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# Activity report Safety and Health Commission for the Mining and Other Extractive Industries 1997

(Approved at the plenary meeting on 14 December 1998)

(presented by the Commission)

## **Contents**

1	INTRODUCTION	3
2	THE WORK OF THE SAFETY AND HEALTH COMMISSION	4
3	THE WORK OF THE COMMITTEES	10
4	FUTURE WORK	14
5.	SUMMARY	15
6	ANNEXES	15

#### 1 Introduction

#### 1.1 The Safety and Health Commission

The Safety and Health Commission for the Mining and Other Extractive Industries continued its work in the year covered by this report. It was established following the mine fire on 8 August 1956 at the Bois du Cazier Colliery in Marcinelle (Belgium) and its severe consequences, and was originally responsible only for safety in coal mines. The Council Decisions of 11 March 1965 and 27 June 1974 broadened its activities to include health protection and extended its responsibilities to all the extractive industries (cf. Annex 6.1). Its primary task is to improve workers' safety and health in the extractive industries by reducing the risks specific to them. It follows various lines of approach, including the pooling of information and experience, proposals to the governments of the Member States and assistance to the European Commission in the preparation of relevant measures.

The Safety and Health Commission consists of representatives of the governments, employers and workers. Its Restricted Committee consists of the government representatives on the Safety and Health Commission and its main task is to maintain permanent contact among the governments of the Member States and between the governments and the Safety and Health Commission and to prepare the work of the Safety and Health Commission. The Restricted Committee is also responsible for adapting to technical progress the annexes to Directive 82/130/EEC. As a general rule, technical questions are dealt with by tripartite working groups. Currently, there are five Committees (cf. Annex 6.2), which are chaired by members of the Restricted Committee. It has also proved useful to have specific questions dealt with by small ad hoc groups of experts. Further details of the history, structure and procedures of the Safety and Health Commission may be found in the 1996 activity report and the report on the years 1985-1995 (Docs No 0030/97 and 0830/97).

Annex 6.3 lists major Safety and Health Commission documents relevant to this report.

#### 1.2 Secretariat

The Secretariat of the Safety and Health Commission, the Restricted Committee, the specialised Committees and the ad hoc groups is provided by the European Commission, which has entrusted this task to Directorate-General V (V/F/4-cf. Annex 6.2). The European Commission also funds the Safety and Health Commission's activities.

#### 1.3 Annual reports

Since the working methods of the Safety and Health Commission and the situation in the Secretariat have stabilised, it has been possible to resume production of annual reports after an extended interruption. A report was produced for the year 1996 (Doc. No 0030/97) and was approved by the Safety and Health Commission on 5 May 1997.

The gap between the 1984 and 1996 annual reports was bridged by a report covering the work carried out from 1985 to 1995 (Doc. No 0830/97). The Safety and Health Commission approved this report on 25 November 1997. The Secretariat will support the delegations in their wish to have it distributed as widely as possible, possibly in the form of a special issue of "Social Europe".

The present report for 1997 follows on from the 1996 report.

#### 2 THE WORK OF THE SAFETY AND HEALTH COMMISSION

#### 2.1 Meetings, workshops

The Safety and Health Commission met twice (on 5 May and 25 November 1997), with meetings of the Restricted Committee on the previous day. The Restricted Committee met twice to adapt the annexes to Directive 82/130/EEC to technical progress. The five working Committees held seven meetings in all and there were various meetings of ad hoc groups. Two workshops were held on topics of current interest in the oil and gas industry and the field of surface and underground workings.

#### 2.2 Exchange of information on noteworthy occurrences

One of the major tasks of the Safety and Health Commission is to pool experience arising from noteworthy events, and especially major accidents. Analysis and prompt forwarding of such information, especially to the governments of the Member States, make a substantial contribution to improving safety and health protection.

#### 2.2.1 Barentsburg Colliery

The Safety and Health Commission considered an interim report on the accident at Barentsburg Colliery, worked by a Russian operator on Svalbard, in the northernmost part of Norway, where 23 miners were killed by a coal-dust explosion and subsequent fire on 18 September 1997. The explosion was probably initiated by shotfiring during development work. It is possible that the explosive used was not approved for the location where the accident occurred. Eye-witness reports indicate that the ventilation was also defective, but it is not clear whether an explosible firedamp concentration played any part in the explosion.

The colliery mines a slightly inclined seam one metre thick. To a large extent, the access drifts are driven following the seam. Mining by the Russian operator is carried out by virtue of a treaty under which Norwegian safety regulations apply.

The accident is to be discussed in depth by the Safety and Health Commission once the investigations have been completed.

#### 2.2.2 San Nicolàs Colliery

In 1997, the Safety and Health Commission was unable to complete discussion of the San Nicolàs accident in Spain, which had occurred on 31 August 1995 and led to the deaths of 14 miners, since questions remained outstanding.

#### 2.3 Safety proposals

Work continued in the Safety and Health Commission on completing a document on measures to reduce the explosion risk in underground workings (Docs No 5346/96 and 5816/96). This consists of a report and proposals to the governments of the Member States to improve workers' safety and is intended to update and supplement the "Simon Report" — Doc. No 5147/89 "Measures to reduce the explosion and fire risk in auxiliary-ventilated workings and to improve the protection of personnel in the event of explosions and fires in coal mines". The Safety and Health Commission is expected to approve the new document in the spring of 1998.

#### 2.4 Safety and health protection reports

In the course of 1997, the Safety and Health Commission approved an information paper on escape from underground mine workings and two reports on the workshops held in 1996. These documents had been prepared by the Committees concerned.

#### 2.4.1 Escape from underground mines in the event of an emergency

Doc. No 0027/3/97 contains valuable information on escape of workers employed below ground – an important subject in underground mining. Starting from the basic obligations of the Framework Directive 89/391/EEC and Directive 92/104/EEC, which is specific to the surface and underground extractive industries, the paper discusses the precautions that can be taken to enable workers to escape from underground mine workings in foreseeable emergencies. The organisational and technical arrangements to be considered in individual cases are determined by the risk assessment and are to be set out in escape plans. Suitable communications systems are essential. Various evacuation aids, such as audible and/or visual warning systems, make escape easier. Selection of self-rescuers must ensure that workers can negotiate the escape routes without suffering health damage when carbon monoxide is present in the ambient atmosphere. In mines equipped with self-rescuers, employees must be given initial training, followed by regular drills. In certain cases, refuge chambers should be provided, with a fresh air supply which does not depend on the normal mine ventilation.

#### 2.4.2 Safety in quarries - risk assessment

Doc. No 5619/1/96 summarises the papers and discussion at the workshop on safety in quarries held in Italy on 21–22 June 1996. The main purpose of this event was to allow a comparison of experience of identifying and assessing hazards and risks in accordance with the Community directives. The report shows how some of the Member States have ensured or intend to ensure that their legislation and practice comply with the European requirements and discusses the cost/benefit ratio for safety and health measures. It also contains information on the quarrying industry in various Member States. Details of the firms visited in connection with the workshop are annexed.

## 2.4.3 Hazards caused by noxious substances resulting from the use of diesel engines and blasting operations underground

Doc. No 5980/1/96 on the workshop held on 25–26 September 1996 in Luxembourg is intended to contribute to improving health protection of workers in underground mining and tunnelling and deals with hazards arising from diesel exhaust emissions and shotfiring fumes. The topic is dealt with from the legal, industrial medicine and technical points of view. The report contains the papers read, the discussion and the workshop conclusions and consists of four parts: legal framework, measurement of diesel engine emissions and medical aspects, measures to reduce pollution and summaries and conclusions. The document does not contain any recommendations to the Member States.

#### 2.5 Workshops

The Safety and Health Commission continued its efforts to arrange events to highlight and promote safety and health protection in the extractive industries. Workshops have been the prime vehicle used for this purpose in recent years. Two such events were held in 1997, on

recognition of training certificates in the offshore oil and gas industry and on risks associated with the use of free-steered vehicles in underground and surface workings.

#### 2.5.1 Mutual recognition of training certificates

The workshop on mutual recognition of training certificates in the offshore oil and gas industry held on 18 June 1997 in Luxembourg was arranged by the Committee on Borehole Operations. Harmonisation is particularly important in the offshore sector, since employees of multinational operators frequently move from one place of work to another and the training is time-consuming and costly. The Safety and Health Commission therefore has a long-standing interest in safety training in the oil and gas sector and in the mutual recognition of certificates.

The workshop afforded an opportunity to review the current situation and explore ways of achieving full mutual recognition, which is desirable to ensure freedom of movement of the workers concerned, unimpeded operation of the internal market and greater efficiency and cost-effectiveness. The speakers included representatives of the European Commission, the academic world, workers, rig operators and owners, training providers and the North Sea Offshore Authorities Forum (NSOAF).

There was broad agreement on the essential points. In the European Union, there is a range of legal provisions which are pertinent to mutual recognition of training certificates. The "attestation of competence" approach generally prevailed in the development of training standards. Mutual recognition was made easier by modular structuring of safety training.

Despite the considerable progress made in previous years, difficulties remain, and particularly affect rig owners, drilling companies and service firms. Further efforts and consultations are required to achieve generally recognised standards. A number of useful suggestions were made and will be followed up by the Committee on Borehole Operations.

#### 2.5.2 Risks associated with the use of free-steered vehicles

A two-day workshop on 11–12 November 1997 in Luxembourg focused on the safety and health risks arising from the use of free-steered vehicles. The papers read referred to both underground and surface operations. Various Committees were involved in the preparations and the work was co-ordinated by the Secretariat of the Safety and Health Commission.

The papers were arranged in three groups.

The first dealt with basic topics, showing that while advanced technology and automation lead to better working conditions and greater safety, they also give rise to new hazards. Detailed analysis is needed to ensure that these dangers are recognised and suitably countered. Advanced computer graphics and virtual reality can enable staff to grasp complex situations and information.

When large numbers of free-steered vehicles are used below ground, it is not sufficient to consider the individual vehicle in isolation. Such machines also represent a considerable hazard in the event of fire.

The second part of the workshop was mainly concerned with machine design, taking account of ergonomic, health and safety aspects. Since the plant is often used under constricted conditions below ground, it is not easy to satisfy these requirements. The type of driver's seat

and cab design are important not only in terms of safety, but also of health. Among the factors which may lead to health impairment is vibration.

Optimum ventilation conditions are essential to the health of underground workers when diesel vehicles are used. To ensure safe vehicle operation, maintenance must be based on a planning and inspection system.

The papers in the third part of the workshop dealt with automatic control systems, communications systems and individual topics. The amount of fresh air needed when diesel vehicles are used depends to a remarkable degree on the type of machine and operating practice and can be regulated as required by an automatic control system.

Systems are available to pass messages directly to the drivers of FSVs below ground. When remote control is used, information can be conveyed by television.

EC type-testing of diesel-powered FSVs contributes to higher safety and health standards. Special precautions were described for drivers of free-steered loading and haulage plant used in the transfer of tip material from old uranium mines.

#### 2.6 Community directives

As in the past, the Safety and Health Commission concerned itself with the transposition of Community directives and with preparing and advising on draft directives which were specific to the extractive industries or had important implications for them.

#### 2.6.1 Transposition into national law

Transposition of Directives 92/91/EEC and 92/104/EEC on requirements for improving the safety and health protection of workers in drilling operations and in surface and underground mineral workings was closely monitored. Discussion between the delegations helped to clarify various questions and ensure that transposal was accomplished satisfactorily. At the end of 1997, the European Commission had been notified by all Member States that both directives had been transposed. The competent Commission departments have not yet finished their conformity checks.

#### 2.6.2 Preparatory work

Work continued at the Safety and Health Commission on drafting a Commission Directive adapting to technical progress Council Directive 82/130/EEC on the approximation of the laws of the Member States concerning electrical equipment for use in potentially explosive atmospheres in mines susceptible to firedamp. The harmonised standards have to be updated for the fourth time because of the developments which have taken place. This is the task of the Restricted Committee.

A group of experts within the competent Directorate-General of the European Commission has begun to draw up proposals for revision of the Machinery Directive. As far as is known, some of the measures being considered would be prejudicial to safety in the extractive industries. The Safety and Health Commission therefore feels it must be given an opportunity to deliver an opinion on the proposed changes, insofar as they affect these industries.

#### 2.6.3 Resolution

Departments within the European Commission are considering whether the occupational exposure limits for  $NO_x - NO_2$  should be reviewed and perhaps lowered. Since lowering of these limit values would appreciably affect the extractive industries, the Safety and Health Commission considers it essential that it be involved in the assessment of the socio-economic impact. It therefore unanimously adopted a resolution calling on the European Commission to consult it before setting new occupational exposure limits for  $NO_x - NO_2$ , or for carbon monoxide and particulate.

#### 2.7 Opinions on safety research projects

One of the Safety and Health Commission's functions is to deliver opinions on research projects intended to improve safety and health protection in the extractive industries. In the report year, it vetted a project to develop a safety system to combat explosions and related hazards, primarily for the petrochemical industry. An application for financial support has been submitted to Directorate-General XII of the European Commission.

The Safety and Health Commission obtained details and discussed the project, establishing that there are at present no systems comparable with that which it seeks to develop. Since it is intended for use in the open air, it seems applicable in oil and gas exploration and production. The Safety and Health Commission was therefore able to endorse the project from its own perspective, without anticipating the decision on funding, which is still to be taken.

The European Commission's fifth R&D framework programme includes the extractive industries. Efforts are also being made to ensure that technical and social research relevant to coal and steel continues to receive support after the year 2002, with funding from ECSC reserves and the interest they yield.

#### 2.8 Co-operation with other institutions

In 1997, the Safety and Health Commission continued to co-operate or maintain links with various other organisations at European and international level, and in particular with the following bodies.

#### 2.8.1 European standardisation bodies

As a primarily technical body, the Safety and Health Commission naturally works with the European standardisation bodies CEN and CENELEC. In 1997, a salient point was CEN/CENELEC's preparation of explosion protection standards, which also apply to the extractive industries. The Safety and Health Commission was fully appraised of this work. Thirty of the sixty standards are being produced in response to a mandate from the European Commission and are mainly intended to give practical expression to the basic requirements of Directive 94/9/EC on equipment and protective systems intended for use in potentially explosive atmospheres.

The European Commission has given the CEN a mandate for standardisation of the requirements for fire-resistant hydraulic fluids. The results of the groundwork carried out within the Safety and Health Commission on fire-resistant hydraulic fluids for power transmission and control (Doc. No 4746/10/91) are to be set out in a harmonised standard and thus made accessible to other sectors.

#### 2.8.2 EUROSTAT

The Safety and Health Commission's remit includes production and analysis of accident statistics, and this necessarily involves co-operation with EUROSTAT. Substantial progress has already been made within the Safety and Health Commission as regards the oil and gas industry, and work is now to begin on accidents in surface and underground workings.

#### 2.8.3 European Agency

The European Agency for Safety and Health at Work in Bilbao (Spain) has now begun work. Its function is to provide the Community bodies, the Member States and those involved in the field with the technical, scientific and economic information of use in the field of safety and health at work. The Safety and Health Commission is keen to work with the Agency. At present, co-operation would mainly concern the collection and analysis of information on accidents in the extractive industries in the European Union.

#### 2.8.4 Advisory Committee

Government, worker and employer representatives continued to attend meetings of the Advisory Committee on Safety, Hygiene and Health Protection at Work as observers from the Safety and Health Commission and, conversely, representatives of the Advisory Committee were invited to meetings of the Safety and Health Commission. It is hoped that this will enable the two bodies to become better acquainted with each other's work. At the plenary meetings of each body, the observers report on the other body's activities. Experience to date indicates that the two do have points in common, but that there are obvious fundamental differences.

#### 2.8.5. International Labour Organisation

There are long-established and close links between the International Labour Organisation and the Safety and Health Commission, as reflected in the fact than an observer from the ILO attends Safety and Health Commission meetings. A major point of common interest is Convention 176 concerning safety and health in mines and the corresponding Recommendation 183. These were adopted by the General Conference of the International Labour Organisation on 22 June 1995. The Convention is based on Directive 92/104/EEC and the Safety and Health Commission is monitoring its ratification. Two Member States have so far ratified, but the others have not yet completed preparations. Another major area for cooperation is the compilation of accident statistics.

## 2.9 Improvement of the organisation, operation and image of the Safety and Health Commission

In order to make its activities even more effective than in the past while working within the administrative and financial constraints applying, the Safety and Health Commission has for some time been seeking to improve its organisation, operation and, as an accessory consideration, its image. The results are reflected in Doc. No 1173/3/95, which the Safety and Health Commission approved on 5 May 1997. The Restricted Committee acts as a steering body for the five working Committees, and it has been possible in some cases to reduce the length of its meetings and the numbers attending. The Committees' work is to be focused on priority projects and to be carried out to a large extent without assistance from the Secretariat,

while the membership of ad hoc groups is to be limited and will depend on the subject being dealt with.

#### 3 THE WORK OF THE COMMITTEES

#### 3.1 Committee on Underground Workings

#### 3.1.1 Meetings, subjects covered

The Committee met twice in 1997: on 6 March and 16 October, and there were several meetings of small working groups. The work centred on escape of workers in an emergency, measures to reduce the explosion risk and the scope for compiling accident statistics.

#### 3.1.2 Escape from underground mines in the event of an emergency

In 1997, the Committee completed work on the information paper on escape from underground mines in the event of an emergency (Doc. No 0027/3/97). This paper starts from basic requirements in Community directives, from which it derives the precautions to be taken. It discusses escape plans, communications systems, aids to evacuation, self-rescuers and refuge chambers and incorporates the knowledge and experience of rescue experts.

#### 3.1.3 Measures to reduce the explosion risk in underground workings

Good progress was made in 1997 on a report with proposals to the governments of the Member States on measures to reduce the explosion risk in underground workings (Docs No 5346/96 and 5816/96). Experts from various fields contributed. The project originated in the explosion protection workshop on 27 November 1995, which indicated that it might be useful to update Doc. No 5147/89, produced following the firedamp and coal-dust explosion at Simon colliery (France) in 1985. The main new topics to be addressed are: firedamp in blind-end drivages where deep/extended-cut techniques are used, various aspects of ventilation ducting, problems in the use of self-rescuers, ventilation of roof cavities, ignition by rock-on-rock friction and triggered barriers. The Committee expects to complete the work in 1998.

#### 3.1.4 Accident statistics

On several occasions, the Committee discussed what the Safety and Health Commission could do to produce statistics on accidents in underground mines. A small working group was asked to draw up a questionnaire, to be based on forms produced by the Committee on Borehole Operations, while also taking account of EUROSTAT's work. The Committee's efforts will be successful only if the Member States provide the data required. It is proposed to cover the period 1990 to 1995.

#### 3.2 Committee on Surface Workings

#### 3.2.1 Meetings, subjects covered

The Committee held a plenary meeting on 17 October 1997. The agenda covered risk assessment, including the previous year's workshop, driver vision from reversing quarry vehicles, blasting accidents and initial preparations for a workshop in 1998.

#### 3.2.2 Safety in quarries - risk assessment

The report on the workshop on basic safety issues in quarries held in Italy on 21–22 June 1996 had been prepared by a small working group so that it could then be scrutinised and approved by the full Committee without change (Doc. No 5619/1/96). The main purpose of the workshop was to allow a comparison of experience of identifying and assessing risks in quarries in accordance with the Community directives. Since field trips had been arranged in conjunction with the workshop, the Committee decided to include in the report information on the firms visited.

#### 3.2.3 Risk assessment in quarries

The Committee started work on a document on risk assessment in quarries, on the basis of two drafts produced separately by Committee members (Doc. No 0481/97 and 0026/97). The first version distinguished three areas of activity in quarry operations: extraction, haulage and preparation. Each of these areas is dealt with in a separate section of the document, which can be used independently from the other sections. The Committee thought this version was a good starting point. Various aspects were to be fleshed out, e.g. using the second draft submitted. A small editorial group was to produce the final draft together with the two authors. The document is mainly intended to provide small and medium-sized firms with help in producing the safety and health document required by Directive 92/104/EEC.

#### 3.2.4 Visibility from quarry vehicles

A high proportion of fatal accidents in quarries arises from reversing of large vehicles. In connection with the Machinery Directive, better arrangements were therefore sought in the United Kingdom for large machines which afford no direct rearward driver vision (Doc. No 0982/97). It has been established that suitable devices are available on the market at reasonable prices. After initial discussion, the Committee decided to instruct a small working group to prepare for more detailed discussion at the next meeting.

#### 3.2.5 Blasting accidents

In view of a number of accidents and incidents in connection with blasting, the Committee decided to discuss the question at the next meeting, on the basis of accident reports. It seems appropriate to include blasters' training and working practice.

#### 3.2.6 Planned workshop in the United Kingdom

The United Kingdom offered to hold a workshop on safety and health in quarries towards the end of its EU presidency in the first half of 1998, as a follow-up to the 1996 workshop in Italy, and focusing on safety and health management in quarries. Field trips were planned in addition to the formal proceedings. The Committee decided to have a programme drawn up by a small working party.

#### 3.3 Committee on Borehole Operations

#### 3.3.1 Meetings, subjects covered

The Committee met twice in 1997: on 15 April and 10 December. Ad hoc groups held several preparatory meetings on various subjects. The work centred on preparations for the workshop

on mutual recognition of training certificates in the offshore oil and gas industry, production of a report on this event and further discussions on accident statistics, including both offshore and onshore accidents.

#### 3.3.2 Mutual recognition of training certificates

This issue is particularly important in the offshore sector. A workshop on the topic was a longstanding project, and took place in the course of the report year. In previous years, the Committee had prepared six recommendations to the governments of the Member States on safety training in the oil and gas industry, and had stressed the desirability of mutual recognition. This is facilitated by EU legislation and policy. The governments, oil companies, contractors and training providers were increasingly interested in a comprehensive solution. The workshop on 18 June 1997 confirmed the importance to the offshore sector of appropriate safety and training regulations, mutual recognition of training certificates and the consequent freedom of movement and efficiency gains. All the groups involved in the workshop showed a willingness to persevere with the efforts to achieve comprehensive recognition arrangements. The account of the workshop's proceedings is to be produced by the beginning of 1998 (Doc. No 0500/97).

#### 3.3.3 Accident statistics

Doc. No 5908/4/94 on accident statistics in the European offshore oil and gas industry, which was approved by the Safety and Health Commission in 1996, includes a recommendation that the reporting system be improved by establishing an agreed basis for presenting accident rates. A substantial draft report with recommendations to the governments of the Member States (Doc. No 0820/97) was produced to clarify this and other questions. The progress made by the end of 1997 indicates that an accident rate per million hours' work may be feasible. It seems worth considering whether accident analysis could be extended to include a breakdown by injury severity and type of employment at the time of the accident. The Committee intends to complete work on the draft report at the beginning of 1998.

#### 3.4 Committee on Health Protection

#### 3.4.1 Meetings, subjects covered

The full Committee met on 8 October 1997 and discussed the draft of a report on the previous year's workshop on health protection for underground workers, as well as priorities for future work.

## 3.4.2 Control of hazards caused by noxious substances resulting from the use of diesel engines and blasting operations underground

The Committee scrutinised a report on the workshop held on 25–26 September 1996 on diesel exhaust emissions and shotfiring fumes in underground mine workings and tunnelling (Doc. No 5980/1/96). Various points, especially in connection with the underground use of diesel engines, were discussed at length. It was suggested that the draft report should be updated in some respects and that the Committee should express a view on certain contentious issues or attach recommendations. After weighing the advantages and disadvantages of these proposals, the Committee decided to leave the report as it stood, but to add the programme of the workshop and a list of participants. The report is to be distributed as soon as it is approved by the Safety and Health Commission. The Secretariat was asked to keep a close watch on moves

within the European Commission with regard to new limit values for nitrous gases and to try to ensure, should the need arise, that the Safety and Health Commission was involved in the technical discussions.

#### 3.4.3 Suggested priorities

The Committee members had a wide range of suggestions for future activities. In addition to familiar topics such as diesel exhaust, vibration, noise, siliceous dust and back protection, two new areas in which information could be exchanged were medical surveillance, e.g. with reference to noxious dusts and including surface workings, and work in extreme temperatures. Financial and organisational constraints and the limited funding available for research will allow only two subjects to be tackled.

#### 3.5 Committee on Human Factors

#### 3.5.1 Meetings, subjects covered

The full Committee met on 18 September 1997. The main points on the agenda were scrutiny of Doc. No 5324/4/96 and arrangements to ensure that it was widely distributed, a major safety campaign in Germany and initial preparations for a workshop.

#### 3.5.2 The role of human factors in risk prevention

Doc. No 5324/4/96, which had been prepared by the Committee and approved by the Safety and Health Commission the previous year, was discussed in depth. It was confirmed that the guidance it contained was useful in practice and could be applied in both large and small firms. The document suggests how human factors can be allowed for in risk identification and assessment, what part they can play in preventive action and how they can be comprehensively taken into account in operational practice.

In view of the importance of the document, which is reflected in the fact that it has been translated into all the official languages of the European Union, it should be distributed as widely as possible. The Committee agreed that the national interest groups should be provided with an adequate number of copies. Distribution to training institutions such as universities and colleges of higher education was also considered. At the next meeting, the representatives of the Member States are to report on dissemination in their various countries.

#### 3.5.3 Safety campaign on risk awareness in company practice

The German delegation reported on a successful safety campaign at two collieries, which had been part-funded by the European Commission (Doc. No 1056/97). The aim was to make individual workers more inclined to exercise caution by improving their personal assessment of risks and thus to cut accident rates. Analysis of the accident figures had indicated that accidents were caused to an appreciable extent by subjective underestimation of the risks actually present. Relevant information was distributed in a way which multiplied its impact and ensured that it reached the whole workforce. A follow-up study some time afterwards confirmed that assessment of dangers had improved and that the accident figures had been considerably reduced. The report met with great interest in the Committee.

#### 3.5.4 Initial preparations for a workshop

For various reasons, it will not be possible to arrange a workshop on human factors before 1999. The Finnish representative offered to hold such an event in his country during its EU presidency in the autumn of 1999. The workshop's focus would be on the relationship between human factors and automation in mines. Such advanced technology was currently being introduced at a Finnish mine. Doc. No 5324/4/96 could be used as an outline for the workshop. An ad hoc group was set up to make the necessary preparations.

#### 4 FUTURE WORK

Priorities for future work in the Safety and Health Commission were set in the light of the financial, staffing and organisational constraints and of the new principles for its organisation and working methods. The Committees will thus concentrate on the following topics:

#### Committee on Underground Workings

Compilation of accident statistics for underground workings; follow-up to the workshop on FSV hazards; exchange of information on problems of mining in extreme temperatures (jointly with the Committee on Health Protection).

#### Committee on Surface Workings

Completion of the report on risk assessment in quarries; start of work on accident statistics for surface workings; assistance with the workshop on 25–26 June 1998 in Bath (UK).

#### **Committee on Borehole Operations**

Completion of the groundwork on accident statistics in the European oil and gas industry; assessments of all results of the workshop on mutual recognition of training certificates.

#### **Committee on Health Protection**

Exchange of information on medical surveillance; exchange of information on problems of mining in extreme temperatures (jointly with the Committee on Underground Workings).

#### **Committee on Human Factors**

Collection and assessment of all available and useful information on the effects of human factors; preparation of a workshop (1999) on human factors and the application of new technologies in the mining industry.

In addition to the workshop planned for the first half of 1998 in the United Kingdom on safety and health protection in quarries, a second workshop is planned for the second half of 1998 in Austria on safety and health in the European extractive industries. A special ad hoc group will be set up at the beginning of 1998 to make the practical preparations for the second workshop, the first being the responsibility of the Committee on Surface Workings. Co-ordination for the workshops will be the task of the Safety and Health Commission Secretariat.

#### 5. SUMMARY

In 1997, the Safety and Health Commission continued its efforts, in accordance with its remit, to improve the safety and health protection of workers in the extractive industries. After a considerable gap, it was again able to produce activity reports, for the period 1985–1995 and for the year 1996.

Discussion of major incidents centred on the accident at Barentsburg Colliery in northern Norway, which took place on 18 September 1997 and killed 23 miners.

Three reports were produced: an information report on escape from underground mines and two reports on the workshops held in 1996 on "Safety in quarries – Risk assessment" and "Control of hazards caused by noxious substances resulting from the use of diesel engines and blasting operations underground". Work was almost completed on drafting a report with proposals to the governments of the Member States on measures to reduce the explosion risk in underground workings.

In the course of 1997, two workshops took place: on mutual recognition of training certificates in the offshore oil and gas industry and on risks associated with the use of free-steered vehicles in surface and underground workings.

The Safety and Health Commission continued its work on Community Directives. By the end of 1997, the directives specific to the extractive industries — Directives 92/91/EEC and 92/104/EEC — had been transposed into national law in all Member States. The Restricted Committee worked on the draft of a Directive adapting the annexes to Directive 82/130/EEC to technical progress.

The Safety and Health Commission endorsed a research project aimed at improving safety in the petrochemical industry, confirming that it was relevant to the extractive industries.

Co-operation continued in 1997 with a number of European and international organisations.

A document was adopted on improvement of the organisation, operation and image of the Safety and Health Commission, bringing these deliberations to a conclusion for the time being.

The Committees on Underground Workings, Surface Workings, Borehole Operations, Health Protection and Human Factors and the associated ad hoc groups prepared the documents adopted by the Safety and Health Commission and the events it organised.

Priorities were set for 1998, with due regard for the financial and organisational resources available and the new approach to organisation and operation.

#### 6. ANNEXES

6.1 Council Decision on the extension of the responsibilities of the Mines Safety and Health Commission to all mineral-extracting industries

Terms of reference of the Safety and Health Commission

6.2 List of heads of delegation and Committee chairmen; Secretariat

6.3 Major Safety and Health Commission documents in 1997

## 6.1 Council Decision on the extension of the responsibilities of the Mines Safety and Health Commission to all mineral-extracting industries

## of 27 June 1974 (74/326/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community and in particular Article 145

Whereas the representatives of the Governments of the Member States meeting within the special Council of Ministers. by Decision of 9 and 10 May 1957, set up a Mines Safety and Health Commission whose terms of reference is laid down by Decision of 9 July 1957 (') of the representatives of the Governments of the Member States meeting within the Special Council of Ministers amended by Decision of 11 March 1965 (3) are to follow developments in safety and in the prevention of occupational risks to health in coil mines and to draw up proposals appropriate for the improvement of safety and health in coal mines:

#### HAS DECIDED AS FOLLOWS:

#### Article 1

- 1. Preventive action against risks of accident and occupational risks to the safety and health of workers in all mineral-extracting industries except simple excavation excluding the protection of the health of workers against the dangers arising from ionizing radiations which is subject to special regulations pursuant to the Treaty establishing the European Atomic Energy Community shall be the responsibility of the Mines Safety and Health Commission within tile terms of reference laid down by Decision of 11 March 1965 of the representatives of the Governments of the Member States meeting within the special Council of Ministers.
- (2) OJ No 28, 31.8.1957, p. 487/57
- (3) OJ No 46, 22.3.1965, p. 698/65

#### Terms of reference of the Safety and Health Commission

## DECISION of 9 July 1957

1. The Commission shall follow developments regarding safety in coalmines, including those regarding the safety regulations instituted by the public authorities, and assemble the necessary information concerning progress and practical results obtained, more especially in the matter of accident prevention.

To secure the necessary information, the Commission shall apply to the Governments concerned.

The Commission shall evaluate the information in its possession and submit to the Governments proposals for the improvement of safety in coalmines

- 2. The Commission shall help the High Authority to work out a method of compiling intercomparable accident statistics
- 3. The Commission shall ensure the prompt forwarding to the quarters directly concerned (including in particular mines inspectorates and employers' and workers' associations) of relevant information assembled by it.
- 4. The Commission shall ascertain, by regular contact with the Governments, what action is being taken to implement the proposals of the Conference on Safety in Coalmines, and such proposals as it may itself draw up.
- 5. The Commission shall propose such study and research as it deems most indicated for the improvement of safety, with notes as to the way in which these can best be effected
- The Commission shall facilitate the exchange of information and experience among persons responsible for safety matters, and propose appropriate measures for this purpose (e.g. organization of study sessions, establishment of documentation services).
- 7. The Commission shall propose appropriate measures for ensuring the necessary liaison among the rescue services in the Community countries.

The Commission shall submit annually to the Council of Ministers and the High Authority a Report on its activities and on developments regarding safety in coalmines in the different member States. In this connection, it shall in particular examine the statistics compiled on accidents and incidents in coalmines

### 6.2 List of heads of delegation and Committee chairmen

#### Secretariat

#### Heads of delegation

Member State	Head of delegation
Belgium	Mainjot
Denmark	Noergaard
Germany	Mager
Greece	Paitas
Spain	de Molina
France	Bonneviale
Ireland	Walsh
Italy	Retacchi
Luxembourg	Weber
Netherlands	van der Tuin
Austria	Maier
Portugal	da Silva Daniel
Finland Wares	Reinikka,
Sweden	Anderson

#### Committee chairmen

United Kingdom

Committee	Chairman	Member State
Underground Workings	Mitchell	United Kingdom
Surface Workings	Retacchi	Italy
Borehole Operations	Noergaard	Denmark
Health Protection	Cocude	France
Human Factors	Anderson	Sweden

#### Secretariat

European Commission Directorate-General V Unit V/F/4 Biosca de Sagastuy (Head) Rother Mitchell

# 6.3 Major Safety and Health Commission documents in 1997

Doc. No
0830/97
0030/97
0027/3/97
5619/1/96
5980/1/96
1056/97
1173/3/95

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## **DOCUMENTS**

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