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## **70. SWEDISH CHEMICAL SUPPORT TEAM FOR THE OPCW, A SURVEY OF THE OFFER ACCORDING TO ARTICLE X IN CWC**

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### **INTRODUCTION**

Sweden signed and ratified the Chemical Weapons Convention (CWC) in 1993. After the convention had entered into force on the 27 April 1997 the Swedish government decided to declare its assistance to the convention and the OPCW. The Swedish offer consisted of a contribution to the OPCW's voluntary fund according to art X paragraph 7a. The government also decides to declare that the country is prepared to consider extending assistance under paragraph 7c including expertise in detection, detection equipment and alarm systems, protective equipment, decontamination and decontamination equipment, medical antidotes and treatments and rescue services and protection of population in a CW environment. In this decision the government also gave the Rescue Services Agency the commission to develop, organize and to be prepared to send special Chemical Support Teams to assist and support the subjected country and the OPCW.

The Swedish Rescue Services Agency (SRSA) is a governmental central authority with responsibility to co-ordinate all rescue activities. This also means a responsibility to prepare the simple man, the municipalities and other organizations involved in rescue activities in prevention of accidents to work for the same goal in civil protection.

The SRSA have in this context been given the special commission to create, develop, organize and maintain a special chemical support team. In the following I will display: the assignment, assumptions, organization, tasks and personnel, preparedness, equipment, safety, transport, planning, training, exercise and state of readiness.

The **assignment** in general is to support the OPCW on scene of operation. The Chemical Support Team should be organized with personnel and equipment and the task to support the subjected country with protective equipment. This task includes equipment for detection and warning as well as prophylactic and decontamination resources. The support team must have a high preparedness and a short time to action. The Swedish government will make a special decision in every case to send these teams on a mission.

### **ASSUMPTIONS**

The Support Team should have high level of preparedness and a short time to action. It should consist of professional rescue responders from the municipalities and the Coast Guard. The safety level should be maintained with personnel from the medical services and the Defense Research Establishment. The support must be given directly on scene of operation to the needing country. The overall activities must be made with the highest level of safety for the personnel. Equipment used in the teams must cope with the demands required for the normal organization in Sweden. The equipment will come from the normal preparedness stock, central or municipalities. The team should be prepared with help from different scenarios, displaying different situations from the start in Sweden to situations in the operations area. A special plan for the Swedish team with a SOP should be prepared.

The teams should be self-supporting concerning all things related to chemical protection equipment and systems, communication, base camp facilities, food, water and medical safety.

### **ORGANISATION AND PERSONNEL**

On the scene of operation the tasks for a team should be possible to maintain with two sub-teams at the same time. Each sub-team will have personnel and equipment for safety and security assigned. Each sub-team is built up with 8 persons. The team staff commands the sub-teams.

Most of the personnel come from the municipal rescue services and the Coast Guard. Specialists are recruited from the Defense Research Agency, police and medical services. Here you can see the set up of personnel. The Support Team consists of approx. 36 persons.

### **TASKS AND ASSIGNMENT**

The team should support the subjected country with individual protective equipment such as protective masks, jackets and bags (for small children). Personnel from the receiving country have to deliver the equipment. The team will support the organization of this handout with information and training. The persons responsible for the handout must be trained initially and given protective equipment in the first place.

The team should support the receiving country with risk assessment, help in evacuating the population, rescue activities, first aid and decontamination.

Continuously system for detection of CW-agents and industrial chemicals together with warning-systems should be set up and working.

The team will be able to inspect and investigate a working area and in this sense take samples to verify the presence of actual agents.

The team also will be able to give logistics advice and help with transports in the effected area even in cases of destruction of CW-agents.

### **PREPAREDNESS**

The requirement of preparedness for the team is high. Personnel from the "team-staff" should be able to leave as a reconnaissance-team in 3 hours, if notification of a situation is received beforehand. The complete team with equipment and vehicles should be able to leave Sweden in 12 hours.

### **EQUIPMENT**

The team bring with them two sets of equipment. **SET 1** - includes civilian people's protection (for 5000 people in families) in protective masks for adults and jackets and bags for children. In this set the team brings additional 1000 special protective equipment for personnel from the receiving country together with simple detector papers and badges. Decontamination agents (powder) and medical counteract ant also is brought for civilian need.

The team is equipped with the Swedish protective system 2000, which consists of breathing- and body protection concerning CW-protection in different shapes. Here you can see Rescue Suite 90 with heat and flame protection as well as Protective suite 95 for decontamination work. In this system splash-suits and breathing apparatus also is included.

Warning instruments for detection and warning in case of CW-hazards as well as industrial chemicals is used. These instruments are used together with CW-detection instruments in a system for monitoring ground contamination from a vehicle.

The GARDS, Ground Area Reconnaissance Detection System is designed for rapid detection of liquid surface contamination together with detection of air contamination, weather information and a rapid geographical reporting system.

#### **BASE CAMP**

In the "SET 1" equipment for self-supporting the team for 14 days is included. This means that a base camp can be put up. The camp is completed with sleeping quarters, hygiene arrangements with shower, kitchen and a mess tent as well as staff facilities and a communication container. An arrangement with a self-supporting electrical facilities and supplies with drinking water and food is included. The base camp can also have an additional communication center like this mobile container.

#### **TRANSPORTATION - VEHICLES**

There is always means of transportation in the team. If the team can't bring the equipment in truck the team will have 4-wheel or 6-wheel vehicles. There are at least 2 motorcycles and one land cruiser in the equipment. For detection capabilities and transporting decon equipment we have ATV 206.

All equipment in SET 1 should be possible to bring in the first transport to scene of operation.

#### **ADDITIONAL EQUIPMENT IN SET 2**

In SET-2 we have included rescue equipment such as drills and lifting devices. Decontamination and cleaning equipment in container, trailer or ATV 206. In this set also includes more decon powder (Fullers Earth), decontamination emulsion and if needed additional of SET 1. System for decon of used clothes is included.

#### **SAFETY**

The safety includes security and protection on scene of operation as well as medical protection and safety, communication-, transportation- and evacuation safety as well as body protection.

#### **SAFE AREAS**

One of the objectives for the advanced party and later the team staff is to locate safe working areas as well as **safe places for base-camps**. The local situation concerning **safe roads** and passages meaning both structural and safe from attacks.

In some cases on scene of operation there will be established **protection forces** for the safety and the protection of deployed organizations. Communications and co-ordination systems will be established to these forces by the team staff.

For **evacuation** situations in case of casualties, the theme staff will make special plans.

**Personal protective equipment (PPE)** for the team members includes a variety of breathing apparatus with, of course, the Swedish protective mask 90 (or F2) and its accessories. The protective system 2000 with Rescue suite 90 and Protective suite 95 for decon work together with the Light impermeable Chemical protective suite represents the variety of protection that that team bring for different tasks.

Training in **mine-awareness** and using/wearing protective body armor with vest and helmet is included in the team training activities.

In the operation area the team will have close communications to the **coordinating staff** operated by the OPCW in Assistance Co-ordination and Assessment Teams (ACAT) or with the On Site Operating Coordinating Center (OSOCC).

## **MEDICAL SAFETY**

For the team a special safety unit is organized. The unit is responsible for the medical safety during work in contaminated areas as well as for the daily medical care.

**Risk assessments and analysis** are made in beforehand as well as on spot for different tasks. **Medical goals** for treatment, equipment, medicine and personnel are set up.

In the team normally **one medical doctor and three nurses** are working.

The team is equipped to **treat and if necessary isolate** and transport casualties and sick team members.

The medical personnel as well as the team members are **trained** to take care of each other in case of an accident or an emergency concerning CW-agents or related substances.

## **VACCINATION**

Each team member is vaccinated for Polio, Diphtheria, Tetanus, Meningitis, Typhoid, Hepatitis A, B, Yellow fever, TBE and Cholera. A special vaccination is taken for Anthrax.

## **MEDICAL RESOURCES**

The team will have medical **equipment** to treat casualties from medical accidents and accidents related from CW agents. There will be **medicine, antidotes and drugs** related to this type of accidents as well as normal traffic accidents and illness. The medicine and drugs will be **stored in portable refrigerators** during transport and work. Medical equipment for **protection of the personnel** in connection with casualty and infectious patients includes the medical resources.

Preparations to send casualties to **hospital** in different steps are made in beforehand.

## **MEDICAL EVACUATION**

From the accident the casualties are planned to be evacuated to the base-camp or directly to an emergency hospital nearby. The patient will be stabilized and treated before transport back to Sweden.

## **COMMUNICATION SAFETY**

Every team member will have access to a **WHF-radio** constantly. The system is used in special arrangement protected by the suit when working in contaminated area. The members also use the system as a fast communication system day and night. It is possible to differentiate the communication to groups or to single members.

**Communication to units** is done by HF-radio (3-30 MHz).

The team staff has at their disposal different types of communication. Here are **CAPSAT** (Inmarsat C) a type of satellite fax.

Normal **satellite telephone** and if available even Iridium.

The systems are programmed for fast connection to the "home central" or other needed connection such as medical experts or chemical- or biological experts.

The team staff has a special designed communication container available if needed.

## **TRANSPORTATION**

For **fast transport** to the scene of operations air transportation is needed. The team with "SET 1" is to be transported with two C 130 (Hercules). Just to give you an example of the dimensions. "SET 2" needs another two C 130 for transporting the equipment. In the first transport route at least one staff vehicle is brought together with the equipment.

Normally we use C 130 Hercules for transport but other types of aircrafts or even civilian commercial aircrafts can be used for personal transport.

The Swedish civilian protective equipment (5000 for families) gives you an idea the capacity needed.

If it is possible the team will be **transported by road** and then use trucks and Land cruisers carrying all equipment from both SET 1 and SET 2.

**Evacuation transports** can be carried out by helicopters for rapid deployment.

## **PLANNING, TRAINING AND EXERCISE**

After the team members been recruited by the agency a training system starts. The members are trained in courses on our Rescue Colleges in Sweden. Here you have the largest Rescue College Rosersberg situated in a castle just outside Stockholm. The courses are conducted for Swedish participants and for foreign (SP) participants together with Swedish. The training course (Assistance and Protection Support) consists of three weeks with mixed theoretical and practical training.

The courses are scheduled with introduction, toxic substances and personal protection. The participants are trained in handling warning and detection instruments and monitors, CW-tactics and communication services.

The training also includes operational techniques and decontamination tactics as well as decontamination equipment and CW-special exercise.

The different blocks are concluded with a practical exercise.

The aim of the course for foreign participants is to show the Swedish system with personal protection and the support, which can be made possible with a designed team.

For Swedish team members there are a special training and exercise during one week. Here are the objectives to give general training in building a team and a base-camp. Also living under camp conditions, building up experience in convoy driving and checkpoint training. All personnel are given training on different vehicles as trucks, jeeps, 4-wheels and ATV's. The exercise is completed with preparations for loading and departing.

The situation concerning the state of readiness and preparation for the Swedish Chemical Support Team is stated below. All preparations are made to give the government a possibility to decide if a team should be dispatched. The state of employment and insurance of the participants is clarified. The equipment needed is in a storage area and prepared. The equipment is not insured as all equipment for the Swedish system.

Today there are two operational teams available for rapid deployment prepared with personnel and equipment.

The first preparations were made in 1998. All activities including **recruiting of personnel** and vaccination have been made by the Agency.

**Planning activities** including a SOP (Standard Operating Procedure) is going on constantly.

Together with teams from other countries and coordinating staff from OPCW the teams will have the opportunity to participate in **international exercises** in the future.

## **SUMMARY**

The Swedish Chemical Support Team is designed, organized, prepared and trained for rapid response and support in situations with CW-agents threats or attacks. Teams are after request and decision by the Swedish government available to support the OPCW.

## **KEY WORDS**

Chemical Support Team, assistance, protection, GARDS, peoples protection, self-supporting