




# Sterling Chemical Malta Ltd

## PROCEDURES EMERGENCY TRAINING AND REACTION

### REVISION HISTORY

Revision Date	Revision Number	Sections affected	Change description
25.02.2014	00		First issue

Procedure Number: <b>MP_4.4.7</b>	Edited by: <b>RDOC/RSGS</b>	Revision by: <b>RSGA</b>	Approved by: <b>Top Management Safety manager</b>
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## 1. PURPOSE

This framework is intended to define the preparation and the response to potential emergency situations and potential accidents that can occur in the workplace, with reference also to the different communication actions before and after the event. In this way the Sterling Chemical Malta Ltd provides all the staff with an operational tool for classifying emergencies and to face them if they should occur, in coordination with all stakeholders.

## 2. FIELD OF APPLICATION

This procedure applies to all the emergency situations that may occur and may cause adverse effects on the environment and/or harm to human health and/or that may compromise the workplace safety and therefore they require interventions to restore the regular situation. This procedure or the accompanying documents, define the ways of working, in order to prevent the emergency conditions and to adopt appropriate measures in order to minimize the environmental impact on human health involved and improve process safety within the company in case of emergency. To ensure the effectiveness of the operational criteria defined in the procedure, simulation tests are planned attended by the staff involved.

## 3. REFERENCE DOCUMENTS

The documents used as reference point for the preparation of this procedure are listed below:

- Italian Law: D.lgs 81:2008 e s.m.i (Sezione VI) e s.m.i;
- Italian Law: D.Lgs. 152/2006 and subsequent amendments and additions;
- Emergency plan and evacuation;

## 4. DEFINITIONS

Here are some basic definitions for a better interpretation of this procedure:

- *Evacuation and emergency staff*: trained workers to provide assistance in case of emergency and fire fighting;
- *Emergency and Evacuation Plan*: procedure to be followed in case of emergencies;
- *Emergency conditions*: these are situations arising from not easily predictable or manageable events, even if their occurrence was simulated.


## 5. RECIPIENTS

This procedure is addressed to all Sterling Chemical Malta Ltd and Sterling SpA's employees and to all the staff who constantly stationed in the complex production.

## 6. MODE

### 6.1 Identification of the emergency situations

Following the risk assessment, the environmental analysis, the knowledge and past experiences as well as the suggestions occurred through the consultation of experts, all the possible types of emergencies have been identified, and summarized as follows:

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- Fire, explosion or outbreak emergency;
- emergency release of hazardous substances as a result of human or mechanical error;
- emergency due to external causes or natural phenomena.

The Sterling Chemical Malta Ltd has defined action plans and/or procedures to handle any emergency situations, defining:


- activities to reduce the effects of the emergency;
- responsibility;
- communication flows.

## 6.2 Contents of the Emergency and Evacuation Plan

To face potential emergencies and minimize the possible consequential damage to persons, environment and installations, Sterling Chemical Malta Ltd has adopted within the plant an Emergency and Evacuation Plan which sets out the procedures for reporting the emergency, the mobilization of human resources of the means supplied for the evacuation.

The Plan contains the following:

- Names or positions of the authorized persons to report the emergency and activate the related procedures and the person responsible for the implementation and coordination of the intervention measures within the site;
- General code of conduct for all those who are involved in an emergency situation;
- Duties, authorities and Emergency supervisor in the site;
- For each potentially dangerous event:
  - Measures to face the event;
  - Measures to limit their consequences;
  - Safety equipment to face the event;
  - Resources available to face the event;
- Criteria and responsibilities for the emergency classification in each of the following classes:
  - Emergency with limited effects;
  - Emergency that affects the entire site;
  - Emergency with only internal effects;
  - Emergency effects outside the site;
  - Emergency manageable with only internal resources;
  - Emergency requiring external help;
- Arrangements for limiting the risks to persons on the site, including alarm systems and norms of behavior that people have to observe at the time of the alarm;
- Clear channels of communication (intercom wired phones, mobile phones, portable radio transmitters);
- Evacuation procedures with reporting and description of evacuation signs, harvesting areas, routes of evacuation;
- Standards of conduct to be observed at the time of the alarm by the Employees, staff thirds of the visitors;

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- Responsibilities and communications media for providing early warning in the event of an accident, the authority responsible for setting the external emergency plan (if any); specifying name and address;
- Type of information immediately to be provided (nature of the accident or emergency situation, the presence of dead and/or injured and/or intoxicated, any substances involved) and how to communicate more detailed information once available.

### 6.3 Abnormalities

In the event of anomalies the worker shall inform the supervisor of the event happened, who will assesses the extent and if appropriate, authorizes the resumption of work. The supervisor, following the assessment of the incident, may authorize the resumption of work, or in the event that this anomaly can cause an emergency situation, upon notice, shall refer the decision to the next level. The supervisor can, however, report the fault by completing the form Accident/almost accident or report it through the VALUTO software.

### 6.4 Training

All the staff at Sterling Chemical Malta Ltd is adequately trained on the Emergency Plan and Evacuation through regular meetings required by the training plan.

All the responsible persons reported in the Emergency and Evacuation Plan are:

- nominated with their consent pursuant to art. 18, paragraph 1, letter b of the Decree. 81/08 in writing;
- adequately trained with courses as required by Article 7 of the D.M. 10/03/1998).

The Emergency and Evacuation Plan is annually tested through simulations involving:

- reporting of emergencies;
- ~~la mobilitazione e l'intervento della Squadra d'Emergenza;~~
- operations relating to the evacuation.

### 6.5 Adequacy of the equipment


The prevention and protection service provides to identify, to make available in the needed quantities, to report to the in site Head of Security any need for integration and to periodically check the safety devices to face the emergency needs.

The monitoring of the fire devices are carried out by the supervisors with the methods indicated in the Instruction for the maintenance of fire-fighting equipment and recorded in the Fire Register.

In addition, during the audit the staff, as specified in the checklist of reference, sample check the status of the devices on the positioning and proper maintenance as indicated in the relevant maintenance schedules.

With periodicity required by the legislation in force, qualified External Companies perform the necessary maintenance, inspections and audits and provide the recording directly on the log fire. They also identify the state of the control directly on the labels affixed to the device.

### 6.6 Procedures for disclosure and verification

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The methods of diffusion of the contents of the Emergency and Evacuation Plans are due also to the assessment of the knowledge and the characteristics of the people in the offices and in the plant (e.g., persons whose mobility, hearing or sight is limited, people who are not familiar with places and with their escape routes, etc..).

For casual visitors and third parties are given a document that shows, in addition to the general information about the plant, including how to report emergency and evacuation.

Periodically there must be controlled the effectiveness of this procedure

## 6.7 Updating Mode


The Internal Emergency Plan can be updated on the basis of assessments of the Safety Manager, on the recommendation of Safety Manager Supervisors or qualified authorities as a result of emergencies that have highlighted the deficiencies and possible improvements in the management of the same.

This procedure will be reviewed and updated if necessary downstream faults or occurred emergencies.

## 7. MANAGEMENT OF ENVIRONMENTAL EMERGENCIES


Without prejudice to what is set out in the Emergency and Evacuation Plan for the events specified in paragraph 6.1, there are some emergencies in the environment that must be stopped before they turn into full crisis that affect health and safety. For this reason, in this procedure it will be completed:

- a) The identification and characterization of individual emergencies, in order to identify possible scenarios, the nature of the hazards, identify the measures of the prevention and mitigation systems;
- b) Emergency preparedness and response in a way to ensure the prevention, intervention, rehabilitation activities, the revision of the procedure;
- c) Communication in emergency situations;
- d) Communication with the authorities and other interested parties;

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## 7.1 Identification and characterization

N° Event	Situation/Emergency Event	Consequences and environmental impact	Preventive measures	Mitigation mode
<b>CONTAMINATION OF SOIL AND UNDERGROUND</b>				
1	Errors during loading/unloading in the external paved area	Spillage of hazardous liquid with possible contamination of the first portion of the underground soil.	Employees training on MIO_4.4.3-B1, and use of first aid kit. All the operators required to manouver the forklifts must possess the appropriate license, the progressive replacement of the containers in PE with PE containers protected by steel frame.	First aid kit
2	Microcracking of the containment basins in areas of waste storage/hazardous substances.	Possible infiltration of hazardous substances in the surface layer of the soil.	Visual inspection state of integrity, insertion in the maintenance plan for the operational control with filling the basins with water.	/
3	Breaking and/or microcrackings of the piping that lead the process water in the underground tanks	Infiltration of hazardous substances/pollutants in the surface layer of the soil and the aquifer		/
4	Cracking of the underground tanks	Infiltration into the soil and in the groundwater of polluted substances	Biennial proof of hydraulic seal	/
5	Raising the level of safety of the underground tanks	Spreading the soil from process water with possible interest to the public sewer	Visual inspection by the operator before being placed in the basins/tank liquid processing	First aid kit
<b>Emissions into the atmosphere;</b>				
6	Pipe burst of the natural gas supply	Methane gas leakings resulting in possible explosion/fire/structural collapse		Safety valves
7	Rupture of the flacons due to inappropriate handling in the laboratory	Potential emissions in air of volatile, toxic, carcinogenic substances.	Procedure on the handling of hazardous substances and related operating instructions MP_4.4.6-D	First aid kit for hazardous chemicals
8	Reaction due to the mixing of acids/bases concentrated in the effluent during the transfer to the transport companies	Potential emissions in air of volatile, toxic, carcinogenic substances.	Training on procedure MPA_4.4.6-A	/
9	Rupture of expulsion filters	Potential uncontrolled emissions	For particle filters there have been installed differential pressure gauges needed to evaluate the clogging of the	/

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			same. The efficiency of the AC filters are monitored through periodic inspections of the chimneys.	
<b>FLOODWATER</b>				
10	Loss of the collection tanks	Possible entry into the ground of polluted water	Annual maintenance of the rainwater tanks and the wash water system with waterproof resin surfaces.	Remediation of the site
<b>WATER CONSUMPTION</b>				
11	Uncontrolled water supply due to macroscopic losses.	Depletion of valuable resources	Weekly readings of volumetric meters.	Increased use of rainwater in underground tank
<b>NOISE POLLUTION</b>				
12	Rupture/failure of the compressors	More noise and possible exceeding of the limits of the law	/	Sound-absorbing protections
<b>OTHER EMERGENCIES</b>				
13	Accident between 2 trucks, carrying hazardous when maneuvering inside the yard.	Release to the soil, air and water of hazardous substances, and possible contamination of the layer of sub-surface aquifer	Inside the corporate perimeter it will be installed a road sign which imposes a maximum speed of 15 km / h. Training on MIO_4.4.3-B1	Anti-spilling kit
14	High fire risk areas <ul style="list-style-type: none"> <li>• Production departments;</li> <li>• Laboratories;</li> <li>• Warehouses</li> </ul>	<ul style="list-style-type: none"> <li>• Emissions into the atmosphere (toxic substances and/or other) as a result of combustion;</li> <li>• Contamination due to waste water entering the water used to extinguish</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency and Evacuation Plan;</li> <li>• Smoke detection system</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency and evacuation plan;</li> <li>• Extinguishing system</li> </ul>
15	Electric black out	<ul style="list-style-type: none"> <li>• Emissions into the atmosphere;</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency and Evacuation Plan;</li> <li>• Procedure MPA_4.4.6-C;</li> </ul>	Operating Instructions MIOS_4.4.7-G

**Table 1 Identification and characterization of the possible emergency scenarios.**

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## 7.2 The emergency response

After having carefully followed the instructions in the Emergency Plan and Evacuation, and once arrested the emergency, it is necessary to comply with the environmental protection measures that differ according to the nature of the emergency and to the environmental compartments that could be affected. In response to the outbreaks occurred, it is necessary to investigate in the manner specified in the Management of non-compliance procedures, corrective and preventive actions (MP\_4.5.3) filling out the form accidents/near misses MM\_4.5.3-B where it is expected an investigation and its analysis of the event.

## 7.3 Spill or release of hazardous substances


### 1. Spillage with illness/injury of the operator

In the event that the spill causes an injured or harmed operator it is required:

- To stop, where possible, the flow where does not create danger for the health and that of other operators;
- To stop the operations that are being executed at the time;
- Evaluating the environmental situation and the possible cause of the illness/injury. In the case of the possible presence of toxic or flammable vapors, and if possible without risking the own safety, it is required to wear the supplied personal protective equipment (half-mask or full-face filter Abek 1, safety shoes, neoprene gloves, goggles, overalls work, disposable overalls) and move the person to a safe place;
- Calling a team official emergency first aid which will apply to the first aid measures to contact, if necessary, the external help.

### 2. Small and medium-size spillage

- ✓ To stop, where possible, the flow where does not create danger for the health and that of other operators;
- ✓ In case of spillage on the ground, it is required to wear the supplied personal protective equipment (half-mask or full-face filter Abek 1, safety shoes, neoprene gloves, goggles, overalls work, disposable overalls);
- ✓ In the event of leakage from intake pipes, leaks from flanges or tanks (bulk) initially use the absorbent sheets in the anti spilling kit;
- ✓ In case of spills such as to constitute a continuous flow, the first step is to stop the operations that are taking place at that time, to contain and delimit the area affected by the use of sleeves within the kit anti spilling kit, forming a dam. Given the preventive use of the cover manholes, the first goal to be pursued is to prevent that the pollutant flow arrivr to the permeable soil immediately next to the building. Once made the first barrier it is required to create a plenum chamber providing a second dam barrier at a distance of 10-15 cm from the first so as to curb the spill and allow the absorption through the granular material or absorbent sheets supplied with the kit so to ensure safety of the contaminated flooring and the simultaneous cleaning and drying. The material should then be manually removed (using blades), to be collected in bags and disposed with proper EWC code.

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### 3. Spillage of significant size

If the spill is so copious that the devices described above are not sufficient to block the flow of the wastewater then it is necessary:

- ✓ To push the closest alarm button and follow the Emergency and Evacuation Plan (call the emergency coordinator who will implement the procedures set out in the Plan);
- ✓ To warn or alert an HSE qualified worker;

To communicate the accident to the RSGA or RSGs that:


- ✓ Call the Director of the plant or, in his absence, his delegate;
- ✓ Warn the Top Management;
- ✓ Giving the task to a delegate or personally overseeing the work of the first intervention by operators acting within its powers;
- ✓ Activate the call to public bodies responsible for the intervention in the field of environmental protection and pollution prevention (MEPA);
- ✓ Notice the certifier authority;

At the end of all the anti spillage, all the materials must becollected and disposed as waste.

In case of a copious and continuous spill in the areas that may affect sensitive receptors such as surface water, public sewer, ground water or land, after stopping the emitting source, secured and limited the affected area, it is the duty of RSGA or of 'Office of the HSE in his absence:

- Notify the competent public authorities in the environmental protection field;
- Take a sample of the spilled substance to perform its full characterization;
- Take a sample of the environmental matrix interested to the spillage (water, soil, etc.) make a characterization with particular reference to the spilled compounds;
- Take a sample of the same environmental matrix not affected by the spill and proceed to the same analytical characterization of the polluted sample;
- Delegate to a qualified and certified laboratory the analysis of collected samples and send their reports to the Competent Authority;
- Cross the data of the analytical reports for pollution and proceed with the remediation of the matrix
- If not reporting the incident to the Competent Authority, it is duty of the responsible for RSGA, assisted by HSE office, to draw up a detailed report on the accident and its consequences in such a way as to exclude any possible contamination of environmental sensitive receptors exploiting all the appropriate steps (analysis concerned matrix, immediate action and remediation of environmental subsequent retest). The communication to the Competent Authority can only be avoided in the following cases:
  - The spillage is accidental and limited in terms of quantity, this means that the discharge must be instant and immediate arrest.
  - Notify the Certifier Authority the accident happened.

In the form MM\_4.5.3-B will be reported, if needed, also the corrective preventive actions.

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#### 7.4 Rupture equipment or other systems that may cause harm to the environment

In case of failure of equipment or other mechanical systems that involve a dispersion of liquid dangerous, follow the instructions given in section 6.3. In the event of breakage or interruption of service of fixed or mobile equipment causing a spill of liquid proceeds as provided in Paragraph 6.2, while in case of breakage involves the impact on systems such as the acoustic environment, water or emissions of pollutants into the atmosphere RSGA must proceed as follows:

- Emissions into the atmosphere; In case of an overpressure inside the reactors to service the system should causing the activation of an emergency vent this should be communicated to RSGA and to the maintenance department to reset the safety valve and delimit the reactor. In addition, any operational malfunction or interruption of the abatement equipment, as not to ensure the compliance with the emission limits set for the emission points required under the integrated environmental regulations will result in the suspension of the work for the time necessary to take into efficiency of the abatement same. It will also be a differential pressure gauge installed on the devices for filtering particulate material, with a note on the register of checks a reference reading to be repeated on the occasion of extraordinary maintenance and / or replacement of such equipment;
- Water supply:: If during the verification on the water consumption RSGA or the Office HSE notice an inappropriate and abnormal rise in water consumption, they are entitled to carry out inspections to detect any systemic losses related to both systems at both pipelines making use of technical experts external to the Organization;
- Noise level; Where the introduction of a new fixed equipment, mobile plant or modification of the conditions equipment / machine / system exists, or there there is a break of the transmission belts of compressors which would alter the sound source emissions should be such as to attribute company issue exceed the limits established by the existing municipal zoning plan, the RSGA is entitled to intervene signaling the need for a replacement and a temporary shutdown of the equipment until the restoration of the limits of the law;


The surveys will be conducted in accordance with the procedures management non-compliance, corrective and preventive actions (MP\_4.5.3) and opening the form MM\_4.5.3-B

### 8. COMMUNICATION WITH THE AUTHORITIES

Where inadvertently, occurs the exceeding of the acceptable limits imposed by the current legislation of the contamination of soil, surface water and groundwater in relation to the specific use of the site, or in the presence of real danger and current exceeded these limits, this situation should be immediately notified to the Municipality, the MEPA and the territorial jurisdiction of the Police and the fire department the situation of pollution or of the real and present danger of pollution of the site.

Such notice must include:

- The person responsible for the pollution or danger of pollution and identification of the company as the owner of the site;
- The location and the estimated size of the contaminated or at risk of pollution;

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- The factors that have led to the pollution or danger of pollution;
- The types and quantities of contaminants released or threatened to be released into the environment;
- The environmental components involved, such as soil, water bodies, flora and fauna;
- The estimate of the population at risk, or if this is not possible, the characteristics of the surrounding urban and territorial to the potentially affected by pollution.

Within 72 hours after the above referred notification, it must be notified to the authorities identified as the interventions of safety measures adopted in order not to aggravate the situation of pollution or danger of pollution, mitigate the effects and reduce the health risk and environmental (communication accompanied by technical documentation regarding the characteristic of interventions). The notification of the accident must be reported within 72 hours of the Certifier by the alarm of emergency.

## 9. PREPARING FOR EMERGENCIES AND TRAINING

The management of emergency also includes emergency preparedness that will be carried out through exercises and simulations. Without prejudice to what has been reported in the Emergency and Evacuation Plan the training should be conducted for all operators who handle dangerous substances in significant quantities or which have to do with equipment and installations containing dangerous substances (in particular, production operators, maintenance, warehouse). The most important environmental emergency is related to a copious spillage in the environment. To ensure the efficiency of the operators behavior, the RSGA will organize at least every 6 months an exercise involving units from time to time and at different locations.

## 10. REVIEW OF THE PROCEDURE

At least once a year, or both in a real situation and in the execution of a simulation, it is necessary to revise the procedure to verify the efficiency, adequacy and possibly update the content.

## 11. RESPONSABILITY

The responsibilities of individual actions, interventions and procedures are listed in the preceding paragraphs or delegated to the Emergency and Evacuation Plan. It will also be the responsibility of those who use the antispillage kit to notify the office environment the charging status still available in such a way as to allow a new order.