and made available for review.

12.2 WORKING AT HEIGHTS

FALL PROTECTION

The CONTRACTOR shall properly implement a suitable and sufficient risk assessment for all Working at Height activities as defined by QCS 2010 Section 11 Part 1.

CONTRACTOR shall ensure that all work at height is properly planned, appropriately supervised and carried out in a safe manner, taking into account adverse weather conditions that could jeopardize the health and safety of employees. Planning must include the selection of appropriate work equipment, and planning for any emergencies or any rescue.

CONTRACTOR shall ensure that all personnel who are or may be exposed to falls in excess of 1.8 meters (6') are provided with an approved method of 100% fall protection. Approved fall protection methods include guard rails, fall arrest, fall restraint, positioning devices, controlled access zones, and lifelines. Safety monitoring systems are not permitted.

CONTRACTOR shall provide and implement a written fall protection program that meets or exceeds requirements found in latest government approved QCS and the LREDC Construction Safety Management Procedure for Fall Protection.

All equipment used shall meet internationally recognized testing requirements, such as ANSI or EU. All equipment shall be inspected daily prior to use by the user and used per manufacturer's guidelines only.

CONTRACTOR shall identify a qualified person to ensure that fall protection systems meet all requirements for such prior to systems being implemented.

CONTRACTOR shall appoint a registered engineer to design, prepare and provide detailed specifications for fall protection systems. System specifications shall be made available for review upon request by the LREDC REPRESENTATIVE.

CONTRACTOR shall enforce and ensure compliance with fall protection requirements on all work activities where exposure to workers exists. Requests for exemption from fall protection requirements for a specific activity or scenario may be submitted to the LREDC REPRESENTATIVE for review and Approval.

SCAFFOLD

CONTRACTORS who plan to use scaffolding systems shall provide and implement a Scaffold Program which meets or exceeds the specifications described in these Requirements, the LREDC Construction Safety Management Procedure for Scaffolding, and all requirements of ANSI A10.8. All scaffold users shall be trained on scaffold safety requirements prior to using scaffolding systems.

CONTRACTOR shall provide only scaffold components manufactured specifically as scaffolding equipment by a licensed scaffold equipment manufacturer. Home-made scaffold components shall not be permitted for use in scaffolding systems on the LREDC Project. The CONTRACTOR shall not permit inter-mixing of scaffold components from different scaffold systems to be used in the same scaffold system.

CONTRACTOR shall not permit inter-mixing of scaffold components from different scaffold components from different scaffold systems to be used in the same scaffold system.

CONTRACTOR shall appoint a minimum of one (1) "Scaffold Competent Person" who is responsible for evaluation and inspection of all scaffold systems. The scaffold competent person's qualifications and training records, which support/ validate their appointment to this position, shall be provided to the LREDC REPRESENTATIVE prior to commencing work for review and Approval.

CONTRACTOR shall ensure that scaffold systems are erected, modified, and dismantled by "Scaffold Qualified Persons" only. The qualified person or "erector" shall submit training records and documentation to support/ validate their appointment to this position. Only the qualified erector(s) shall direct/ manage the erection, modification or dismantling of any scaffold system.

CONTRACTOR shall ensure that safe working loads of scaffold systems are not exceeded. A comprehensive tagging/ identification system shall be used to communicate to the user the status of the scaffolding.

13.0 EQUIPMENT MACHINERY & TOOLS

13.1 PLANT & MOBILE HEAVY EQUIPMENT

Heavy equipment and plant shall be inspected upon mobilization to the site and daily prior to use by the operator (refer to Section 6.3). The CONTRACTOR shall ensure that persons assigned to operate heavy equipment and plants are qualified for the specific equipment being operated. Operators shall hold a current certification from a recognized testing and certification agency.

CONTRACTOR shall ensure that all plant and heavy equipment is provided with a current test Certificate. Test Certificates shall be current within one (1) year, and shall be issued only by licensed and approved inspections and testing agencies. Equipment shall be so marked with record of the latest Test Certificate. Should equipment modifications and/ or repairs be made, the equipment shall be re-certified prior to being placed back into service.

CONTRACTOR shall maintain a full record of all plant and heavy equipment test certifications, expiration dates, certifying agencies, etc., and shall update records accordingly to provide most current information.

Where heavy equipment will be staged on roads, or whose activities will affect general vehicle travel on site roads, the CONTRACTOR shall provide a minimum of two (2) trained and qualified Flagmen to control traffic flow and to advise motorists of CONTRACTOR activities, precautions, etc. Where heavy equipment will be travelling on public roads, the CONTRACTOR shall provide a trailing escort vehicle, equipped with a sign indicating “slow moving vehicle ahead”, to warn vehicles approaching from behind of the potential hazard.

No more than one (1) person (the operator) shall be permitted to sit or ride upon heavy equipment in operation. The CONTRACTOR shall use strict disciplinary actions for personnel found in violation of this policy.

Heavy equipment or plant having internal combustion type engines which will be operated inside structures, tunnels, or enclosed areas shall be equipped with exhaust scrubber technology to minimize the production of Carbon Monoxide gas in confined spaces.

All plant and heavy equipment shall be provided with a minimum 2.5 kg ABC dry chemical fire extinguisher.

All personnel operating vehicles or equipment shall have in their possession a valid Qatari Driver’s License identifying what vehicles and equipment the individual is authorized to operate.

All vehicles and equipment shall be registered and licensed in accordance with Qatar Law. If equipment or operators are found without the required licenses and/or registration the LREDC may remove them from the LREDC Project.

13.2 CRANES, RIGGING & HOISTING EQUIPMENT

CRANE OPERATORS

- Training records, licenses, etc for crane operators shall be submitted to the LREDC REPRESENTATIVE for review a minimum forty eight (48) hours prior to the crane being mobilized onto the site.
- Crane Operators shall be certified for the specific crane they plan to operate. Certifications, licenses shall be current.
- Operator shall understand crane hand signals and be conversationally fluent in the language(s) spoken by his riggers/ signalmen.

RIGGING & RIGGING PERSONNEL

- The CONTRACTOR shall provide all rigging hardware and tackle necessary for all planned lifts.
- Rigging hardware shall be inspected prior to each use by the Rigger. Defective or damaged rigging or tackle shall be immediately removed from service, tagged and/ or destroyed.

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- Rigging inspection shall be documented and records made available to the LREDC REPRESENTATIVE for review upon request.
 - Prior to commencing lifting operations, the CONTRACTOR shall provide the LREDC REPRESENTATIVE with Test Certificates from the rigging manufacturer for all rigging used.
 - Riggers shall be knowledgeable of crane hand signals and shall be conversationally fluent in the language(s) spoken by the crane operator.

GENERAL REQUIREMENTS FOR CRANES

- CONTRACTOR shall notify the LREDC REPRESENTATIVE a minimum of seventy-two (72) hours prior to mobilizing a crane to the LREDC Project or erecting a tower crane. No tower crane shall be erected on site without prior Approval of the location(s) by the LREDC REPRESENTATIVE.
- All cranes shall be delivered to the site with a valid Test Certificate, current within ninety (90) days, issued by a licensed and approved inspections & testing agency. Certification must be renewed quarterly for all cranes.
- Cranes shall be inspected daily by the operator and at a minimum monthly by the CONTRACTOR HSE Dept. Inspections shall be documented and made available for review upon request.
- The CONTRACTOR shall designate a “Crane Supervisor” or similar exclusively responsible for crane coordination and management, who shall have no other duties.
- All cranes shall have load charts specific to the crane configuration provided inside the cab of the crane. Load charts shall be in a language which is understood by the assigned operator.
- CONTRACTOR shall implement a “Critical Lift Plan” for all lifts exceeding forty (40) tons, tandem lifts, tailing lifts, and lifts exceeding 75% capacity of the crane.
- Each critical lift shall require an individual lift plan.
- The Critical Lift Plan shall meet or exceed these LREDC Critical Lift Procedures and shall be Approved by the LREDC REPRESENTATIVE prior to the critical lift occurring.
- CONTRACTOR shall provide radio communication to crane operators and riggers/ signalmen. Crane radios shall have a separate channel on which to communicate.
- Tag lines shall be used on **ALL LOADS** regardless of size or weight.
- CONTRACTOR shall halt all crane operations at wind speeds of 35 km per hour, as measured at the top of the crane mast, boom, or jib; unless manufacturer’s guidelines recommended crane stoppage at lower wind speeds. The most stringent standard shall apply.
- The LREDC REPRESENTATIVE will provide the CONTRACTOR with a “wind advisory” when wind speeds reach thirty (30) km per hour. Should special conditions exist, cranes may be ordered to stop work by the LREDC REPRESENTATIVE at wind speeds less than thirty five (35) km per hour.

ELEVATING WORK PLATFORMS

- Operators of scissor lifts and mobile elevating work platforms (MEWP) shall have completed special operators training. Record of operator training shall be retained on the operator and at the CONTRACTOR’S office.
- CONTRACTOR shall ensure that all personnel working from MEWP use approved fall arrest or restraint in addition to standard guard railings, as provided by the design of the lift.
- Manufacturer’s instruction manuals shall be provided on all elevating work platforms.

- Elevating work platforms shall be provided with a minimum 2.5 kg ABC dry chemical fire extinguisher.

14.0 FAILURE TO COMPLY WITH LREDC CONSTRUCTION HSE GENERAL REQUIREMENTS

14.1 GENERAL

CONTRACTOR shall comply with the HSE General Requirements as may be amended or supplemented from time to time. Qatari Diar Real Estate Investment Company (QD) as Master Developer to the Lusail Project is responsible for HSE issues at all LREDC Projects. Consequently, QD requires the CONTRACTOR to enter into a HSE Performance Deductions Agreement and the CONTRACTOR shall enter into this agreement when required to do so by LREDC.

Should the CONTRACTOR fail to comply with, implement, impose, or is deemed to be in breach of any of these Requirements, LREDC shall, without prejudice to any rights afforded to it, (whether contractual or otherwise) be entitled to:

1. Provide to the CONTRACTOR Performance Deduction Receipt Form identifying the discrepancy/ violation, required corrective action(s), and required remedying completion date(s). The LREDC REPRESENTATIVE may conduct corrective action verification inspections following the report of corrective action completion by the CONTRACTOR;
2. Should the CONTRACTOR fail to implement the required corrective action(s) prior to the due date as notified by the LREDC REPRESENTATIVE or if a repeat instance of similar discrepancy/ violation be identified, the CONTRACTOR will be issued a second notice informing the CONTRACTOR of the violation;
3. Where the CONTRACTOR fails to comply with these Requirements, impose the Performance Deductions as outlined in Sub-Clause 13.2 of the HSE General Requirements in accordance with the H&S Performance Deductions Agreement. Notwithstanding the fact that LREDC imposes Performance Deductions in accordance with these Requirements and the H&S Performance Deductions Agreement, LREDC may incur charges, claims, costs, damages, losses fees and/or expenses as a result of and arising from the CONTRACTOR's violation of these Requirements in excess of the Performance Deductions. Therefore LREDC reserves its right to seek and recover such additional compensation for such charges, claims, costs, damages, losses, fees and/or expenses that may be incurred. Furthermore, LREDC may seek appropriate contractual and/or legal recourse against the CONTRACTOR as it deems appropriate. These Requirements may be updated by LREDC from time to time.
4. Developer shall sign and return the Performance Deduction Receipt Form and submit to HSEELQ Director for necessary action.

IN SITUATIONS WHERE THE FAILURE BY THE CONTRACTOR IS OR IS DEEMED TO BE LIFE THREATENING THE CONTRACTOR SHALL SUSPEND ANY WORK AFFECTING OR AFFECTED BY SUCH LIFE THREATENING SITUATION.

Notwithstanding anything to the contrary in these Requirements:

CONTRACTOR's failure to comply with these Requirements shall entitle LREDC and/or the LREDC REPRESENTATIVE to:

- (i) Suspend or terminate the CONTRACTOR's works and/or services.
- (ii) revoke the permits afforded to the (including access to the site) at any time there is a violation of these Requirements;
- (iii) report the violation to local authorities;

- (iv) rectify at its own initiative any HSE violations of the CONTRACTOR. Any costs, damages, losses and/or expenses arising from such rectification work shall be solely borne by the CONTRACTOR, and recoverable from the CONTRACTOR by LREDC. If the CONTRACTOR fails to compensate LREDC for any rectification work, and/or to pay any agreed compensation arising from our violations of these Requirements, within 3 days of the notice by LREDC to do so (or less if the urgent rectification is required), LREDC shall be entitled, but not obligated, to deduct such costs, damages, losses, expenses from any amounts under its contract with the CONTRACTOR; and/or
- (v) bring a claim against the CONTRACTOR in respect of the results of any failure by the CONTRACTOR to comply with these Requirements.

Any imposition of or failure by the LREDC REPRESENTATIVE to issue notification of a HSE breach or a failure by LREDC to impose a Performance Deduction shall not relieve the CONTRACTOR of any of his obligations under its contract.

In the event of the LREDC REPRESENTATIVE taking action in accordance with this Clause 13 the CONTRACTOR shall not be entitled to any additional costs or extension to the time for completion of their contract.

Furthermore, none of LREDC or the LREDC REPRESENTATIVE(s) shall be liable for, nor shall the CONTRACTOR be entitled to, any damages, costs, expenses, losses, or compensations for any impacts to its work, project or reputation, following any Payment Deduction(s), suspension, stoppage of work, or permit revocations by LREDC or the LREDC REPRESENTATIVE(s) (as appropriate).

14.2 PERFORMANCE DEDUCTIONS

Performance Deductions shall be paid by the CONTRACTOR for its failure to comply with these Requirements and these are subject to LREDC review and Approval. The CONTRACTOR acknowledges that the Performance Deductions are not a pre-estimate of loss or damage which may be suffered to person or property as a result of non-compliance with the Regulations. The CONTRACTOR agrees that the Performance Deductions are therefore in addition to, and not in substitution of, LREDC's rights at law and shall not be interpreted as full and inclusive compensation to LREDC or any other party against any damages or losses to person or property, including but not limited to LREDC's infrastructure or any improvements to the LREDC Project.

If failures or violations of these Requirements are not corrected within the timescale required by the LREDC REPRESENTATIVE, subsequent compensation "Performance Deductions" shall be imposed upon the CONTRACTOR at LREDC's discretion.

The Performance Deduction shall be applied for first instance of failure. Where repeated instance of Requirement violation occurs, or multiple instances of the same violation occur at the same time and location, the LREDC REPRESENTATIVE may apply Performance Deductions equal to the sum of the Performance Deduction multiplied by the number of instances of violation.

14.2.1 This list is non exhaustive. Further compensation may be required to be paid, where cost to LREDC and other affected parties exceed the amounts referred to below. The amounts below are in addition to any amount that may be prescribed under contract, Qatari law or other regulations which may be collected by LREDC or any competent authority.

14.2.2 The table below has specifically remained silent on other HSE violations that may occur. Those will be dealt with using the remedies available under the specific construction contract or sale and purchase agreement as relevant.

Table of Performance Deductions per Occurrence (in Qatari Riyals)

No.	<u>Type of CONTRACTOR Violation</u>	<u>Performance Deduction (QAR)</u>	<u>Date Of Violation</u>	<u>Violation Closed-Out</u>
1.	Failure to produce and submit to LREDC approved HSE Documentation e.g. HSE Plan, Method Statements, OH Plan, EMP Reports, etc.	5000		
2.	Failure to implement a safe system of work and the Requirements of LREDC OCEMP.	5000		
3.	Failure to conduct emergency drills as specified.	2000		
4.	Failure to comply with LREDC with regard to Incident / Accident Notification, reporting and investigation requirements.	2000		
5.	Failure to appoint competent HSE staff	10000		
6.	Failure to report a potential high risk activity.	10000		
7.	Failure to provide staff training in HSE and/or appropriate inductions	5000		
8.	Failure to provide safe access and egress to LREDC Project sites.	2000		

* This deduction is in addition to all damages and losses LREDC may claim in order to cover as a result of the CONTRACTOR's failure to comply with the LREDC HSE Required Standards.

14.2.3 LREDC retains the right and may (exercising its absolute and sole discretion) vary, amend, suspend, reduce and/or cancel any Performance Deduction(s) issued to the CONTRACTOR in the event that the CONTRACTOR demonstrates to LREDC CEO's (or delegated representative's) satisfaction that it has fully implemented a revised HASP and CAP to comply with LREDC's Construction HSE General requirements and will henceforth strictly comply with those revised plans