

Emergency response to incidents involving Hazardous substances



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Introduction

Incidents involving hazardous substances may have very serious consequences for the people affected, for society as a whole and for the emergency response personnel involved in the incident. Collective planning and interaction are required in order to implement effective response measures.

We will be presenting here a number of development projects, both completed and in progress, such as

- national reinforcement resources intended to support the municipal fire & rescue services in the case of incidents involving hazardous substances
- first on scene, a brochure formulated for the fire & rescue services, medical services and police
- recommendations for creation of measures for better cooperation between "blue light authorities"
- training, etc.

The purpose of this brochure is to provide an overview of work completed and in progress.

Several of these projects involve partnerships between the Swedish Civil Contingencies Agency, the Swedish National Police Board, the Swedish National Board of Health and Welfare, the Swedish Radiation Safety Authority, et al.

Detailed information will be available on the Swedish Civil Contingencies Agency website at www.msbmyndigheten.se/farligaamnen

Hazardous substances guidelines, 2015



In consultation with the Swedish Coast Guard and the Swedish Maritime Administration and other organisations involved – the focus for damage limitation in the case of incidents involving hazardous substances at sea and on land is described.

This report reviews risks in respect of objectives and measures before, during and after accidents involving hazardous substances. No drastic changes can be predicted, but in the longer term volumes, numbers of transports and the distribution of hazardous substances will be affected.

One reason for this may be the fact that there is a certain degree of slowness in the system. Extensive transport networks such as railways cannot be constructed in a short time. The EU's general control in its REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulation will have a major impact due to the fact that fewer hazardous substances will be permitted in future.

Renewable fuels are on the increase, while at the same time environmental awareness means that change is demanding more of mankind and its skills.

This report provides suggestions for the focus of improvement work for the future.

National reinforcement resources

Four Decontamination units

Three advanced Detection units

Reinforcement resources for hazardous substances

Six Chemical units

Oil combating depot

Chemical coordinators

These national reinforcement resources can be used as support for the local fire \mathcal{B} rescue services in the case of complex incidents and for planned events such as major sports events, major international summits and state visits.

National resources – in terms of both personnel and equipment – must support the local fire & rescue services in the case of incidents involving hazardous substances.

The following resources are available:

• Chemical unit

Rescue service in a chemical environment.

• Decontamination unit

Decontamination of operational personnel, and also lifesaving decontamination of individuals in the case of planned events.

• Detection unit

To identify and analyse any unknown substances at the site of an incident.

• Chemical coordinators

Will support the work of the municipalities in their region for planning and preventing incidents involving hazardous substances, but not in an operational capacity.

• Oil combating depot

Will support municipalities affected by oil spills on beaches adjoining State waters. This support aims to provide both equipment and personnel.

National reinforcement resources may also provide international aid in the case of incidents involving hazardous substances.

First on scene











This manual has been produced especially for incidents involving hazardous substances (CBRNE) and can be used by the fire & rescue services, medical services and police during the initial phases of the incident.

The manual provides decision support and acts as a quick reference guide for anyone who already has a basic knowledge of working at incident scenes and is applicable to personnel at all levels.

Irrespective of whether the incident is an accident or an antagonistic event, this manual is designed to assist in the identification of CBRNE incidents and implementation of first response measures.

Planning and interaction

The service National Board of Health and Welfare, the Swedish National Police Board and the Swedish Rescue Services Agency have worked in cooperation to produce recommendations for better interaction and knowledge, such as a new incident scene organisation.



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Each initiative is unique and requires major operational flexibility for the people working with the incident. Their efforts are controlled by the extent of the damage and the hazards posed.

The purpose of these recommendations is also to improve training in the field and to enhance what the authorities already know about one another's working methods.

Regional planning and interaction

The Acts concerning the measures of municipalities and county councils prior to and in the event of extraordinary incidents in peacetime and at times of heightened states of alert, include support for the creation of regional coordination functions. (RSF).



The purpose of this coordination function is to promote planning in cooperation between the local and regional organisations involving the fire & rescue services, medical services and the police. This function will not replace existing structures. If a functioning regional cooperation is already in place, this coordination function must be viewed as a complement.

According to the recommendations in the report entitled "Planning and interaction in the case of incidents involving hazardous substances", RSFs must be convened by the county administrative board. These organisations must work together to plan and implement training courses and exercises for operational personnel and plan for incidents in the region.

Detection capacity

Internationally

Nationally/regionally		Special resources
Locally/regionally		Enhanced indication capacity
Locally	Initial	

The objective is to achieve effective indication and coordinated operations in incidents involving hazardous substances. The purpose is to preserve and save lives, to safeguard the health and safety of operational personnel and to protect the environment.

Warn – Local level: Personal protection must be underpinned by issuing warnings. Measures during the initial stage of the incident, no special skills, no special equipment.

Measure – Regional level: Reinforced indication capacity (planned), special skills, special equipment which must verify and/or identify a substance, any leaks.

Analyse/Identify – Regional, national level: May have regional specialists in some locations, but often expert skills and special resources are available outside the organisations of the blue light authorities.

A collective guideline has been produced in cooperation with the Swedish National Police Board, the Swedish Civil Contingencies Agency, the National Board of Health and Welfare, the Swedish Radiation Safety Authority, KBM, FOI, Swedish Customs and the Swedish Association of Local Authorities and Regions for indication of chemicals and radioactive substances.

Sampling



In the case of several different types of incident involving hazardous and unknown substances, early and fast collection of samples for analysis, evidence or other purposes is required, along with the transportation of such samples. It should be possible for the personnel first on scene to take samples. MSB together with the police (RPS) and other relevant actors will develop and produce simple sampling equipment to be used in the initial incident phase.

This equipment will be disposable and may include:

- collection vessels,
- collection devices for fluids, objects and soil samples,
- equipment for taking smear samples.

There will be instructions for sampling and use together with method descriptions.

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Online courses



You can practice, anywhere and at any time, how to structure organisation of an incident site irrespective of the type of incident. The extent of the damage and the hazards posed are what determine how the incident site is to be organised.

The Swedish Civil Contingencies Agency provides online training courses in cooperation with the Swedish National Police Board and the National Board of Health and Welfare, and these courses are available round the clock. Online courses must be able to offer both profession-specific and collective organisational knowledge, but each organisation will operate on the basis of its own areas of responsibility.

Training is available at www.raddningsverket.se/wufa (and will also be available at the Swedish Civil Contingencies Agency website later on). You have to create a user ID and a password there. Basic training on incidents involving hazardous substances is also available there.

Interactions which strive to achieve a collective approach to preparatory and basic knowledge and nationally consistent, quality-assured operations.

Interactive training tool



A collective interactive training tool for passing on information and knowledge.

This training tool works on the principle of standard modules in accordance with an online training standard. This tool has

been developed to allow people experienced in the use of computers to produce training material at a local, regional or national level. The tool includes complete educational templates.

Information on pre-hospital emergency care





Collective, detailed information has been produced for lifesaving and prehospital care in the case of incidents involving hazardous substance

The most important health risks due to exposure to the respective substances are described in brief in the RIB^{*} database. This includes information and answers to questions on several thousand chemicals.

This information is aimed mainly at the fire & rescue services, medical services and police.

*RIB is a computer-based decision support tool used by many fire services and authorities for emergency response and other civil protection work.

Corporate Chemical Contingency



If an incident involving hazardous substances takes place anywhere in Sweden, the Corporate Chemical Contingency ensures that at least two people will be available within 90 minutes of the alarm being raised, 24 hours a day. These people will be experts from companies dealing with the chemical in question and support personnel who have knowledge of closely related chemicals.

Expert assistance is provided mainly for ammonia, chlorine, sulphur dioxide, sodium hydroxide, potassium hydroxide, nitric acid, hydrochloric acid, sulphuric acid, oleum and sodium hypochlorite.

Corporate Chemical Contingency is a partnership agreement which regulates participation of the chemical industry within municipal fire & rescue services in the event of emergencies involving certain hazardous substances, and it covers all of Sweden.

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