



Lusail Real Estate Development Company

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

Lusail Construction Safety Management Procedure – Emergency Planning & Response

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COMPANY PROPRIETARY INFORMATION

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This element of the LCSMP details the requirements for emergency planning and response for the Lusail City Development Project. This element applies to all Lusail personnel, Contractors, Developers, Consultants and subcontractors working on the Lusail projects. All personnel designated to carry out specific responsibilities are expected to know and understand the processes and procedures outlined in this document.

This procedure has sections for management responsibilities, Emergency Management Plans (EMP), emergency levels and categories, emergency preparedness, reporting and communication, training and meetings to assist Contractors in emergency planning and response. Fire response planning, however, results in many other additional considerations and requirements. Additional fire-related topics such as Fire Protection and Prevention, Extinguishers, Firefighting Equipment, and Fire Warning Systems, are discussed in [LUS-HSE-WG3-446-012](#), Fire Protection. The various types of incidents and Lusail reporting requirements are outlined in [LUS-HSE-WG3-446-004](#), Incident Reporting and Investigation.

2. Definitions

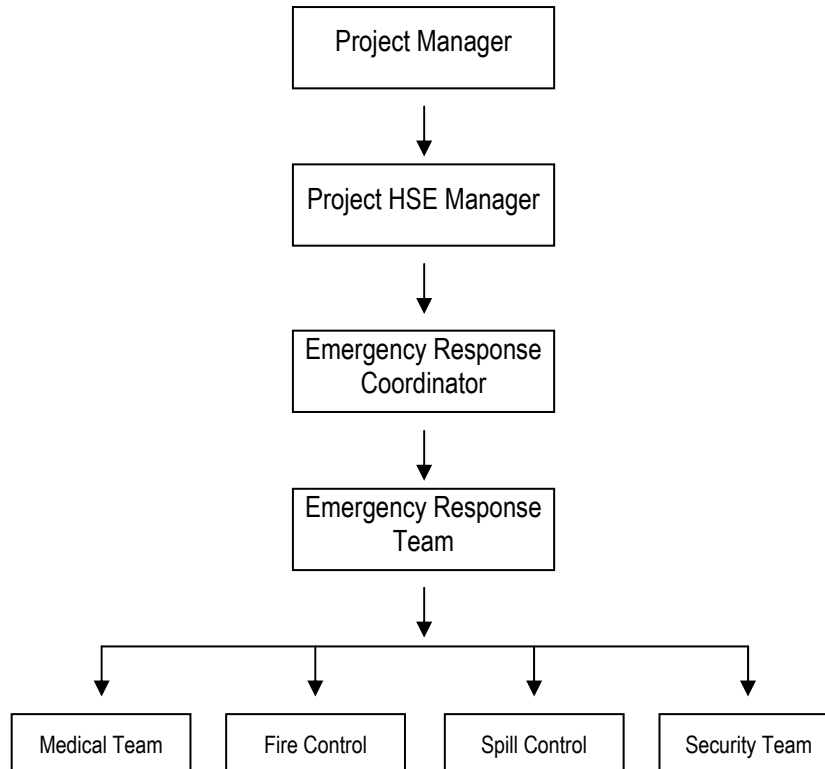
Term	Description
Assembly Point	Location of muster for employees after an evacuation.
Civil Disturbance	Creating mass, violent disturbances of the public peace in attempts to show the world that the general public does support their cause(s).
Emergency Response	A response effort by employees from outside the immediate release area or by other designated responders (e.g., mutual aid groups and/or local fire departments) to an occurrence that results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances in which the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area, or by maintenance personnel are not considered to be emergency responses within the scope of this procedure.. Responses to releases of hazardous substances for which there is no potential safety or health hazard (i.e., fire, explosion, or chemical exposure) are not considered to be emergency responses.
Evaluating Risk	A method of identifying the probability of a crisis event, the reliability of sources, accuracy of information, and impact the crisis event.
Incident Management	Activities of an organization to identify, analyze, and correct hazards to prevent a future reoccurrence
Post Emergency Response	That portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the site has begun
Threat Indicator	Indicators that trigger an alert state (e.g. Rumors of speculation of event, Reliable/confirmed reports, Minor events, significant occurring or about to occur, catastrophic crisis events occurring or imminent)
Trigger Response	Response actions to specific levels of threats (e.g. Increase security awareness, low level risk mitigation taken, initiate security and crisis management protocols, initiate full-scale security and crisis response)
Workplace Violence	Any act of physical violence, threats of physical violence, harassment, intimidation, or other threatening, disruptive behavior that occurs at the work site. Workplace violence can affect or involve clients, consultants, contractors, subcontractors, employees, or visitors.

3. Management Responsibilities

3.1 Organizational Structure

The Contractor's Project Management is responsible for the assurance that all work is planned and conducted according to Company and Lusail Health Safety & Environment (HSE) procedures and Qatar Construction Specifications 2010. Should a conflict occur between procedures/standards or requirements the more stringent will apply.

As a minimum, each Contractor shall implement the following organizational structure for developing, implementing and maintaining their respective Emergency Management Plan:



3.2 Responsibilities

Project Manager

- Ensuring the requirements of the EMP are communicated to all concerned, including Sub-contractors and service providers
- Issuing a copy of the EMP to a Lusail Representative and all other applicable parties
- Identifying the project-specific potential emergency events, as part of the Project HSE Risk Assessment
- Providing appropriate resources for effective implementation of the EMP at project level, including the resources required for the procurement and maintenance of emergency response equipment
- Constituting an Emergency Response Team for the project and defining their specific responsibilities
- Chairing meetings for a review of the adequacy of response after each emergency event and defining appropriate business continuity planning

Project HSE Manager

- Preparing, implementing and maintaining project-specific emergency response procedures and emergency evacuation plans
- Constituting an Emergency Response Team, in consultation with the Project Manager
- Communicating the responsibilities and accountabilities of the Emergency Response Team
- Incorporating the emergency response procedures and emergency contact details in the
- Site HSE Induction
- Identifying the needs for emergency response equipment and resources and communicating those to the Project Manager for approval and procurement
- Ensuring that Emergency Evacuation Plans are posted in all strategic locations and on
- Project HSE Notice Board
- Ensuring conduct of routine emergency evacuation and emergency response exercises on site and labor camps and maintaining records of such exercises

Emergency Response Coordinator

- Assessing the severity and potential consequence of any emergency event and deciding on the level of response required
- Contacting the external emergency services, if required
- Acting as the Commander in Control in the event of any emergency and coordinate emergency response actions and emergency communication to the emergency control room
- Arranging rescue of any person affected by the emergency event, without compromising the safety of the emergency team members
- Transferring Command in Control Responsibility to appropriate External Emergency Agency where the assistance of such agency is required
- In consultation with the Project HSE Manager, planning and coordinating the conduct of emergency evacuation exercises
- Conducting debriefing after the completion of emergency evacuation exercises
- Inspecting and maintaining the emergency response kits and facilities

Medical Team (Nurse/First Aiders)

- Providing first aid treatment to any injured person
- Facilitating the transfer of injured/ill persons to nearest hospital or clinic, if they need medical attention

Fire Control Team

- Fighting of fire with fire extinguishers or water tankers, where it is safe and practicable to do so
- Assisting Fire Brigade, if requested to do so
- Inspecting fire extinguishers and smoke alarms at periodic intervals
- Facilitating emergency evacuation in the event of a fire

Spill Control Team

- Attending spillage spots immediately and taking all possible initiatives to stop spillage, if it is safe to do so
- Containing spillage by constructing bunding around the spill or by spreading inert absorbents to prevent further spread
- Recovering spilled chemicals/ substances, where practicable
- Cleaning of spillage site as soon as practicable and storing contaminated soil/dirt in an appropriate manner
- Assisting external emergency agencies, as required or requested

Security Team

- Cordoning off the emergency area to prevent access of any unauthorized person
- Assisting the Emergency Response Coordinator and external emergency agencies, as requested

Workers

- Understanding and following the local emergency response procedures
- Refraining from activities which may contribute to an emergency event
- Reporting any emergency event to the Emergency Response Coordinator as soon as practicable
- Initiating any reasonable action to contain the impact and/or severity of an emergency event, if it is safe to do so
- Participating in emergency evacuation exercises.

4. Planning

4.1 Emergency Management Plan (EMP)

Every Contractor must have a site-specific written Emergency Management Plan in place before operations begin. This written plan is available to all employees and is the basis for training and drills. Not all site plans are the same.

The following emergency categories must be considered by the site, but the list is not intended to be all inclusive:

- Medical Emergency
- Fire
- Chemical releases

- Severe weather (e.g. Wind, Sand Storm, Extreme Heat)
- Workplace Violence
- Civil Disturbances
- Man Made Threats (e.g. Terrorism, Cyber threats)
- Power failure
- Vehicle Related Accident

The site response to each type of hazard is documented in the written plan. Responses at the site must consider the hazards presented by the scope of work, nearby activities, and the environment. Contractor must utilize a risk management approach to determine primary threats that may trigger a crisis event and their resulting implications are recommended.

The required staffing, training, and equipment for each hazard category must be considered before committing to a specific response in a written plan. As a minimum, the plan must include the following information:

- Crisis Management organizational chart including an Emergency Response Team
- Roles and Responsibilities and contact information for Emergency Response Team.
- Method or approach for assessing the risk of existing and potential threats (e.g. Risk Assessment Matrix)
- Alert States, Threat Indicator, and Triggered Responses
- Procedures for immediate responding to site-specific crisis events.
- Designated emergency wardens and searchers.
- Procedures for emergency evacuation, including type of evacuation, assembly points, and exit route assignments.
- Map showing exit routes and assembly point(s).
- Procedures for personnel accountability after evacuation.
- Medical support.
- Emergency Communication Plan (ECP) – (e.g. telephone roster, verbal and email reporting, notification systems, external liaison, communication assets, media)
- Training (e.g. Site-Specific, Staff and Management, Awareness)

Meetings (e.g. Management Meetings, Drills and Practices, Table Top Exercises)

5. Levels of Emergency

In order to assist decisions made during responses for controlling an emergency event, emergencies shall be classified into the following three levels:

Level One (Minor Emergency)

A localized, contained event, which can be quickly resolved with internal resources or limited help and does not affect the productivity of a project or overall functioning capacity of a facility.

Examples of Level One minor emergencies include, but are not limited to:

- Small fire
- Small Spillage of hazardous chemical/substance (less than 200 liters)
- Limited power outage
- Serious injury or illness requiring immediate hospitalization

Level Two (Major Emergency)

A serious event that completely disrupts one or more operations and may affect mission critical functions or life safety or cause significant damage to the environment. Outside emergency services as well as major efforts from Contractor

Emergency Response Team and Lusail would be required. Examples of Level Two major emergencies include, but are not limited to:

- Major Fire or explosion
- Widespread power outage
- Bomb Threat
- Suicide
- Shooting or stabbing
- Fatality
- Major spillage of hazardous substance or chemical (more than 200 liters but less than 800 liters)
- Rioting or civil disturbance

Level Three (Catastrophic Emergency)

An emergency that seriously impairs or halts the operation of a project or facility. Outside emergency services would be needed. Major policy considerations and decisions would always be required. Examples of Level Three catastrophic emergency include, but are not limited to:

- Multiple fatalities
- Major Fire causing damage to property worth over QAR 1,000,000 or having potential to do so
- Health epidemics
- Collapse of major infrastructure
- Major spillage of hazardous substance or chemical (over 800 liters with potential to cause irreversible damage to the local environment or ecosystem)
- Natural disaster causing halt to all operations in a project or facility

6. Emergency Preparedness

6.1 Response Resources

The core objectives of the emergency response protocols are to establish, before an emergency, simple and effective measures and steps that managers and staff can take in that emergency to protect people and to quickly and effectively gain control of a crisis situation.

Each Contractor is responsible for developing procedures for the immediate responding to an emergency event. The procedures must assist the contractor to quickly establish facts, avoid affected areas, make decisions, share information, manage the event, and account for people and assets.

In order to prevent potential loss of life and damage to property and the environment, Lusail is committed to maintain all reasonable preparedness for emergency response in project sites, labor camps and facilities. The need and level of the preparedness for each premises shall be determined through the emergency planning process described in Section 4 of this Procedure and shall include as a minimum:

- An Emergency Response Team
- Fire extinguishers
- Fire blankets
- Smoke alarms
- Water trucks (where required) with appropriate hoses
- First aid center/facility
- Spill kits
- Inert absorbents
- Emergency vehicle
- Security surveillance
- Emergency evacuation alarm or siren
- Emergency exit(s)
- Emergency evacuation assembly point (Muster point).

6.2 Evacuation and Assembly

Employees are assigned definite locations to assemble after evacuating. These locations are strategically placed so they are close enough to work areas for access, but far enough away from potential disaster areas to afford protection to personnel. Alternative areas will be considered in case of other possible events or seasonal weather conditions. Assembly areas must provide a definite destination for an orderly evacuation, allow for instructions to be easily conveyed, and expedite the search for missing persons.

The plan designates evacuation wardens so that employees can be moved quickly from the danger location to the safe areas:

Generally, one warden for each twenty employees in the workplace can provide adequate guidance and instruction at the time of a fire.

6.3 Exits and Exit Routes

Exit routes, exit discharge, and exit doors must be installed in sufficient number and arrangement to allow safe evacuation in accordance international standards.

Each exit route must be adequately lighted in accordance with local and international standards, so that an employee with normal vision can see along the exit route, in accordance with [LUS-HSE-WG3-446-005](#), Field and Office Facilities.

Each exit must be clearly visible and marked by a sign reading "EXIT," in accordance with federal and state regulations and [LUS-HSE-WG3-446-016](#), Signs, Barricades, and Traffic Control. Exits must also comply with the following operation and maintenance requirements:

Employees cannot occupy a site unless the exit routes are available and existing fire protections are maintained, or until alternate fire protection is furnished that provides an equivalent level of safety.

Exit routes must be kept free and unobstructed. Exit routes must be kept free of explosive or highly flammable furnishings or other decorations. No materials or equipment may be placed, either permanently or temporarily, within exit routes.

Safeguards designed to protect employees during an emergency (e.g., sprinkler systems, alarm systems, fire doors, exit lighting) must be in proper working order at all times.

Fire-retardant paints or solutions must be renewed as often as necessary to maintain their fire-retardant properties.

6.4 Internal Safe Havens

In the unlikely event of a civil or political disturbance or attack against the facility (e.g., a rioting crowd or a lone gunman), each contractor shall provide safe location in which workers can gather while emergency services are on route to deal with the problem. These locations should provide protection and barriers to prevent or slow unauthorized access. Safe havens may be a designated floor with sealable entrances and limited glass frontages, or a conference room or storage area.

6.5 Inspection and Maintenance of Emergency Response Facilities

All emergency response equipment and facilities shall be subject to routine inspection and maintenance. The Project HSE Manager shall ensure that such equipment and facilities, including the emergency exits and assembly points are inspected at routine intervals and maintained fully functional. Records of such inspections and any maintenance shall be maintained

6.6 Emergency Response Training

Emergency Evacuation Drill

Emergency Response Coordinator for each project and facility shall plan and conduct planned and unplanned emergency evacuation drills at quarterly intervals in accordance with Qatar Construction Specifications 2010.

All project employees shall be made familiar with the evacuation alarm/siren, emergency exits and evacuation routes and the assembly points by various means including the following:

- Providing relevant information during Site HSE Induction
- Displaying Emergency Evacuation Plans at strategic locations
- Ringing false alarm at occasions and notifying that it was trial to familiarize the evacuation sound

At the end of each drill, the Emergency Response Coordinator shall deliver a de- briefing to the evacuees. The following records shall be maintained by the Emergency Response Coordinator for each emergency evacuation drill:

- Date and time of evacuation drill
- Number of persons evacuated
- Time required for total evacuation
- Any constrain faced during the drill.

Emergency Response Exercise

In order to test and maintain appropriateness of emergency response equipment and emergency response capabilities, the Emergency Response Coordinator shall conduct mock up emergency response exercises at least at half yearly intervals.

Such exercises shall include, but are not limited to:

- Fire fighting
- Spill containment/recovery
- Rescue of persons entrapped at height and inside confined spaces

Emergency response equipment shall be inspected at routine intervals to ensure that they are fully functional at all times, and where required calibrated as per manufacturer's specifications.

7. Emergency Reporting and Communication

7.1 Emergency Reporting

All Contractors and their sub-contractors are responsible for reporting an emergency event to their designated Emergency Response Coordinator and the Lusail Emergency Control Center (44977-666) as soon as they notice or encounter an emergency or potential emergency event. The protocol for reporting of emergency event is summarized in Figure 1 below:

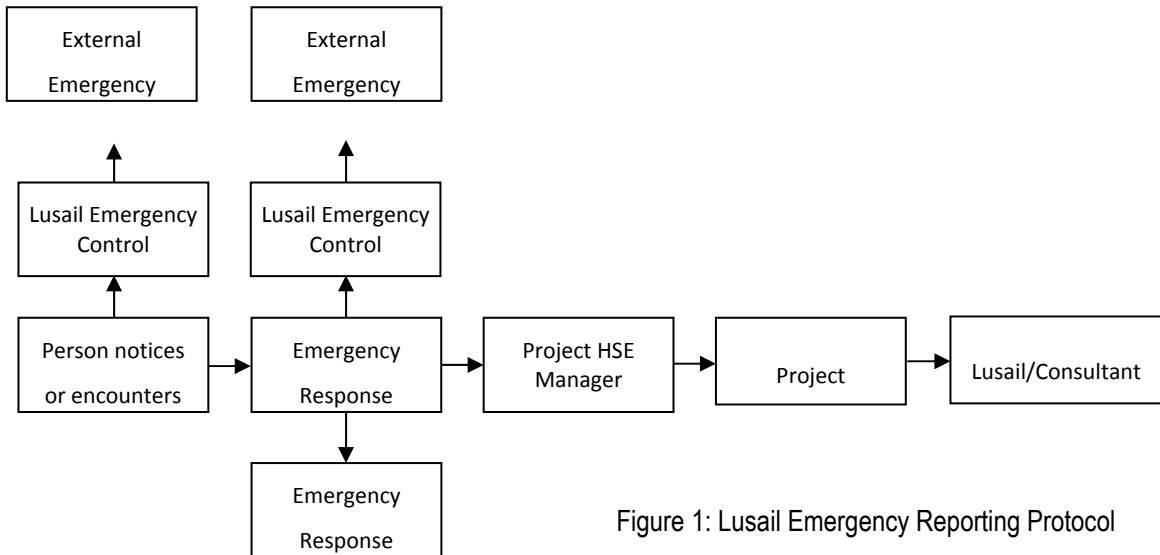


Figure 1: Lusail Emergency Reporting Protocol

7.2 Emergency Communication

Timely and accurate communication of an emergency event and response related activities are critically important. The Emergency Response Coordinator shall ensure that a clear line of communication is maintained with the members of the Emergency Response Team as well as management. Such communication shall be maintained through mobile telephone or radio, as appropriate.

In the event of any major or catastrophic emergency event, the relevant Project Manager shall establish an Emergency Control Room. The Emergency Response Coordinator shall maintain continuous communication with the Emergency Control Room to provide updated information and to receive management instructions.

All Contractors shall designate an authorized person(s) for any communication with the media regarding an emergency.

8. Emergency Response Categories

In order to ensure timely and efficient first response to any emergency event all Contractors shall maintain emergency response procedures that include, but are not limited, to the following:

- Medical
- Fire
- Chemical Emergency Response
- Natural Disasters
- Workplace Violence
- Civil Disturbances
- Terror Threats
- Utility Failures
- Vehicle Related Accidents

Where required, Contractor Emergency Response Procedures will be customized to address any requirements of Lusail, relevant regulatory agencies and contract conditions. As part of a periodic review, all Contractors shall review their Emergency Management Plan and related response procedures at least annually.

8.1 Medical

Each Project Manager with their Company's HSE Manager identifies medical and fire protection services (which are selected in accordance with [LUS-HSE-WG3-446-001](#), Medical Qualification and Surveillance, and adds the following information to the project Emergency Management Plan:

- Medical provider and response and/or transport service
- Contact information
- Proximity to the site
- Directions
- Most likely response time

First aid care may be provided on-site for a minor injury. First aid is defined in [LUS-HSE-WG3-446-002](#), First Aid. More serious injuries requiring professional care are treated at a professional medical care facility. In a medical emergency, first aid providers take the following action:

- Assess the situation.
- Administer triage, as necessary.
- Contact external emergency medical personnel.
- Collect relevant information to assist in diagnosis and treatment.
- Wait with the injured person for transport.

8.2 Fire

The HSE Manager and Project Manager determine the project's plan for fire response, and incipient fire response, and will include details in the project Emergency Management Plan. The site must consider the following factors:

- Size and quantity of flammable gases or liquids
- Areas of loading/unloading, storage, and use
- Fixed fire protection systems
- Potential fire response staffing
- Local fire response capabilities

- Initial staff training and maintenance of competency
- Fire response equipment required

Provisions for response to a small, contained fire are limited to use of fire extinguishers or small fire hoses with no entry into burning structures or use of firefighting protective equipment. Incipient fire response is addressed in [LUS-HSE-WG3-446-012](#), Fire Protection. Incipient fire response is appropriate if:

Large quantities of flammables are not involved

Local fire response capabilities are adequate and nearby

Note: Lusail does not maintain fire brigades; it relies on local fire response facilities.

8.3 Chemical Emergency Response

The HSE Manager and Project Manager determine the plan for chemical emergency response and defensive measures; they will include details of the plan in the project Emergency Management Plan. The site must consider the following factors:

- Toxic effects and quantity of hazardous chemicals or flammables on site
- Location of the hazardous chemicals
- Proximity to offsite populations and operations
- Prevalent and seasonal meteorological conditions
- Nearby sensitive environmental considerations
- Numbers and availability of personnel onsite to respond to an emergency
- Initial training and maintenance of competency
- Chemical response equipment required for the site
- Contacts with the Civil Defence to determine availability of emergency response environmental firms and local mutual aid responders

The HSE Manager, in conjunction with the management team, assesses high hazard chemicals that present a risk from an airborne release that may be life threatening and that could extend beyond a localized area. Consider replacing or substituting high-hazard chemicals that would require a response beyond that for an incidental release where the substance can be absorbed, neutralized, or otherwise controlled at the time of release. If a site has no high-hazard chemicals, then chemical response planning will likely be limited to training of operators and/or maintenance employees for incidental releases of chemicals.

Defensive measures include straightforward evacuation of site personnel and taking mitigation measures to stop or reduce the effects of release if those measures can be performed remotely or in a manner that does not risk exposure to the high hazard chemical.

8.4 Natural Disasters

The project management team must assess every type of natural hazard presented by the operating locale and include emergency provisions for each type of natural hazard in the project Emergency Management Plan, for example:

- High Winds
- Thunderstorm
- Sandstorm
- Tsunamis
- Extreme Climate Conditions (e.g. heat)

8.5 Workplace Violence

The project management team must assess the potential for workplace violence to occur. The risk of assault can be prevented or minimized if employers take appropriate precautions. The site must consider the following:

- Zero-tolerance policy toward workplace violence.

-
- Risk evaluation and determination.
 - Implementing prevention control measures.
 - Awareness and training.
 - Physical security.
 - Post-Incident response.

8.6 Civil Disturbances

The project management team must assess the potential for a civil or political disturbance emergency situation that could occur at any time and with a minimum of warning. The site must consider the following:

- Notification.
- Risk evaluation and determination.
- Evacuation/Lock down.
- Procedures for addressing external/internal demonstrations.

8.7 Terror Threat

The project management team must assess the potential for a terror threat. The site must consider the following:

- Risk evaluation and determination
- Notification
- Site security
- Emergency response
- Awareness and training

8.8 Utility Failure

The project management team must assess the potential for an unplanned, loss of utilities. The site must consider the following:

- Risk evaluation and determination.
- Evacuation (if necessary).
- Emergency backup systems (e.g. generators, uninterrupted power supply).
- Communications (e.g. radios, cell phones).

8.9 Vehicle Related Accident

The project management team must assess the potential for a vehicle related accident. The site must consider the following:

- Notification.
- Emergency response (e.g. on and off-site).
- Vehicle maintenance and inspections.
- Operator training and licensing.
- Procedures for dealing with local authorities.

9. Meetings

Each contractor must periodically hold forum meetings to review existing and potential risks and to determine how, as a team, it will respond to these risks. Meetings may include only contractor and subcontractor personnel, or external participants may be invited to participate.

Each contractor must conduct periodic drills and practices for managers and other employee staff on how to respond to threats. These practices can also remove ambiguity and can identify shortfalls and gaps within contingency planning measures. Drills may consist of but not be limited to Fire Drills, Evacuation Drills, or Lockdown drills.

Each contractor must conduct periodic table top exercises to allow management to walk through options and solutions, identifying gaps, shortfalls, or crisis scenarios in order to gain confidence and familiarity with dealing with emergency situations. These exercises may be held with members of LREDC staff.

10. Documentation

The records custodian documents all instruction and training. The HSE Representative maintains these records at the site for the duration of the project and archives them for a minimum retention time of 10 years from creation date.

11. References

EM 385-1-1, Safety – Safety and Health Requirements, Section 1.E, Emergency Planning; and Section 28, Hazardous Waste Operations and Emergency Response

NFPA 101-2000, Life Safety Code

NFPA 1600, Standard on Disaster/Emergency Management and Business Continuity Programs

Qatar Construction Specifications 2010