ABSTRACT

This report summarizes the main activities of the Fire & Rescue Service (FB) Group of the Technical Inspection and Safety (TIS) Division during the year 2000. It focuses on the most important differences with respect to the previous years in terms of organisation and domains of activity. It also contains detailed statistics of activity for the year 2000.
Summary

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1. MANDATE

The mandate of CERN Fire Brigade is:

- to protect the lives of all CERN’s personnel, contractors, visitors and users from fire or other threat and provide first aid and ambulance care in case of injuries or illness,
- to protect CERN’s property and that of its personnel, contractors, visitors and users from fire or other damaging threat,
- to carry out any other urgent or humanitarian operation in order to safeguard the interests of CERN and the environment.

2. ORGANISATION

The year 2000 was marked by significant changes in the organization of the Brigade.

With regard to personnel, new heads of important units within the Brigade have been appointed due to promotions and retirements, two people have been reclassified for health reasons and therefore left the Service and unfortunately one died. The main organisational change has been the reduction of the day team, from 10 to 7, in order to increase the number of operational personnel on shift.

The unit called “Fire Protection” has disappeared due to the reorganisation.

Two new posts, with the job title of operations assistant, have been created to reinforce the operational force of the teams whilst giving important support to the technical work of the day team. They will work on shift basis but only during the day and will always be ready to assist the team in case of important interventions. Their main task is to serve as a link between the Fire Service and other services at CERN, in order to:

- compile the information of new installations or significant changes that may affect the safety at CERN,
- analyse the information received and evaluate the potential impact on the intervention procedures of the teams,
- prepare operational procedures,
- transmit this information to the teams by way of specific meetings or lectures and instructional visits.

They will also cooperate with the head of operations in the preparation of intervention plans.

The Service continues with the detached firefighters policy that has proved to be very beneficial, despite the training effort and the limitation in the knowledge of the sites that it implies. As a consequence of this detachment system and due to the new vacancies, the second half of the year was marked by an intense period of selection boards to select new personnel. Six new firefighters on detachment started in February 2001 and for three other detached firefighters their contracts have been renewed. The two operational assistants started in March 2001.

The organizational chart of the service is shown in Annex 1.

The fact of being one person below the compliments in the teams (red team with only 11 operational people) and several long term sick leaves have reduced to 8.2 the average presence in the teams (10 is the minimum agreed by SAPOCO) and has handicapped the planned training activity, mainly that to be performed off-shift.
Additionally, during the year 2000, several meetings were held, including two by the Consultative Board, to review and update the Administrative Circular n° 25 “Special provisions for the fire and rescue services”. A final draft was agreed and prepared for approval at the end of the year.

3. EQUIPMENT

With respect to equipment, in September 2000 a new ambulance replaced a 16-year-old one. A new container has been equipped with specific means for interventions involving hazardous materials and is conceived as a command post in case of major interventions. During this year the service has prepared all the administrative and technical procedures for the acquisition of a new fire vehicle that will replace one of the two in service, already 18 years old. This will allow changing the structure of the standard turnout.

The brigade has currently in use the following vehicles:

- 2 fire trucks
- 1 specific rescue heavy truck
- 1 vehicle transport of containers
- 2 rapid intervention vehicles (RIV)
- 2 ambulances
- 1 van for personnel and material transport
- 6 light vehicles (extinguishers, team leader, permanence, piquet, logistics, ass.op)
- 4 containers equipped for different potential needs with:
  - extinguishers
  - specific containing and absorbing materials for pollution incidents
  - pumping equipment in case of floods
  - and hazardous materials incidents support equipment, also prepared as command post
- 1 trailer-tank for water reserve and transport (5,000 l)
- 1 small trailer with an electricity generator engine.

Each operational member of the Service is equipped with high quality CE approved personal protection clothing. Among the intervention equipment available we can mention:

- Single and double bottle breathing apparatus (up to 1 hour autonomy)
- Fire-fighting whole equipment (water, foam, powder)
- Chemical and radiation contamination protective suits
- Chemical intervention (plugging, containing and pumping) material
- Dangerous atmosphere detection and measuring devices
- Fall and accident complete rescue force equipment
- Swiss + French regulations compliant ambulance equipment
- Pollution control equipment, etc.

4. ACTIVITY

With respect to the Brigade’s activity during year 2000 we can differentiate four different types.

1. Intervention

- Fire suppression and explosion control
- Rescue (structural collapse, vehicle, falls, lifts…etc)
Ambulance care  
Chemical incidents  
Incidents involving radiation  
Pollution control  
Floods  
…etc.

2. Prevention

- Control rounds  
- Instructional visits to specific risks buildings or spots  
- Dangerous situations control (trees, hanging elements)  
- Confined spaces  
- On site prevention for works with risk  
- Training exercises

3. Logistics

- Theft declarations and recording  
- Taxi service  
- Key service

4. Training

There are two main types of training: to FB personnel and to external personnel. Details are given in Chapter 5.

The break down of the quotidian activity within the team has been, in general lines, the following:

<table>
<thead>
<tr>
<th>Day shift (07:00 to 19:00)</th>
<th>Night shift (19:00 to 07:00)</th>
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</thead>
<tbody>
<tr>
<td>Personal equipment check</td>
<td>Personal equipment check</td>
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<tr>
<td>Daily briefing</td>
<td>Daily briefing</td>
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<tr>
<td>Intervention equipment check</td>
<td>Intervention equipment check</td>
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<tr>
<td>Training</td>
<td>Instruction (theory classes)</td>
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<td>Lunch</td>
<td>Instruction visits</td>
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<tr>
<td>Individual tasks + non urgent missions</td>
<td>Control rounds</td>
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<tr>
<td>Administration</td>
<td>Radiation</td>
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<tr>
<td>Equipment exercises</td>
<td>Red telephones</td>
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<tr>
<td>Confidential papers</td>
<td>Underground firefighting material</td>
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<tr>
<td>Sprinklers…..etc</td>
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<tr>
<td>Preparation for hand over</td>
<td>Preparation for hand over</td>
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<tr>
<td>equipment</td>
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<tr>
<td>consignes and report writing</td>
<td>consignes and report writing</td>
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<td>cleaning of installations</td>
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<td>sport</td>
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The main changes, in comparison with the previous years, were the revision of the night activity of the teams by converting the night rounds into instructional visits to buildings and installations, and the revision of the intervention plans.

The number of interventions (1599 in all) has decreased by approximately 25% compared to those recorded in 1999, mainly due to an important decrease in detection alarms (almost 30%). The number of emergency call-outs followed by fire and rescue operations has also slightly decreased (see Annexes 2, 3, 4 and 5 for statistics).

The most significant interventions were: a transformer fire in BA3, a fire in the ventilation system of the SPS at BA6, a small fire of uranium pills in building 3 that resulted in exhaustive contamination control procedures, and an intruder in the PS control room that ended with his arrest by the Geneva Police.

There were five pollution incidents, the same number as last year, and five small incidents involving radiation.

The only activities that have increased compared to previous years are lost property and theft declarations, and the number of “taxi” transports.

No important incidents due to extreme weather conditions have been recorded.

The LEP shutdown ceremony posed a challenge to our Brigade since we had a key role in the organisation and co-ordination of safety during the event. This involved the French fire brigade, two rescue helicopters and the ambulance service. In addition to the normal resources, 14 CERN firemen reinforced the safety crews for the event.

Relations with the neighbouring fire services of the host States has been kept at a satisfactory level. A series of meetings were held with the commandant of the Fire Service of l'Ain, which resulted in an outline programme being agreed for closer ties between CERN FB and the French Fire Service.

Four familiarisation visits of CERN installations were organised for fire officers from l'Ain (around 50 officers in all). These were continue in 2001. Furthermore an agreement was reached to ensure basic and continuation training in rope rescue skills, (GRIMP) in 2001.

On the Swiss side of the border a close working relationship continues. Geneva Fire Service recruits were trained in CERN’s fire simulator and CERN’s underground installations were used as a training venue. This was very successful and will continue in 2001. Crews from Geneva Fire Service carried out site familiarisation visits. A collaboration agreement was reached with Neuchâtel Fire Service enabling CERN ambulance staff to gain practical experience by attending emergency interventions in Neuchâtel. This will be in exchange for fire simulator training at CERN.

A series of (3) small exercises were organised on the LHC civil engineering projects to confirm CERN intervention procedures and response time.

During year 2000 the databases and software have been updated and optimised to give better access to intervention reports and statistics.

Important modifications were made in Building 65 to make it adequate for future needs. Two new offices were prepared to host the fire prevention service of TIS/GS and the classroom was moved to the first floor. Half of the second floor was fully refurbished and improvements were made to the gymnasium and the changing rooms in the first floor.
Several important water cuts affecting the LEP firefighting water supply, meant that important corrective measures had to be applied by our fire brigade.

With regard to the safety of LHC project, the chief of the service was involved in several committees and working groups to define the future safety requirements of the machine and the future experiments.

A new Fire Prevention Engineer joined TIS/GS and was housed in building 65. This close contact has proved to be very beneficial for both parties.

The design of Web pages for the brigade started, and will be on line in 2001.

5. TRAINING

With regard to the training of FB personnel, the daily activity has continued under the supervision of the responsible person for the training of the Brigade, the team leaders and the team instructors. As in previous years the teams have taken advantage of weekends to organise major training exercises. Several ambulance staff have been sent to Neuchâtel fire brigade to do a practical training period. This is necessary in order to be fully compliant with the requirements of the cantonal law on ambulance service.

The program of practical training period for the team leaders and their deputies at SIS Geneva, that started in 1998, has continued with some of the personnel responsible for the intervention staying day and night with the Geneva’s fire staff during a whole shift cycle (two days and two nights).

As exceptional activities, a new four-day Command and Control course was introduced to better enable incident commanders to understand and apply the decision-making logic used during emergency interventions. An important part of the team leaders and deputies have completed the course and the rest will do so during year 2001.

The four watch instructors have received training in Sweden and Finland to better enable them to train our own people and exterior firefighters at CERN’s’ realistic fire training facilities.

Concerning the training provided by our Brigade to CERN or exterior personnel, 1950 people received a basic CERN safety-training course during the year 2000. LEP dismantling and LHC civil engineering projects were the main reasons for the 50% increase.

Several courses were provided for summer students and for CERN guides from the Visits service. Assistance was also given to the Visits service to define the rules of safe conduct of the new post LEP visit itineraries.

On the language education side, the French language courses given for the detached firefighters have continued and the Service continues to provide English courses for some of its francophone staff.