Alarm and hazard control planning

Internal Alarm and Hazard control planning

Alarm and hazard control planning

An oil tanker carrying 100.000 barrel of petrol (gasoline) is to be offloaded

Two people dead
Almost 30 oil tanks are endangered by the flames

Alarm and hazard control planning

Accident of an oil tankers on the Rhine

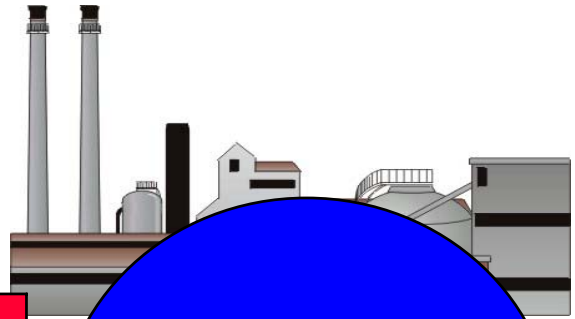
Alarm and hazard control planning

Fire-outbreak and explosion in the MiRO on the 23.07.2004

11:13 11:13 11:14 11:37 The last fire fighting measures

Alarm and hazard control planning

Accident-prone industrial plant



Basic safety duty of the operator

Internal hazard control planning

Description of type and procedure

organisational measures

technical measures

After detecting a dangerous situation

that can lead to an accident

that arise as a result of an accident that took place

Alarm and hazard control planning

Alarm plan:

What is being reported? **(alert levels)**
Who has been informed? **(with Alarm)**
How was the information given? **(Alarm procedure)**

Hazard control plan:

What is being planned for? **(Accident scenarios)**
Who are involved with the planning? **(the partners)**
Is the plan up to date? **(Documentation and updating)**
Has anything been forgotten? **(Checklists)**

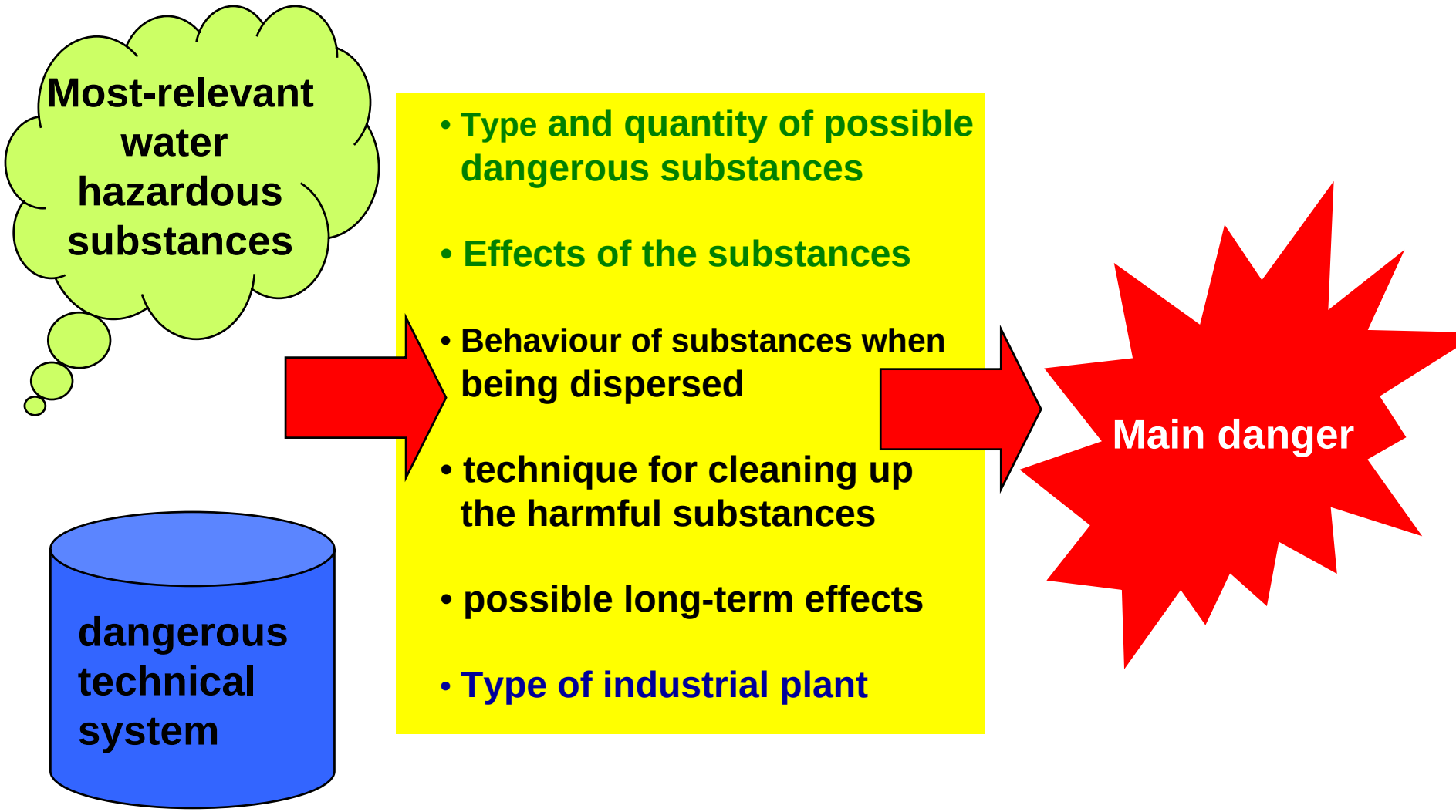
Uniformed alarm and hazard control planning !

Alarm and hazard control planning

Overview of internal emergency plan structure

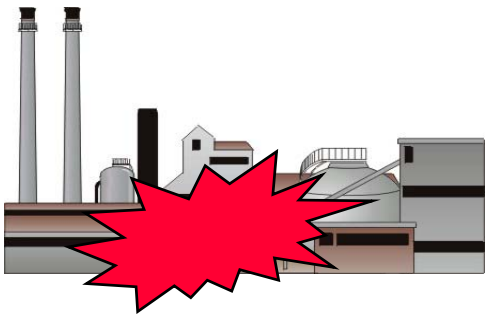
	Structure:	Content:
I	Formulation in regard to hazard control	Field of application, aims, competence, Documentation process
II	Actions	Alarm plans, path of informing, Reactions
III	Informative documents	Plant description, environment dangerous substances, documents

Alarm and hazard control planning



Alarm and hazard control planning

What must be guaranteed by the internal alarm and hazard control planning?



accident

Detection

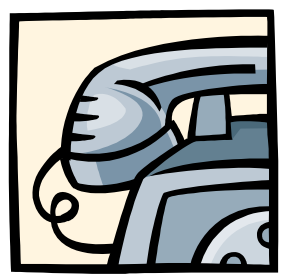
Internal reporting point

External reporting point

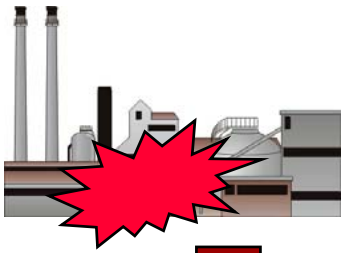
Alarm and hazard control planning

internal alarm planning must guarantee

Manual of action



Alarm and hazard control planning



Internal alarm can be realised by in-house means

Internal alarm, that can be heard from outside; can be realised by in-house means; external authorities are informed prophylactic

External alarm, fault can probably not be rectify by in-house means

Alert phase 1

Alert phase 2

Alert phase 3

Consideration of international alarm plans

In agreement with the authority

Alarm and hazard control planning

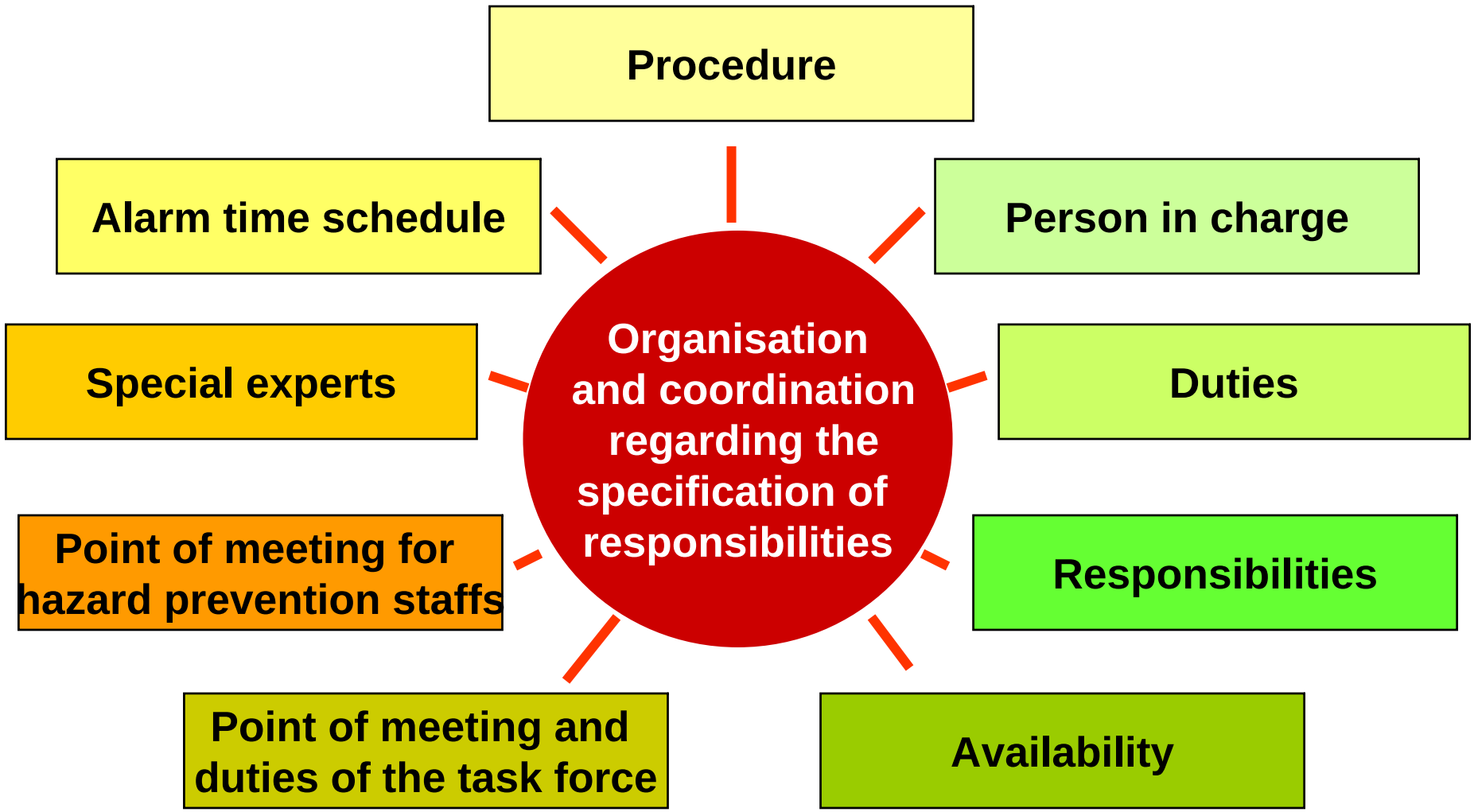
Example: method of reporting during danger to seas and rivers

- Reporting to a central warning office according to the laid down principle for that particular area (e.g. according to international Warning and alarm plan for the Danube).

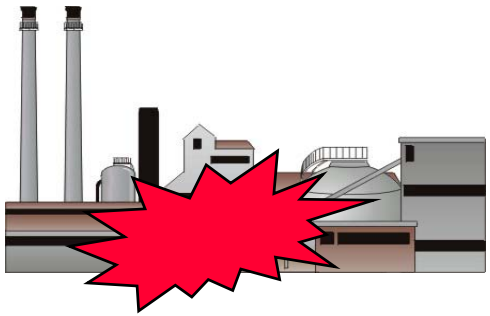
- Standard value for the quantity of substances hazardous to water that can be released

Released quantity ≥ 10 kg	Released quantity ≥ 100 kg	Released quantity ≥ 1000 kg
Substances WRC 3	Substances WRC 2	Substances WRC 1

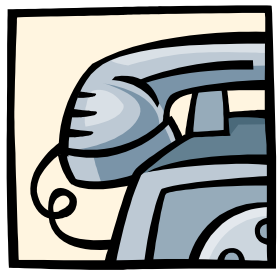
Alarm and hazard control planning



Alarm and hazard control planning



Warning and Alarm



Users of the seas and rivers

Information

The public

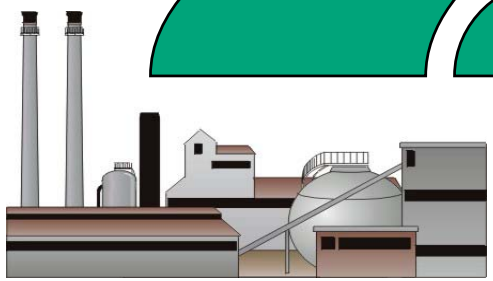
Alarm and hazard control planning

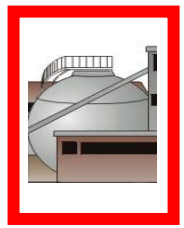
The following general information are necessary among others for plant-related hazard control planning.

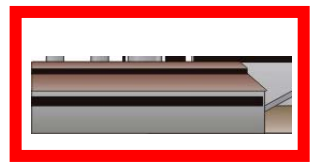
- **Listing of all available emergency resources**
- **A description of the seas and rivers in the vicinity of the industrial plant as well as special usage (e. g. Area protected as result of their usage as source of portable water)**

- **Nature and quantity of substances in the fire sector and storage facilities of the plants, including safety data sheets and as the case may be, also in-house information on the substance**

Alarm and hazard control planning





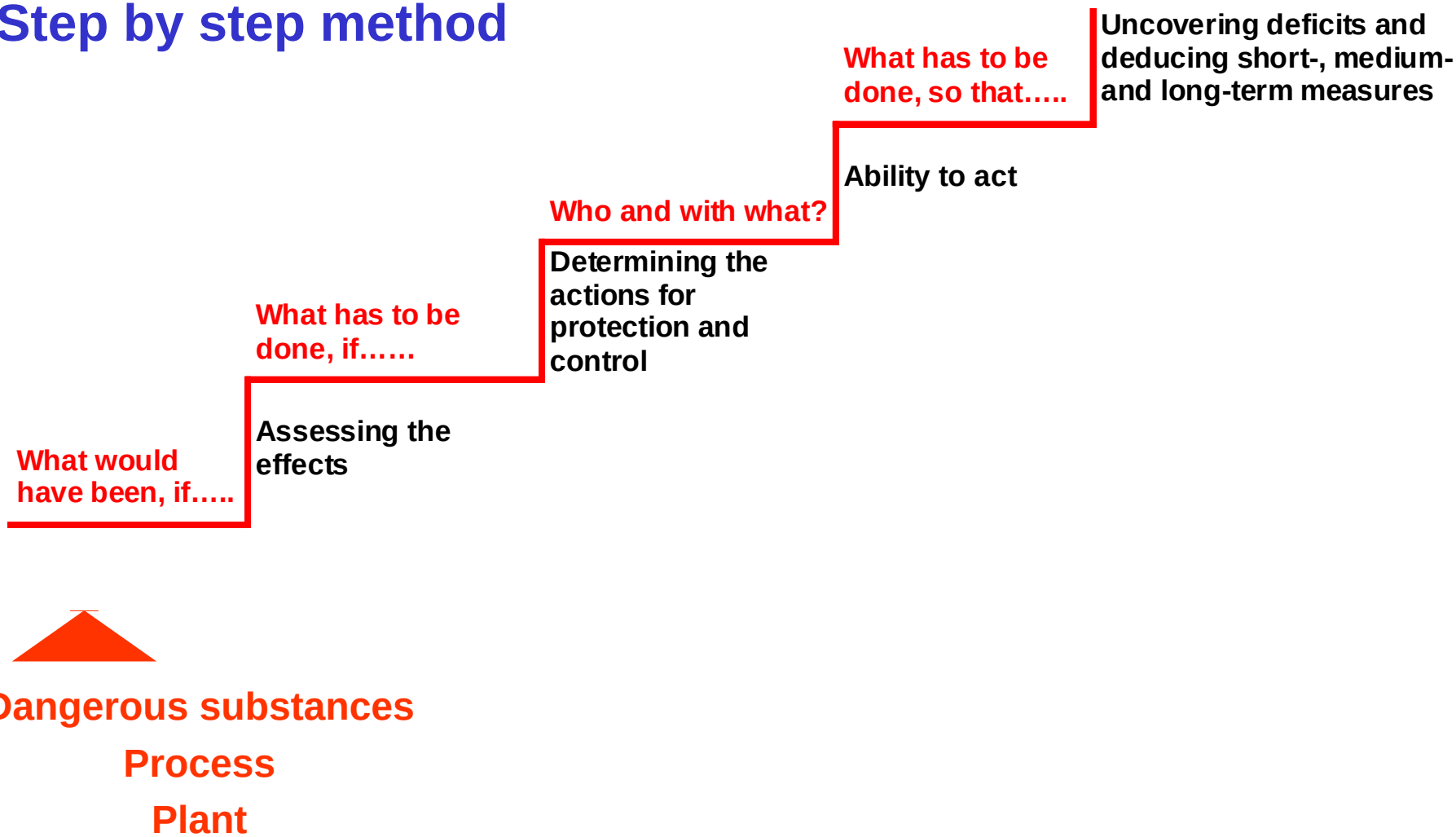


- Fire prevention plans
- Water supply
- Energy supply
- Plan of sewage system
- internal alarm and warning systems
- emergency off-switch for dangerous plant

Information on

Alarm and hazard control planning

Step by step method



Dangerous substances

Process

Plant

Alarm and hazard control planning

Surveying the potential danger to seas and rivers

Accident scenarios

- Leakage
- Overfilling
- Total failure of containers etc.
- Fire and fire fighting water for the extinguisher
- In-house accidents due to transportation processes

Examining the effects

- Duration
- Spatial process

Measures for reducing accidents

- Fire fighting water containment
- Collecting basin
- Fire fighting systems

Alarm and hazard control planning

Other measures are:

Trainings in regular intervals on how to respond and the measures to be taken in the event of industrial accidents.

Update the internal alarm and hazard control plans regularly

Ensure that the local authority and the personnel are **informed** about the alarm and hazard control plans.