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Project Emergency Preparedness Procedure

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Project Emergency Preparedness Procedure

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Project Emergency Preparedness Procedure

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Project Emergency Preparedness Procedure

1.0 PURPOSE

The purpose of this procedure is to describe the actions personnel require to take in an emergency and provides direction on how and when to appropriately activate notification and emergency procedures.

These actions, when followed, will minimise personnel exposure to potentially dangerous situations and minimise property damage.

2.0 SCOPE

The scope of this procedure applies to all works performed under all Government Construction Contracts executed throughout the Kingdom of Saudi Arabia.

3.0 DEFINITIONS

Definitions	Description
HSSE	Health Safety Security Environment
IC	Incident Controller
IMT	Incident Management Team
JHA	Job Hazard Analysis
SWMS	Safe Work Method Statements
OSHA	Occupational Safety and Health Administration
STARRT	Safe Task Analysis and Risk Reduction Talk
PPE	Personal Protective Equipment
MEPI	Mobile Equipment Personal Interface
SCBA	Self-Contained Breathing Apparatus

4.0 REFERENCES

- OSHA 29 CFR 1910 – Requirements for Emergency Response and Preparedness.

5.0 RESPONSIBILITIES

5.1 Project Manager

The Project Manager is responsible for ensuring the resources and arrangements are available for the implementation and management of this procedure

5.2 Contractor

Contractor has the following roles and responsibilities:

- Implement and manage all aspects of emergency response.
- Communicate the applicable sections of the procedure to all personnel involved.
- Support all identities emergency response arrangements.
- Manage integrated emergency response exercises.
- Provide equipment and resources to effectively manage an emergency.

5.3 HSSE Manager

Contractor HSSE (Health Safety Security Environment) Manager is responsible for the following:

- Provide and develop emergency procedures.
- Initiate and provide information on training requirements.
- Review procedures periodically to ensure they are adequate.



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- Initiate the procurement of equipment required to perform an emergency.

5.4 Emergency Response Coordinator

The Emergency Response Coordinator reports to the HSSE Manager. Responsibilities may include the following:

- Coordinates the emergency.
- Assigns Muster point locations and maintains the plan.
- Coordinates the equipment and resource requirements and may include training of personnel.
- Develops and maintains an Emergency Call-Tree.

5.5 Employees and Visitors

All employees and visitors are responsible for the following:

- Report all incidents and emergencies immediately.
- Obey all safety and information signs.
- Follow all instructions given by Wardens, which includes but not limited to the following:
 - o Obey directions to provide aid at the scene.
 - o Assist persons with disabilities when asked to do so.
 - o Report to Warden at the Muster Point for roll call.
 - o Remain at the Muster Point until instructed to leave.

5.6 Incident Management Team

The Incident Management Team (IMT) consists of the appropriate management and technical expertise to quickly and effectively respond to emergency events. The size and roles of various members will depend on the size of the event. A full response team may not be required for most the emergency events, in which case certain personnel may assume multiple rolls.

The IMT is responsible to oversee the implementation of the following:

- Review strategies in place in managing emergencies.
- Review the effectiveness of emergency preparedness exercises and any need for improvement.

The IMT is responsible during an emergency event for the following:

- Provide strategic direction.
- Determine response priorities.
- Ensure that emergency response operations are carried out in a safe manner.
- Provide guidance on tactical response matters better handled at IMT level.
- Take the lead in conducting long and short term planning.
- Manage information.
- Arrange for services necessary to sustain emergency response operations.

5.7 Incident Controller

The Incident Controller (IC) leads the overall management of emergencies and is responsible for the following:

- Leads the IMT.
- Allocates the resources.
- Assigns duties.



6.0 RISK ASSESSMENTS

An integral aspect of the work planning process is the performance of a proper risk assessment. Risk Assessments must be conducted at the Planning Stage to identify the hazard risks and determine control measures.

The Risk Assessments that shall be conducted at the Planning Stage are as follows:

- Project Risk Assessment.
- Safe Work Method Statements (SWMS)
- Job Hazard Analysis (JHA).
- Safe Task Analysis and Risk Reduction Talk (STARRT)

It is imperative that prior to beginning any work activity, a STARRT briefing occurs to discuss the contents of the WMS/JHA which includes mitigations for any other hazards noted by the crew at the jobsite. The discussion shall also include job steps, expected hazards associated with the activity, and the mitigation and protection methods that shall be implemented to prevent incidents.

If circumstances change by way of the environment, other work crews are in the area, additional hazards are now present, change of methodology of the task etc..... another STARRT briefing shall occur.

The Hierarchy of control shall be used to reduce the likelihood of an incident occurring.

- **Elimination** (Remove the Hazard)
- **Substitution/Isolation** (Replacing material, process or hazard with a lower risk one/ separate people from the hazard (such as suitable guarding, distance, etc.)
- **Engineering Controls** (Redesign or replacement of plant and equipment)
- **Administration Controls** (Procedures, training, signage)
- **PPE** - Personal Protective Equipment

No work is to commence until the above has been implemented and signed by the relevant Supervisor in charge. To ensure that all risks are properly recognised and understood, risk assessments must be performed at various stages of the project.

6.1 Assessment of Safety Risk – Tender for Design Stage

A generic risk assessment to identify all potential risks should be conducted at the Bid Stage. The following risks should be considered:

- The location – Country, Region.
- Political history and known threats.
- Climatic conditions.
- Geology (earthquake/flood/landslide etc. potential)
- Endemic health risks.
- Scope of project.
- Risks from neighbouring facilities.

6.2 Assessment of Risk – Construction Stage

A risk assessment should be conducted for all activities during construction. High risk activities are a priority. Controls through the proper use of Job Hazard Analysis (JHA) or Safe Work Method Statements (SWMS) and must be developed and communicated to all personnel involved.

Construction risks may include the following:

- Working at height.
- Fire and explosion.



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- Toxic and flammable gas release.
- Working over or near water.
- Demolition of structures.
- Transportation.
- Major utility outage.
- Adverse weather.

6.3 Controlling the Risks

Once the risks have been properly identified and understood, the Emergency Action Plan shall identify the required resources needed to either eliminate or reduce the risk by implementing the required controls.

7.0 PROCESS

7.1 General Requirements

Depending on the scope of work, an emergency may result from any one of the following:

- A gas fire.
- Explosion.
- Flood.
- Storm.
- Personal injury.
- Toxic release, or spill.

Personnel will be notified of an imminent or actual emergency, by the activation of an alarm system or equally effective system. An alarm system will be installed to warn of an emergency. Where applicable, a remote toxic vapour release alarm will be installed to warn of a toxic release.

7.2 Emergency Actions – General

All personnel are required to be familiar with their emergency action responsibilities, namely:

- Use radios and/or telephone systems only for communication of specific instructions regarding the emergency.
- Follow the instructions from the responsible supervisor.
- Know the locations of the areas assembly/muster points.
- Notify the warden at the assembly/muster point upon arrival.

Personnel that are not directly affected by the emergency will take note of the direction of the wind and proceed across/upwind to the nearest assembly/muster point. (Note: this action generally applies to toxic/spill release or fire emergencies.

Await further instructions/directions from the assembly/muster warden after reaching this point.

7.3 Emergency Actions – Project Specific Objectives

All projects/facilities shall ensure that their specific Emergency Action Plan considers the following objectives:

- Protection of employees and public.
- Methods of controlling and containing the source or agents creating the emergency.
- Managing and mobilising resources.
- Protection of the emergency team.
- Preservation of life of any casualties.
- Protection of property.



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- Reinstatement and returning to normal business.
- Protection of staff and dependants.

7.4 Reporting the Emergency

The Project specific Emergency Action Plan will include all the appropriate reporting and notification requirements. These should include specific names of individuals and the organisation/Department they work in. Their contact details shall be included in the plan for the following reasons but not limited to:

- In case of a serious injury.
- In case of fire or any hazards (e.g., explosion, gas leaks).

8.0 TEMPORARY WORKS

Temporary Works are defined as the parts of the works that allow for the construction of the permanent elements of the work, in a safe manner, which may or may not be described/stipulated within the Works Information. Temporary Works are used to provide but not limited to:

- Access – site roads, bridges, paths, scaffolding etc.... including safety measures.
- Facilities for the site setup – site offices, satellite cabins, stores and warehouses, toilets, canteens etc.....
- Site or work area boundaries including protection of public – hoarding, barriers, traffic management, debris netting etc.....
- Structural support and ground support – formwork, falsework, special lifting gear, trench support, propping, underpinning etc.....
- Utilities and Plant – forced air, rescue equipment, temporary utilities, construction plant, site drainage etc.....
- Material and Equipment pads during the construction stage – piling mats tower crane pas and rails, hardstanding etc.....
- Safe Work Environment – dewatering, temporary roofs, instrumentation and monitoring etc.....

Temporary Works may or may not remain in place upon the completion of the works. Interaction of Temporary Works with permanent works is critical and may require review by the engineering team.

9.0 EMERGENCY PRE-PLANS

Plans shall be developed for the following types of emergencies:

- Medical
- Toxic and Flammable Gas Release.
- Fire/Explosion.
- Structural Collapse.
- Extreme Weather.
- Failure of Utilities.
- Natural disaster.
- Unexploded Ordnance.
- Water Rescue.
- Rescue from height.
- Location Evacuation due to Threat and Hostilities.

For each of the emergency scenarios identified, the following protocol should be followed when developing Pre-Plans:

- Objectives of emergency – Secure personnel.
- Sound alarm.
- Evacuation areas
- Complete Assembly of Personnel.



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- Recovery of casualties.
- Identify exclusion zones.
- Complete risk assessments relating to recovery/demolition or Investigation activities.
- Providing additional resources.

The above is a selection of steps to be taken in an emergency. The process is to execute scenarios associated with an incident or emergency situations to ensure that emergency teams have the appropriate tools and equipment to effectively recover/assist personnel and for the protection of facilities and the environment.

10.0 COMMUNICATIONS

The Contractor will designate personnel who will take command of all emergencies. A Control Center will be established in an appropriate facility location. The Control Center will be equipped with communications systems able to link directly to site response personnel.

Radio telecommunications, two telephones (one dedicated to incoming calls) shall be designated in the plan.

An Emergency Action File is to be in the Control Center at all times for reference, as a minimum it will include:

- Call-out lists.
- Emergency Services telephone numbers.
- Mutual-aid responders.
- Environmental Agency local contacts
- Roster of facility Emergency response personnel with level of training.
- An emergency lighting system.
- A copy of Emergency Procedures.
- The Fire/Rescue Team Leader (of Supervisor grade or higher).
- Control message pads and Action Log Sheets.

The Security Staff (if competent in language) will provide staff support for the Control Center.

Emergency Alarms and signals will be used to alert employees of any emergency. Codes may be utilized for different emergencies. Alarm activation stations as well as horns/whistles (as applicable) will be installed across the construction area and in camps and offices.

Emergency Assembly points will be arranged and clearly identifiable by signs.

The HSSE Supervisor or deputy will respond to all emergency calls. He/she will liaise with the Fire Rescue Team Leader and Area Supervisor, and provide regular situation reports to the Control Center.

11.0 DEVELOP RESOURCES

All projects shall ensure that proper preparedness has been assessed and that all resources required for any identified emergency is available. Consideration shall be given to the following:

- Command Center has been established in an appropriate location.
- Communication system in the command center and emergency assembly points.
- Emergency Call-out lists available.
- Equipment, Materials and Transportation.

11.1 Equipment, Materials and Transportation

The following items shall also be considered based on Project scope and the results of the risk assessment(s):



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- Mobile Equipment and Personnel Interaction (MEPI)
- Fire Vehicle (fully equipped, equal to small town requirements).
- Rescue equipment (stretchers, wheelchairs, etc.).
- Self-contained Breathing Apparatus (SCBA), chemical protection suits and hoods.
- Emergency lighting units.
- Fully equipped ambulance.
- Rescue craft.
- Independent radio system.
- Environmental Emergency Response Truck (carrying shovels, buckets, plastic bags, plastic sheets, absorbent materials, etc.).
- In addition, mobilization plans for cranes and other heavy equipment should be developed.
- All-terrain vehicles for prevailing weather rescues.
- Appropriate personal protective equipment (PPE).
- A list of staff, pool cars and buses should be kept current and drivers nominated for forced location evacuation.

12.0 EVACUATIONS

12.1 Emergency Assembly Points

The number, location and type of Assembly Points will be established based on the type and size of the facility. Emergency Assembly Points will be arranged and be clearly identifiable by signs. Employees will have been advised on the locations and the reporting procedures (head-count) during induction.

Options for evacuation from the assembly area should be prepared for in the event the assembly area is exposed to a hazard or additional shelter/resources are required.

12.2 Evacuations (other than medical emergency)

These requirements pertain to two types of emergency situations that can occur at the project requiring evacuation (other than medical emergencies):

- Fire, explosion, natural hazard, or other emergency that does not result in the release of toxic Vapours.
- Emergency situations that result in the release of toxic Vapours.

12.3 No Toxic Vapour Release

In emergencies not involving release of toxic vapors, communication will be made to all personnel. Personnel will then:

- Check the wind direction (flag, smoke).
- Listen to the alarm system codes to determine if their area is affected.
- If in affected area, move quickly out of affected area into an open area using extreme caution.
- Travel by foot to the closest designated assembly area and report to a company supervisor or a Muster warden, and then wait for instructions from the Assembly Point Coordinator.

12.4 Toxic Vapour Release

In emergencies involving release of toxic vapors, communication will be made to all personnel. Personnel will then:

- Listen to the alarm system, as appropriate, to determine if their area is affected.
- Extinguish or turn off all ignition sources (welding or cutting machinery, vehicles, etc.)
- Check the wind direction (wind sock, flag, smoke, etc.)



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- If the emergency is in your area, evacuate crosswind and/or upwind to the designated assembly point as specified.
- Travel by foot to the closest upwind designated assembly area and report to a company supervisor or a Muster warden, and then wait for instructions from the assembly point coordinator.

The Assembly Point Coordinator or designee is responsible for taking roll call, establishing the status of all personnel, and providing internal notification to the Control Center if applicable.

13.0 TRAINING

Each new employee will receive training on the basic requirements of this procedure upon mobilising to site. There will also be Toolbox meetings to periodically emphasize the requirements of this procedure.

Retraining will be required when there is a change to the Emergency Action Plan.

Exercise and drills will be performed with all key personnel to ensure everyone is aware of their responsibilities which shall include evacuation routes, alarms, assembly points, and personnel accountability.

13.1 Selection/Training of Emergency Response Team

The management should select suitable personnel to train for supervisor rolls as emergency team members. Consideration shall be given to:

- Previous experience/training.
- Willingness to participate, (volunteer).
- Job duties/capabilities/knowledge.
- Physical fitness.

14.0 ATTACHMENTS

N/A