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SOP-152

DPS Emergency Response Plan

INTRODUCTION


This Emergency Response Plan refers to all emergency situations generated by the ENEMALTA/IESC Delimara Power Station activity in Marsaxlokk that can result in injuries to people, damages to the environment and the facilities. This document is of application for personnel, the contractors and the visitors.

The ERP defines the Emergency Response Team, and also the actions that will be taken during an emergency situation. The ERP includes protocols to ensure close coordination with local area emergency response organizations and authority. The ERP also addresses the reporting requirements compliant with the relevant provisions of EU and Maltese laws and regulations. The objective is to be prepared to:

- Ensure safety of own and others' personnel
- Prevent fatalities and injuries.
- Reduce damage to buildings, facilities and equipment.
- Avoiding or minimising damage to third party property
- Minimising or avoiding damage to plant
- Minimising or avoiding financial loss
- Minimising or avoiding loss of supply to consumers
- Protect the environment and the community.
- Speed up the resumption of normal operations.

The development of the plan begins with a proper risk analysis and damages assessment. The methodology and results of the assessment are collected in the Safety Report, while the following items are shown in the ERP:

- What can happen – the list of possible emergency scenarios
- What resources we have – human and material resources available for the emergency management.
- What organization structure we need – emergency crew and leaders, as well as their functions.
- What actions should be taken – the implementation of the ERP, through training, practices, drills and audits.

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SCOPE OF THE DOCUMENT

The Emergency Response Plan is applicable to any major accident, accident, incident, occupational injury, near miss which may occur at the Delimara Power Station facilities under direct management of ENEMALTA. The Operators included in the scope of this ERP are ENEMALTA plc and its subsidiary IESC Ltd.

The DPS establishment also includes other Units managed by other Operators, namely ELECTROGAS MALTA Ltd and D3 Power Generation Ltd. They are supported by O&M contractors ESB International, Bumi Armada, and Reganosa Malta, as well as IESC Ltd. These Units and their operations are out of the scope of this ERP. The Coordinated Emergency Response and the Communication between Operators in case of emergencies are out of the scope of this document and are addressed in the Coordinated Emergency Response Plan (SOP-174).

OPERATIONS

Due to environmental reasons, local generation has been shifted from Heavy Fuel Oil (HFO) to Natural Gas and limited use of Gasoil, and PHASE 1 (D1) of the Delimara site has been decommissioned; the two HFO steam units have been dismantled.


Currently Enemalta is operating 2 open cycle gas turbines and a combined cycle unit consisting of 2 gas turbines and a steam turbine, all fired by diesel, referred to as the D2A and D2B respectively. Subsequently, the Diesel Oil (DO) storage is maintained as a peak or emergency fuel supplying the Enemalta Gas Turbines and part of the D3PG plant and the Heavy Fuel Oil (HFO) tanks are currently being used to store HFO for third parties.

However, the unloading, loading and the handling of HFO and diesel are the most important activities from the point of view of safety as it is in those activities where we can identify the initiating event that could originate a major accident.

Other activities carried out in other parts of the installation, such as the cooling system and the water treatment system, are not directly correlated to a major accident but they can affect and determine the extension of its consequences.

Other risks may arise from facilities operated by other operators within ENEMALTA premises, such as Natural Gas pipelines running from the Regas to D3PG and D4 units.

Enemalta is also responsible for all common areas of the DPS including access roads, fuel storage other than LNG, common services including firefighting water, and site security.

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RISK ANALYSIS

Although emergencies by definition are unexpected events, their occurrence can be predicted with some degree of certainty, through the experience gained by the investigation of past accidents, the identification of the possible hazards and the assessment of the risk. For the purposes of this document five categories of hazards have been analysed:

- Major accident (or process accident): Analysed in the Safety Report. Are usually caused by the process and operations carried out in the facility and specifically to the handling of hazardous materials.
- Other industrial accident: Analysed in the HAZID study and they are due to other causes apart from the handling of hazardous materials.
- External incident: Caused by events outside of the facility and analysed within the HAZID study. Could be caused by environmental events and by human activities (intentional or not).
- Job injuries: Incident linked to personnel activities that can lead to different kind of emergency and that involve the employee safety at work.
- Near misses: Incident that do not have consequences neither on persons nor on the plant, but very useful to be analysed and recorded because they provide information to prevent future accident.


ISPS EVENTS

Amongst the external events that may result in an emergency inside Delimara Power Station facilities, unauthorized entries are the most relevant detected by the HAZID. All of them may result in spillages and/or fires and are prevented by the security systems.

MATERIAL RESOURCES

In order to achieve a safer level of operations when handling Diesel Oil and Heavy Fuel Oil products, and considering the unlikely risk of fire that may occur, the installation is protected with suitable systems. Systems are organized in five main categories:

- **Prevention system**, based on standard operating procedures, permit to work, training of the employees and safeguards installed on the field.
- **Detection system**, based on detectors and alarms on the field, they are focused on the early detection of any occurrence which may lead to an emergency.
- **Fire-fighting systems** are the standard facilities designed, installed and maintained in order to quickly extinguish any incipient fire.

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- **Other resources** are all the resources available for the solving of specific situations apart from fire, including spillages.
- **Warning systems and external communications systems** are the resources available for the communication of the emergency situation inside / outside the facility and among the employees and to the general public and the authorities.

COMAH SIRENS

Two COMAH sirens to alert the population offsite are available:

- One is located within ENEMALTA premises, on top of the CCR building and facing Delimara
- One is located within EGM premises, on D4 structures and heading towards Marsaxlokk village

These sirens are activated from the respective Control Rooms (Enemalta and Electrogas). The decision to sound the sirens is made by the ranking CPD officer (Incident Commander) on site.


HUMAN RESOURCES

People who may be involved in an emergency situation inside the facility can be classified in the following lines:

- **Employees (work force):** any person who holds an employment contract signed with Enemalta plc/IESC.
- **Contractors (outsourced staff):** refers to the person/s that have a temporary employment relationship with DPS, to provide services to perform certain temporary tasks inside the DPS facilities and can affect or be affected by the same risks as regular staff.
- **Third party:** People outside DPS, except the contractors, who for various reasons are in the vicinity of the installation.
- **Staff employed with D3 and D4:** Persons who will be inside the DPS facility but are employed by D3PG and EGM (or their subcontractors).

The human resources available in DPS in Delimara can be split into active and passive staff as follows:

- Active Personnel: all those who have a specific function and are trained for the Emergency Response Plan.
- Passive Personnel: all those who have no specific function during an emergency and are not specifically trained. This group includes visitors, truck drivers and subcontractors together with administrative personnel not included in the active resources.

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EMERGENCY PROCEDURES

The purpose of the plan is to reduce injuries to people and damages to the environment and properties in case of an emergency. To do so, it has to specify those staff members who may put the plan into action and to identify clearly the staff members who will take responsibility for the strategic and on field decision. It has also to ensure that at least one of them must be on site or available through the mobile at all times whenever the facility is operative.

EMERGENCY CATEGORIZATION

Many factors determine what procedures are needed in a real emergency. They can be summarized in the following classes:


- Nature of emergency: spill, fire, explosion, unauthorized entry, earthquakes, others. However, the ERP may also be activated by any other unforeseen circumstances that may cause a significant hazard to personnel or equipment.
- Emergency level: alert, partial activation, full activation
- External resources required: controllable or uncontrollable emergency.

In the event of an emergency, it will be necessary to identify the level of incident that has occurred in order to assess the appropriate level of response. Incidents can therefore be ranked in order of increasing seriousness to enable the appropriate response. Additional assessments will also be required to establish whether the incident has the potential to develop into a more serious incident, and whether the emergency level is to be escalated.

EMERGENCY PROCEDURES

During an emergency, some standard actions are always taken. Common elements to be considered include pre-emergency preparation and provisions for alerting and evacuating staff, handling casualties, and controlling the hazards. They can be defined using simple and standard procedures, in order to minimize the effort and maximize the efficiency. The following emergency procedures in case of emergency are included as part of the Emergency Response Plan document:

- Detection
- Alarm
- Evacuation
- Fire
- Injury
- HFO / DO / Oil Spillage on land
- HFO / DO / Oil Spillage into the sea
- Chemical Spillage

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IMPLEMENTATION OF THE PLAN

Completing a comprehensive plan for handling emergencies is a major step towards preventing disasters. Exercises and drills must be scheduled and performed, ensuring full participation of all members of the Emergency Response Team and their leaders. A thorough and immediate review after each exercise, drill, or after an actual emergency will point out areas that require improvement.

The plan should be revised when shortcomings have become known, and should be reviewed at least annually. The plan should be updated when there are changes in facility infrastructure, processes, materials used, and key personnel.

It should be stressed that provision must be made for the training of both individuals and teams, if they are expected to perform adequately in an emergency. In fact, training sessions are going to be prepared. An annual full-scale exercise will help in maintaining a high level of proficiency.


The goals for a correct implementation can be summarized as follows:

- Developing and implementing procedures and incident and emergency protocols
- Providing adequate and ongoing training for personnel
- Conducting desktop and field exercises
- Regular auditing of construction activities
- Ongoing and effective communication
- Ongoing liaison with public authorities
- Identifying new or additional resources and equipment required for effective emergency response
- Identifying new or additional roles and responsibilities of individuals
- Identifying new or additional key personnel and reliable means of contacting them
- Maintaining documentation so potential incidents or emergencies can be properly managed
- Ongoing compliance checks with OHS requirements by Health and Safety Department and Environmental and Safety Coordinator.

PERSONNEL TRAINING AND DRILLS

All staff, depending on the area where such officers are employed, will receive basic training regarding the prevention, planning, response to and recovery from incident or emergency, which forms a key part of the overall training programme. Specific training regarding safe planning of works to prevent such occurrences includes:

- Training in the contents of this plan as described below.
- Training in basic first aid.
- Training in required response to manage environmental emergencies.
- Training in basic fire awareness

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ERT – Emergency Response Team

A specialised team has been set up with personnel; drawn from the normal operations staff, who have been further trained in the use of the industrial fire-fighting equipment present on the site. This knowledge will be enforced in the practicing of drills that will be conducted on a regular basis.

DPS will conduct periodic emergency drills according to the requirement by L.N. 44 of 2002, as amended by Legal Notice 437 of 2012. These drills will ensure that workers are familiar with emergency procedures and that they are able to use the emergency equipment.

To make the above drills more fruitful, CPD members shall be invited to the site for familiarisation.

ANALYSIS AND EVALUATION OF THE ACCIDENTS

Any incidents or accidents should be studied and analysed to, amongst other requirements, detect any faults in the implementation, organization or preparation of this Emergency Response Plan.

In order to do so, a working group should be formed, comprising the crew who participated in resolving the emergency, together with the facility responsible, the Compliance Manager and the Section Manager to analyze the causes, assess the damage and propose a plan review.

ERP REVIEW



The ERP is a controlled document and its filing, handling, replication and distribution shall be controlled by the Compliance Manager in accordance with the procedures detailed.

The ERP shall be submitted to update at least in the following cases:

- Modification of the facilities or activities taking place (especially extensions or change of classified product).
- Incorporation of new risks
- Legislative changes
- Real emergency involving subsequent amendments to improve the operability of the ERP
- Result of the different drills.

Amendments shall be inserted in full in the following manner:

- The Compliance Manager shall implement all necessary changes and updates to the ERP. The OHSa may periodically review the ERP, including updates.
- The relevant page is amended on the electronic copy, with text changes being in red.
- The electronic copy is issued for internal approval even when minor changes are implemented.

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- After approval, the ERP shall be re-printed and all employees informed to destroy and replace outdated copies by the Document Controller.
- Changes and updates to the ERP are recorded in the Enemalta Document Management System.