COMMISSION OF THE EUROPEAN COMMUNITIES

COM(87) 182 final

Brussels, 16 June 1987

TRANSPORT OF DANGEROUS GOODS AND WASTES

FINAL REPORT FROM THE COMMISSION
COMMUNICATION FROM THE COMMISSION
THE TRANSPORT OF DANGEROUS GOODS AND WASTES

1. INTRODUCTION
In a debate on 13 September 1984 the European Parliament adopted two resolutions on the environment and in particular the accident involving the Cargo-ship Mont Louis, requesting the Commission and the Member States to take certain actions relating to the transport of dangerous and radioactive substances and wastes.

The Commission has examined the complicated network of laws, conventions, regulations, agreements, codes and recommendations controlling the transport of dangerous materials, and developed the recommendations for action at Community level contained in this communication. The detailed report of the Commission's working group will be made available separately.

The Commission's recommendations are intended to contribute to the rationalisation of the regulations governing the transport of dangerous goods by consistent implementation of the requirements of international agreements at Community level. Such action will help to reduce the risks to man and the environment resulting from the transport of dangerous materials and will assist the aim of completing the internal Community market by 1992.

2. INTERNATIONAL CONVENTIONS AND AGREEMENTS
Many international conventions and agreements affect the transport of dangerous materials; there are agreements specifically concerned with the transport of dangerous goods and other, more general, agreements concerned with the safety of transport which also affect vehicles carrying dangerous materials. In general these agreements apply only to international transport.
UN Recommendations

The United Nations Committee of Experts on the Transport of Dangerous Goods has published detailed recommendations which cover, amongst other things, the classification of dangerous substances, a list of the principal dangerous goods, general packing requirements, testing procedures, marking, labelling or placarding and shipping documents. These recommendations are relevant to all modes of transport and they have been incorporated into many of the international agreements on the transport of dangerous goods.

Sea transport

Sea transport, with the exception of coastal shipping, is international and there are many international agreements governing all aspects of shipping, safety and pollution prevention, usually agreed under the auspices of the International Maritime Organisation (IMO). The most important from the aspect of the transport of dangerous goods are SOLAS 74/78 (Safety of Life at Sea) and MARPOL 73/78 (Prevention of Pollution). The international agreements on sea transport are accompanied by detailed Codes of Safe Practice - including the International Maritime Dangerous Goods Code. The IMDG Code gives detailed guidance on the transport of dangerous goods by sea, but does not at present cover hazards to the marine environment.

Road, Rail and Inland Waterway

Road transport of dangerous goods in Europe is covered by the ADR Agreement under the supervision of the Inland Transport Committee of the UN Economic Commission for Europe (ECE). The international regulations concerning the carriage of dangerous goods by rail (RID) are included in Annex 1 of the International Convention concerning the international carriage of goods by rail (COTIF), administered by the Central Office of International Rail Transport (OCTI). Transport of dangerous goods on inland waterways connected to the Rhine network is covered by the ADNR agreement administered by the Central Rhine Commission. Some other European waterways also apply the ADNR agreement as the ADN agreement administered by ECE is not yet in force.
Air transport
Together with other members of the International Civil Aviation Authority (ICAO) EC Member States apply the standards set out in Annex XVIII of the Convention on International Civil Aviation (the Chicago Convention) to transport of dangerous goods by air.

Waste
Waste materials are not included as a separate category in most international agreements on the transport of dangerous goods, although large quantities of wastes are transported to disposal sites outside the country of their origin. Most wastes can be fitted into one of the classes of dangerous goods, but there are difficulties in classifying wastes of mixed or variable composition. There is a need for an agreed classification system for wastes.

Radioactive materials
Radioactive materials are a special class of dangerous material and regulations for their transport have been developed by the International Atomic Energy Agency (IAEA). All the international organisations concerned with the transport of dangerous goods have adopted the IAEA regulations and incorporated them into the appropriate international agreements, but not all the agreements have yet been revised to conform with the latest edition of the IAEA regulations adopted in 1985. The Commission contributes to the continuing development of the IAEA regulations and promotes the uniform application of their requirements throughout the Community.

3. NATIONAL LEGISLATION IN MEMBER STATES OF THE COMMUNITY

International transport
The international agreements described in the previous section are implemented by means of national legislation in each participating country. The majority of the international agreements have been adopted and implemented by the EC Member States with a few exceptions. The agreements covering the transport of dangerous goods by road, rail and air have been implemented by all the Member States, except Greece and Ireland which have not yet ratified the ADR agreement.
In the case of transport by sea, the major conventions affecting the transport of dangerous goods (SOLAS and MARPOL) have been ratified by most Member States, but have not yet been fully implemented.

National transport
National regulations on the internal transport of dangerous materials by road, rail and inland waterway vary considerably between the Member States of the Community. Several countries have regulations which are modelled on the international agreements and are largely compatible with them, but there are many small differences introduced to meet the requirements of particular countries. In other countries the regulations for internal transport are not based on those for international transport and one Member State has no national legislation for road transport of dangerous goods.

4. COMMUNITY POLICY ON THE TRANSPORT OF DANGEROUS GOODS

Policy objectives
Accidents involving vehicles carrying dangerous goods can have potentially disastrous consequences and, even though the number of major accidents is small, there is understandable public concern about the risks involved in transporting dangerous materials. The aim of the Community policy should be to ensure that such goods are carried safely and economically, and that the risk to people and the environment is minimised.

Within the Community this objective can best be achieved by greater harmonisation and more effective enforcement of the regulations applying to national and international transport, and by preventing barriers to the movement of dangerous goods, subject to agreed controls.

International transport
The international agreements on the transport of dangerous materials are extremely complex documents which have taken many years to develop and it would clearly be pointless for the Commission to attempt to duplicate the work of the international organisations
responsible for them. The role of the Commission is to ensure that the international agreements are uniformly applied by the Member States of the Community.

The Commission will also attempt to achieve a more systematic and structured coordination of Member States' positions within the international organisations and will encourage these organisations to take further steps towards a unified system of regulations for all transport of dangerous materials.

A number of actions have been taken at Community level concerning sea transport of dangerous goods, including the establishment of an information system for the control and reduction of pollution caused by spillages of hydrocarbons and other harmful substances at sea. It is proposed that a mandatory notification system for ships carrying dangerous goods and a reporting system for incidents involving packaged goods should also be introduced.

The Commission is also sponsoring a study of an improved Vessel Traffic Services (VTS) network to reduce the risks of collision at sea, including the identification of ships carrying dangerous goods (COST 301).

National transport
There is no comprehensive Community instrument concerning the transport of dangerous goods and Community transport operators may have to comply with different regulations for national and international journeys. The long-term objective should be to achieve the freedom to provide services for the carriage of dangerous goods, and their circulation in the Community, subject to harmonized controls. The Commission takes the view that the rules applying to the internal transport of dangerous goods should be based on the same principles as the international agreements. It will accordingly make proposals for this purpose.

Studies of the transport of dangerous goods by road have found low levels of compliance with existing regulations and priority in Community action should therefore be given to improved training of drivers and managers, and better enforcement of existing rules.
Wastes
The Community directives concerning wastes contain certain provisions on transport and make reference to the international transport conventions to which Member States are party. It is therefore important that all Member States should apply the international conventions in order to achieve uniformity.

Classification and Labelling
There is a large degree of harmonization in the requirements for the classification, packaging and labelling of dangerous goods for transport by different modes, but the Community requirements for the classification and labelling of dangerous substances for marketing differ significantly from the transport requirements. This can lead to multiple labelling of the same product.

5. RECOMMENDATIONS FOR SPECIFIC ACTIONS BY THE COMMUNITY

The Commission intends to make proposals to the Council on the following matters to achieve the objectives of greater harmonization and more effective enforcement of the rules governing the transport of dangerous goods in the Community:

i) a Community instrument requiring Member States to implement the provisions of relevant international agreements on the transport of dangerous goods by sea;

ii) a Directive on a mandatory notification system for ships carrying dangerous goods and a reporting system for incidents involving packaged goods;

iii) a Directive requiring Member States to accept road vehicles conforming to ADR for international transport of dangerous goods or wastes;

iv) a Directive on the training of drivers of road vehicles carrying dangerous goods or wastes;

v) a Directive on the training of road transport managers concerned with the transport of dangerous goods or wastes;
vi) a Directive on the enforcement of regulations on the transport of dangerous goods and wastes by road.

Drafts of these instruments are in preparation by the Commission.

The Commission will also study the following further measures:

vii) The Commission intends to study how to harmonise Community classification and labelling requirements with those of the international transport agreements.

viii) The Commission will continue to support the work of the international organisations to develop an agreed classification system for wastes.

ix) A study is being made of providing VTS (Vessel Traffic Service) systems with additional information on vessels carrying dangerous goods.
TRANSPORT OF DANGEROUS GOODS AND WASTES
FINAL REPORT OF THE INTERSERVICE GROUP

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I. INTRODUCTION

The European Parliament in an emergency debate on 13 September 1984 adopted two resolutions on the environment and in particular the accident involving the Mont Louis.

The resolutions, which are presented in annexes I and II to this report, request the Commission and the Member States to take certain actions relating to the transport of dangerous and radioactive substances and waste.

The Commission consequently convened two groups entrusted with the analysis of the resolutions and with the drafting of recommendations.

An Interservice Group of the Commission has made an investigation into the existing regulations at international and national level on the transport of dangerous goods and wastes, in order to discover the gaps and problems which could give rise to Commission proposals as asked for by the Parliament.

In addition, the special CEC permanent working party for the transport of radioactive materials was convened on 17 October 1984 to examine the technical, radiological and regulatory aspects of transporting uranium hexafluoride.

The inventory in the following four chapters of this report shows a complicated network of laws, conventions, regulations, agreements, codes and recommendations controlling the transport of dangerous materials in which national and international organisations supported by highly qualified experts are constantly working on amendments to improve safety.

Chapters 6 and 7 describe current regulatory problems and gaps and the ongoing initiatives in the international bodies to solve these problems. The last part of the report (chapter 8) sets out conclusions and recommendations for possible Community actions. The
Community actions recommended are intended to contribute to the rationalisation of the regulations governing the transport of dangerous goods by greater harmonisation of the requirements of international agreements and consistent implementation of these agreements at Community level. Such action will help to reduce the risks to man and the environment resulting from the transport of dangerous materials and will assist the aim of completing the internal Community market by 1992.

The report is principally concerned with the regulatory aspects of transporting dangerous materials and it does not address the legal question of liability and compensation for damage or injury resulting from accidents involving dangerous materials. Aspects of this question has been considered by several other organisations including the IMO Legal Committee which made a proposal for a draft convention in 1984, the International Institute for the Unification of Private Law (UNIDROIT), and OECD. The European Foundation for the Improvement of Living and Working Conditions has recently sponsored a major study of the transport of non-nuclear dangerous goods and wastes, including the legal aspects, which is being studied by the Commission.

2. INTERNATIONAL CONVENTIONS AND AGREEMENTS — SEA TRANSPORT
There are a large number of international conventions and agreements governing the transport of goods by sea made under the auspices of the United Nations (UN), principally by the International Maritime Organisation (IMO). The provisions of these agreements affecting the transport of dangerous goods are summarised in this section of the report. The information on contracting Member States was correct at the time of writing the report.

2.1. INTERNATIONAL CONVENTIONS AND AGREEMENTS

Entry into force: 1962 — number of contracting states: 56, EC Member States except France, Italy, Ireland, Greece
The convention deals with the rights and duties of states on the High Seas. The term "High Seas" means all parts of the sea that are not included in the Territorial Sea or in the Internal Waters of a state.

There are only two regulations on the protection of the marine environment: Art. 24 requires every state to draw up regulations to prevent pollution of the seas by the discharge of oil from ships, pipelines, etc.; Art. 25 requires states to take action to prevent pollution of the sea by radioactive wastes, or other radioactive or noxious materials.

Hazards for the marine environment caused by the transport of dangerous cargo other than oil are not dealt with.

**TS-Convention**: Convention on the Territorial Sea and the Contiguous Zone, 1958 (not in force)

Though the convention is not in force, it codifies the custom in international law in respect of the right of innocent passage. Subject to the provisions of the convention, ships of all states shall enjoy the right of innocent passage through the territorial sea. Passage is innocent as long as it is not prejudicial to the peace, good order or security of the coastal state. Foreign ships exercising the right of innocent passage shall comply with the laws and regulations enacted by the coastal state, in conformity, in particular, with international laws and regulations relating to transport and navigation. The coastal state may take the necessary steps in its territorial sea to prevent passage which is not innocent. Furthermore, the TS-Convention contains regulations on the determination of the base-line from which the territorial sea is established.


Concluded in 1982 and signed at Montego Bay, Jamaica, April 1983. The Convention will come into force 12 months after the deposit of the 60th instrument of ratification or accession.
The LOS-Convention deals with the entire International Law of the Sea in 320 articles subdivided in 16 parts and in nine annexes. The protection and preservation of the marine environment is settled in great detail in Part XII Art. 192-237.

Regulations from this part most important for shipping are:
Article 211 (pollution from vessels)
Article 217 (enforcement by flag states)
Article 218 (enforcement by port states)
Article 219 (measures relating to seaworthiness of vessels to avoid pollution)
Article 220 (enforcement by coastal states).

According to Article 211 (1), states acting through the competent international organization or general diplomatic conference, shall establish international rules and standards to prevent, reduce and control pollution of the marine environment from vessels and promote the adoption of routeing systems designed to minimize the threat of accidents which might cause pollution of the marine environment. Coastal states may, for their territorial sea, adopt laws and regulations for the prevention, reduction and control of marine pollution from foreign vessels, including foreign vessels exercising the right of innocent passage. But according to Article 19 (2) the passage is no longer regarded as peaceful if the foreign ship engages in any act of willful and serious pollution contrary to this convention. Even outside the territorial sea, the coastal states, for the purpose of enforcement, may in respect of their Exclusive Economic Zone, adopt laws and regulations for the prevention, reduction and control of pollution conforming to and giving effect to generally accepted international rules and standards.
International Convention for the Safety of Life at Sea (SOLAS 74/78)
The Convention was elaborated within IMO in 1974 and the Protocol in 1978; it entered into force in 80/81 and has been ratified by all maritime EC Member States.

Chapter VII deals exclusively with the carriage of dangerous goods. Regulation 1 of Chapter VII prohibits the carriage of dangerous goods by sea except when they are carried in accordance with the provisions of the SOLAS Convention and requires each Contracting Government to issue detailed instructions on safe packing and storage of dangerous goods. Regulation 2 divides dangerous goods into nine classes. Other regulations deal with the packing, identification, marking, labelling and placarding of dangerous goods, the documents which are to be provided, storage requirements, and the carriage of explosives on board passengers ships. IMO has recommended that Chapter VII of SOLAS should be implemented by means of the IMDG Code (section 2.2.).

International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)
The Convention was elaborated within IMO in 1973 and the Protocol in 1978; it entered into force in 1983 and has been ratified by all maritime Member States except Ireland.

Annex I of MARPOL deals with pollution by oil. Annex II to the Convention contains general requirements relating to the prevention of pollution by noxious liquid substances carried by sea in bulk and is scheduled to enter into force in April 1987.

Optional annex III contains general requirements relating to the prevention of pollution by harmful substances carried by sea in packaged form or in freight containers, portable tanks or road and rail tank wagons. This annex has been ratified by Denmark, France, Germany, Italy, Greece and the United Kingdom. To supplement the basic requirements of Annex III, contracting governments are required to issue detailed
requirements on packing, marking, labelling and placarding, documentation, storage, quantity limitations, exceptions and notifications by the master or owner of the ship or his representative of the intent to load or unload harmful substances.

Protocol I deals with provisions concerning reports of incidents involving harmful substances. The revised Protocol as adopted on 5 December 1985 should enter into force on 6 April 1987. It stipulates the duty of the master of a ship involved in an incident which may cause a discharge of oil or noxious liquid substances carried in bulk or of harmful substances in packaged form, to make without delay a report to the nearest coastal state. The revised Protocol will cover the transport in packages of substances listed in the IMDG Code as marine pollutants.

Convention on the International Regulations for preventing collisions at sea (COLREG 72)
Elaborated within IMO in 1972 and amended in 1981; entered into force in 1977 (amendments in 1983); ratified by all maritime EC Member States.

The Convention contains sections dealing with steering and sailing; lights, shapes of navigation marks and sound and light signals. There are also four annexes containing technical information about lights and marks and their positioning; sound signal appliances; and a list of recognised international distress signals. Article 10 deals with the navigation of ships in IMO approved traffic separation schemes.

International Convention on Load Lines (LL 66)
Elaborated within IMO in 1966 and amended in 1971, 1975, 1979, 1983. Entered into force in 1968 and has been ratified by all maritime Member States. (The amendments have not yet come into force).
The main objective of the Convention is determination of freeboards: limitation on the draught to which a ship may be loaded. The technical annex contains several additional safety measures concerning doors, freeing ports, hatchways and other items.

International Convention relating to intervention on the high seas in case of oil pollution casualties (Intervention 69)
Elaborated within IMO in 1969; entered into force in 1975 and ratified by all maritime Member States except Greece.

This Convention affirms the right of a coastal State to take such measures on the high seas as may be necessary to prevent, mitigate or eliminate danger to its coastline or related interests from pollution by oil or the threat thereof, following upon a maritime casualty. The coastal State is, however, empowered to take only such action as is necessary, and after due consultations with appropriate interests including, in particular, the flag State or States of the ship or ships involved, the owners of the ships or cargoes in question and, where circumstances permit, independent experts appointed for this purpose.

Protocol of 1973: entered into force in 1983 and has been ratified by Belgium, Denmark, Italy, Netherlands, France, Germany and the United Kingdom. It extends the regime of the 1969 Intervention Convention to substances other than oil.

International Convention on standards of training certification and watchkeeping for seafarers (STCW/78)
Elaborated within IMO in 1978 and entered into force in 1984, has been ratified by all maritime Member States.

Of importance are resolutions 11 and 13 of the International Conference on Training and Certification of Seafarers, 1978, which invite IMO to consider provisions concerning the handling of hazardous or noxious dry chemicals in bulk and the training of
officers and ratings of ships carrying dangerous and hazardous cargoes other than in bulk. An IMO Resolution to this effect was adopted in 1983.

**Agreement for cooperation in dealing with pollution of the North Sea by oil and other harmful substances (Bonn Agreement)**

This agreement was signed by the coastal States of the North Sea and by the Community on 13 September 1983. It strengthens co-operation and mutual assistance in combating pollution by oil and other dangerous substances.

**Protocol to the Barcelona Convention concerning cooperation in combating pollution of the Mediterranean Sea by oil and other harmful substances in cases of emergency**

This Protocol, signed in Barcelona on 16 February 1976, was concluded by the Community on 12 August 1981, with France, Greece and Italy as Contracting Parties.

It provides for the Parties to cooperate in drawing up emergency plans, promoting methods of controlling marine pollution by hydrocarbons, disseminating information on the organization of resources and on new methods to prevent and control pollution and developing relevant research programmes.

**Convention on the protection of the marine environment of the Baltic Sea Area (Helsinki Convention)**

This Convention was signed in 1974 by the coastal states of the Baltic Sea. An attempt was made by the Community to adhere to the Convention in 1977, but it was opposed by a non-member state.

The Convention provides, inter alia, for the Contracting Parties to take measures and co-operate in order to maintain a capability to combat spillages of oil and other harmful substances on the sea.
2.2. CODES AND RECOMMENDATIONS

United Nations Recommendations

The United Nations Committee of Experts on the Transport of Dangerous Goods has published detailed recommendations which cover, amongst other things, the classification of dangerous substances, a list of the principal dangerous goods, general packing requirements, testing procedures, marking, labelling or placarding and shipping documents. These recommendations have been incorporated into many of the international agreements on the transport of dangerous goods and the UN number of the principle dangerous goods is widely used to identify dangerous substances. The UN Recommendations are relevant to all modes of transport and they aim at presenting a basic scheme of provisions that will allow national and international regulations governing the various modes of transport to develop within it in a uniform fashion.

International Maritime Dangerous Goods (IMDG) Code

The IMDG Code has been adopted by all maritime EC Member States.

The IMDG Code only applies to ships covered by the SOLAS Convention, but IMO considers it highly desirable that its requirements should be observed by all ships. The legal system of each country determines whether the Code becomes mandatory or is applied as a recommendation. Application of the Code as a recommendation does not detract in any way from the obligations imposed by the SOLAS Convention, but provides a greater flexibility in the method of observance.

The first part of the Code consists of a General Introduction, describing required marking, identification and consignment procedures, labelling and placarding, documentation and packing of dangerous goods. The General Introduction includes sections containing special requirements for freight containers, portable tanks and road tank vehicles, storage and segregation, fire prevention and fire fighting. The final sections deal with the carriage of dangerous goods on roll-on/roll-off ships, in limited
quantities, in shipborne barges on barge-carrying ships, the chemical stability of dangerous substances and requirements for transport under controlled temperatures.

The Code details nine classes of dangerous goods and Annex I to the General Introduction gives packing recommendations and a glossary of packaging with illustrations.

The General Index of the IMDG Code
All substances and articles which appear in the IMDG Code are listed in the General Index which gives the product's UN number; its Emergency Schedule number (EmS. No.); Medical First Aid Guide Table number (MFAG Table No.); and the IMDG Code-Page number of the individual schedule. By looking up the substance or article in the General Index it is a simple matter to ascertain the appropriate Emergency Schedules or Medical First Aid Guide Table.

Emergency procedures for Ships Carrying Dangerous Goods (Emergency Schedules - EmS).
IMO has prepared group emergency schedules for all substances and articles covered by the IMDG Code. These are contained in the IMO Emergency Procedures for Ships Carrying Dangerous Goods, a supplement to the IMDG Code. These procedures were published in 1981 and contain information designed to protect the ship as well as those on board. The Emergency Schedules divide the various substances and articles contained in each IMDG Code class into groups and advise on any special emergency equipment which should be carried; they also include the emergency procedures which should be followed and the emergency action to be taken in case of spillage or fire.

The Code of Safe Practice for Solid Bulk Cargoes (BC Code)
The BC Code was adopted in 1965 and has been revised four times since; it is applied by Belgium, Denmark, Germany, Ireland, Netherlands and the United Kingdom.
The primary aim of the Code is to promote safe stowage and shipment by:

- highlighting the dangers associated with the shipment of certain types of bulk cargoes;
- giving guidance on the procedures to be adopted when the shipment of such bulk is contemplated;
- listing typical materials currently shipped in bulk, together with advice on their properties and handling; and
- describing test procedures to be employed to determine various characteristics of the bulk cargo materials.

The practices contained in the BC Code are intended as recommendations to governments, ship operators and masters, and include internationally accepted methods of dealing with the hazards which may be encountered when carrying a cargo in bulk.

The BC Code deals with three basic types of cargo:

- those cargoes which may liquify (Appendix A);
- materials possessing chemical hazards (Appendix B); and
- other materials not falling within these two categories (Appendix C).

**International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)**

This Code will apply to chemical tankers constructed on or after the entry into force of the 1983 Amendments to the 1974 SOLAS Convention, which has been set for 1 July 1986. Chemical tankers constructed before 1 July 1986 should comply with the requirements of the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, resolution A.212(VII) (BCH Code), as appropriate and as amended.

The BCH Code applies to existing bulk chemical carriers and will become mandatory upon the entry into force of Annex II to MARPOL 73/78, presently scheduled for April 1987. This code has been
incorporated in the Belgian, Dutch and Italian legislation, and used on a voluntary basis by Germany, Denmark, the United Kingdom and France.

The IBC Code is a companion document to the BCH Code - the purpose of each of these Codes is to provide an international standard for the safe transport by sea in bulk of liquid dangerous chemicals by prescribing the design and construction standards of ships regardless of tonnage involved in such carriage and the equipment they should carry so as to minimize the risk to the ship, its crew and to the environment, having regard to the nature of the products involved.

The Codes primarily deal with ship design and equipment. Other important facets of the safe transport of the products, such as training, operation, traffic control and handling in port, are being or will be examined further by IMO.

**International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code)**

This Code will apply to gas carriers constructed on or after the entry into force of the 1983 Amendments to the 1974 SOLAS Convention, which has been set for 1 July 1986. Gas carriers constructed before this should comply with the requirements of the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, resolution A.328(IX) or the Code for Existing Ships Carrying Liquefied Gases in Bulk, resolution A.329(IX), as appropriate and as amended.

The Code has been in force since 1971; Resolution A.328(IX) has been implemented by Belgium and the Netherlands, and used on voluntary basis by Germany, Denmark, France and the United Kingdom. A.329(IX) is only used on a voluntary basis by France, Germany, Netherlands and the United Kingdom.
2.3. EC INSTRUMENTS

Council Recommendation of 26 June 1978 on the ratification of conventions on safety in shipping\(^1\) (78/584/EEC)

Recommends that Member States which have not already done so should sign and ratify the international conventions concerning the safety of maritime transport, in particular SOLAS, MARPOL, ILO Convention No. 147 concerning minimum standards in merchant ships, and the protocols to these conventions.


This directive requires Member States to take all necessary and appropriate measures to ensure that oil, gas and chemical tankers of 1600 grt and over - whether fully or partly laden - and including those empty but not yet degassed or purged of hazardous residues, entering or leaving the seaports of their territory shall be required to comply with certain minimum requirements on safety of navigation.


This directive prescribes that vessels wishing to use the services of pilots in the North Sea and the English Channel can call on adequately qualified deep-sea pilots and promotes the employment of such pilots in vessels flying the flags of Member States.

\(^1\) OJ No. L 194 of 19.7.1978

\(^2\) OJ No. L 33 of 8.2.1979

\(^3\) OJ No. L 33 of 8.2.1979
Council Decision of 13 December 1982, instituting a research programme known as COST 301\(^4\) (82/887/EEC)

The main objective of COST 301 is to consider the need for and, if appropriate, to propose means to improve the safety of navigation in European waters through an integrated network of shore-based centres. The purpose of these centres, (known as Vessel Traffic Services or VTS) would be, through better organization and management of traffic flow, to reduce risks of collision, stranding and ramming, and therefore enhance safety at sea and prevent pollution of seas and coastal areas. In the Commission's view the relevant objectives contained in the final declaration of the International Conference on the Protection of the North Sea (1984) should be taken into account in this context and in particular the development and introduction of a system of notification for specific ships categories should be examined. Finland, Sweden, Norway and Spain joined the project in 1983 by signing an agreement of cooperation.

The results and conclusion of the project will be made available to national administrations, international organizations (IMO, IALA, EMPA, etc.) and maritime users in April 1987.

Council Resolution of 26 June 1978 setting up an action programme of the European Communities on the control and reduction of pollution caused by hydrocarbons discharged at sea\(^5\)

This programme gave a mandate to the Commission to undertake studies and to make proposals for action in various fields such as: consultation, contingency planning, the impact of hydrocarbons on marine flora and fauna, etc.

\(^4\) OJ N° L 378 of 31.12.1982

\(^5\) OJ N° C 162 of 8.7.1978
Council Decision of 6 March 1986 establishing a Community Information System for the control and reduction of pollution caused by the spillage of hydrocarbons and other harmful substances at sea (86/85/EEC)

This decision replaces the Council decision of 3 December 1981, which established the "Hydrocarbon" Information System, and provides for its extension to other harmful substances.

The main purpose of the Information System is to make available to the competent authorities of the Member States the data required for the control and reduction of pollution caused by the spillage of hydrocarbons and other harmful substances at sea in large quantities.

2.4. OTHER INSTRUMENTS.

Port State Control. A Memorandum of Understanding laying down certain rules for the control of ships in European ports was signed in January 1982 by the maritime authorities of 14 European States (EEC (except Luxembourg), Norway, Sweden, Spain, Portugal, Finland) in order to eliminate sub-standard ships from European waters. It came into effect on 1 July 1982.

The authorities will maintain an effective system of Port State Control with a view to ensuring that foreign ships visiting their ports comply with the standards laid down in the relevant international Conventions (such as SOLAS and MARPOL etc.). In selecting ships for inspection, the authorities will pay special attention to ships which may present a special hazard, for instance oil tankers and gas and chemical carriers.

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6 OJ No L 77 of 22.3.1986
2.5. SHORT-SEA CROSSINGS

**Baltic agreement**
The Baltic agreement (Memorandum of Understanding for the transport of dangerous goods in Roll-on Roll-off ferries on the Baltic) contains special supplementary rules for road transport concerning segregation of different goods and stowage in vehicles. Vehicles which comply with the ADR (paragraph 3.1.) agreement and the Baltic agreement are exempt from IMO rules during a short-sea crossing in the Baltic.
The Members of the Baltic agreement are Denmark, the Federal Republic of Germany, Norway, Sweden and Finland.

**Sea crossings to the U.K.**
The differences between sea and land regulations for the transport of dangerous goods are causing difficulties for international transport to the United Kingdom.
The joint meeting of ADR/RID (paragraph 3.1. and 3.2) has tried for many years to set up Special Appendices for short-sea crossing on the same basis as the Baltic Agreement but the IMO considers that only very short-sea crossing or sheltered areas like the Baltic deserve to be exempted from the sea regulations. Discussions about the contents of these Special Appendices to ADR and RID are taking place in IMO.
Until agreement has been reached about these Special Appendices, road transport has to meet the IMO rules when crossing to the U.K. Railway transport to the U.K. is governed by more flexible rules than those of IMO. These are set out in an operational manual.
This is a temporary solution which was necessary because of a change in the legal status of the international railway convention in the U.K.

**Mediterranean Sea**
There is no specific international regulation for short-sea crossings in the Mediterranean and IMO rules are applied to international trade.
2.6. TRANSPORT OF WASTE MATERIALS

The disposal of waste (including nuclear waste) at sea is governed by international and regional conventions, including the London Dumping Convention of 1972 and the Helsinki, Oslo and Barcelona Regional Conventions. These Conventions are not specifically concerned with transport of waste materials, but they put restrictions on the substances which may be disposed of at sea.

IMO resolution A 582 concerning guidelines for the construction and equipment of ships carrying hazardous liquid wastes in bulk for the purpose of dumping at sea was adopted on 20 November 1985. These guidelines cover various fields such as:
- ship arrangements,
- cargo containment,
- cargo transfer,
- personnel protection,
- operational requirements.
They are designed for use not only on new ships, but, as far as reasonable and practicable, existing ones as well. Member Governments are recommended to put them into effect as soon as possible.

3. INTERNATIONAL CONVENTIONS AND AGREEMENTS - INLAND AND AIR TRANSPORT.

The agreements and conventions governing the international transport of dangerous goods by road, rail, inland waterway and air transport are described in this section of the report.
3.1. ROAD TRANSPORT

The European Agreement concerning International Carriage of Dangerous Goods by Road (ADR) is an international agreement administered through the Inland Transport Committee of the United Nations Economic Commission for Europe (ECE).

The ADR consists of three sections:

1. the agreement and protocol of signature;
2. Annex A. A list of substances allowed to be carried and the requirements for labelling and packaging of the materials;
3. Annex B. Operational requirements for carriage by road, requirements for the transport vehicles and general requirements for drivers and their training.

The purpose of the ADR agreement is to ensure that dangerous goods and wastes travelling through more than one country by road are carried under suitable conditions. If they meet the regulations and prescriptions of the ADR they are exempt from the national legislation in force of those countries. According to marginals 2010 and 10602 of the ADR, the Contracting Parties may agree directly among themselves to authorise bilateral derogations from the provisions of the ADR in order to adapt them to technological and industrial developments before they are officially amended. These derogations have to be notified to the competent U.N. services.

At this moment there are about 1400 of these bilateral agreements registered.

There are no specific provisions in ADR for enforcement, other than that a vehicle not complying with the requirements of the ADR has to meet the national requirements and regulations.

As of the date of writing this report the ADR agreement had not yet been adopted by two Member States: Ireland and Greece.
3.2. RAIL TRANSPORT

The international regulations concerning the carriage of dangerous goods by rail (RID) are included in Annex 1 of the International Convention concerning the Carriage of Goods by Rail (CIM) established in 1890. The convention is administered by the Central Office of International rail Transport (OCTI) in Berne, Switzerland. OCTI is not associated with the United Nations, but RID and ADR bodies conduct joint meetings frequently, to maintain harmony between the conventions governing road and rail transport of dangerous goods in Europe.

As the RID was in fact a model for the ADR, the structure and application are very similar. RID too, gives prescriptions for labelling and packaging of the dangerous materials which are classified on the same way as in the ADR. Moreover prescriptions are given for the containers, the train units and the method of despatch. RID, as a part of the CIM, has been adopted by all nations of Europe and several nations outside Europe.

3.3. INLAND WATERWAY TRANSPORT

Whilst in theory inland waterway transport is regulated by a UN/ECE agreement referred to as ADN, the most important international agreement existing in practice for the transport of dangerous goods by these waterways is the ADNR (Accord Européen relatif aux transports des marchandises dangereuses par voie de navigation sur le Rhin) administered by the Central Rhine Commission in Strasbourg.

ADNR consists of three parts:

1. the agreement and its rules;
2. Annex A. Definitions and classification of dangerous goods allowed to be transported;
3. Annex B. Prescription for:
   - procedure of transport
   - construction of vessel
   - crew
loading and unloading
special traffic rules.

ADNR is applied by all the states with waterways connected to the Rhine network, with the exception of the Danube. It is enforced by adoption in national legislation.

To obtain a navigation licence for the Rhine, a master must meet the requirements of the Central Rhine Commission concerning knowledge of handling dangerous goods. The ADNR is revised from time to time in order to harmonize its prescriptions with the rules of other modes of transport.

3.4. AIR TRANSPORT

The part of transport by air in the total transport of dangerous products is relatively limited, although an important increase has taken place in recent years.

A set of standards for the safe transport of dangerous goods by air has been established in Annex XVIII to the Convention on International Civil Aviation (the Chicago Convention). The Dangerous Goods Panel (DGP), one of the subsidiary bodies of ICAO, is responsible for the elaboration and updating of these standards. This Annex is supported by a detailed body of "Technical Instructions, for the safe transport of Dangerous Goods by Air", which are incorporated by reference into the Annex and provide the necessary details concerning classification, packaging, marking, labelling and handling aboard aircraft of dangerous goods.

Both the Annex and Technical Instructions are based upon the recommendations of the UN Committee of Experts on the Transport of Dangerous Goods and the International Atomic Energy Agency (IAEA), thereby providing intermodal harmonisation.

The ICAO adopted Annex XVIII and the Technical Instructions in June 1981 and they are now implemented in international and national air transport as all Member countries, including the E.C. Member States, agreed to incorporate the Annex into their legislation from 1 January 1984 on.
As to the implementation by E.C. Member States, only four countries (Belgium, Italy, the Netherlands and United Kingdom) have communicated some (small) differences between their national regulations and the international standards and recommended practices of Annex XVIII.

As provided for in the "Technical Instructions", paragraph 10.1 of Annex XVIII requires that dangerous goods training programmes be established. With this in view ICAO produced a series of six books, each developed for the training of a particular category of personnel involved in the transport of dangerous goods by air. The books are:

1. Shippers and packers
2. Cargo agents
3. Operators' cargo acceptance staff
4. Load planners and cargo handlers
5. Flight crew
6. Passenger handling staff and flight attendants.

These training programmes, which are approved by the national authorities, have been produced to help achieve a uniform level of training in all aspects of handling and transporting dangerous goods by air.

For the direct application of the existing rules the International Air Transport Association (IATA) issues precise guidelines in its "Restricted Articles regulations" which are updated regularly. IATA airlines levy a not insignificant surcharge for the transport of dangerous goods.

3.5. TRANSPORT OF WASTE MATERIALS

Waste is only partially covered in the framework of international conventions and agreements on the transport of dangerous goods. The classification of mixtures of waste materials presents particular problems. The United Nations classification system for dangerous goods can be used for a wide variety of wastes, but does not cover all types. A classification system based on grouping the most
dangerous components in a mixture has been developed by a joint ADR/RID expert group and is likely to be adopted by the parent bodies (ECE and OCTI) in the near future.

At Community level, directive 78/319/EEC\(^7\) on toxic and dangerous wastes specifies certain general controls on the transport of dangerous wastes and includes a list of toxic or dangerous substances requiring priority consideration. Directive 84/631/EEC\(^8\) on the transfrontier shipment of hazardous wastes specifies that transport of hazardous wastes should be controlled by means of a uniform consignment note system and allows the Member State of destination of the waste to raise objection to the shipment. The Directive sets out general rules concerning the packaging, labelling and transport of wastes. Appropriate conditions of transport are deemed to be met when a Member State applies the provisions applicable under the international transport conventions to which it is a party, in so far as these conventions cover hazardous waste. An amendment to Directive 84/631 agreed in 1986\(^9\) (86/279/EEC) extends the requirement to obtain the agreement of the destination country to non-Member States.

\(^7\) OJ N° L 84/43 of 31.3.1978

\(^8\) OJ N° L 326/31 of 13.12.1984

\(^9\) OJ N° L 181/13 of 4.7.1986
4. TRANSPORT OF RADIOACTIVE MATERIALS AND WASTES.

4.1. THE INTERNATIONAL ATOMIC ENERGY AGENCY REGULATIONS FOR THE SAFE TRANSPORT OF RADIOACTIVE MATERIALS

As early as 1959, the United Nations Economic and Social Council (ECOSOC) adopted a resolution entrusting the International Atomic Energy Agency (IAEA) with the task of establishing recommendations for the safe transport of radioactive materials. This responsibility falls within the purview of the Agency's statutory functions which, among other things, consist of ensuring the safety of peaceful nuclear activities carried out by Member States with the Agency's assistance.

The IAEA responded to this resolution by convening panels gathering experts from Member States and from the international transport organisations to study the technical and administrative aspects of such international transport. As a result of this study, the first edition of the IAEA "Regulations for the Safe Transport of Radioactive Materials" (Safety Series no 6) was published in 1961 as a component of the Agency's Safety Standards.

These Regulations were revised and updated in 1964, 1967, 1973, and a comprehensive review was carried out in 1985, to reflect experience in their application, new trends in radiation protection and changes in methods and technology.

The safety regulations are based on two main principles:

- the required safety levels are achieved by appropriate package design, without consideration of the safety of the transport mode;
- the potential hazard defines the required package safety level.

Safety series no 6 contains the following basic requirements:

- packaging and package design requirements
- items exempt from specified prescriptions (low specific activity material, low level solid radioactive material)
- activity limits for packages
- controls for transport and storage in transit
- specific provisions for fissile materials
- test and inspection procedures for packaging
- administrative requirements.

4.2. IMPLEMENTATION OF IAEA REGULATIONS

The IAEA Regulations have been adopted by the United Nations as its recommendations for the safe transport of radioactive materials. They have been incorporated into the national regulations of numerous countries where nuclear legislation was enacted in conjunction with the development of nuclear energy programmes for peaceful purposes. All international organizations concerned with the transport of dangerous goods have also adopted the IAEA Regulations for application to the transport of radioactive materials, including radioactive wastes.

Transport by rail - RID
The dangerous goods covered by RID are classified in accordance with the UN system and the IAEA transport regulations have been adopted as the requirements for radioactive materials. The current RID is in conformity with the 1973 revised edition of the IAEA transport regulations for the safe transport of radioactive materials. The RID also includes a table of minimum distances by which packages containing radioactive materials must be separated from packages containing photographic films.

Transport by road - ADR
The IAEA transport regulations have been adopted as the requirements for the transport of radioactive materials. The 1978 version of the technical requirements set out in Annexes A and B to the ADR are in conformity with the 1973 revised edition of the IAEA transport regulations.
Transport by Inland Waterways - ADNR

Within the framework of this Convention, the Rhine States have developed provisions on the transport of dangerous goods, among which are those concerning the transport of radioactive materials. Since traffic in these goods has hitherto been insignificant, the relevant provisions in the ADNR are still based on the 1967 edition of the IAEA regulations.

It is likely that in the next few years changes will take place that will necessitate the updating of the ADNR provisions.

Transport by sea - IMO

Transport by sea is regulated in most European Countries by the International Maritime Dangerous Goods Code (IMDG Code). Dangerous goods are classified in the IMDG Code in accordance with the UN system and the IAEA transport regulations have been adopted as the requirements for radioactive materials. The current version of the Code is in conformity with the 1973 revised edition of the IAEA regulations.

The IMDG Code includes tables specifying the minimum permissible segregation distances of packages of radioactive materials from living accommodation or regularly-occupied working areas on ships and from packages containing undeveloped photographic film.

Transport by air - ICAO, IATA

The current edition of the IATA Restricted Articles Regulations (RAR) includes two sets of regulations for the transport of radioactive materials. The first is in conformity with the 1973 revised edition of the IAEA transport regulations. The second is in conformity with the 1967 edition of the regulations.

Tables are included which specify the minimum permissible distances from the surfaces of the packages to the inner floors of passenger cabins and flight decks and to the surfaces of packages containing undeveloped photographic film.
Transport by post - UPU

Under the existing convention, radioactive materials in which the activity does not exceed 10% of the upper limits for items exempt from the packaging, labelling and stowage requirements of the IAEA transport regulations may be transported internationally by post provided certain relatively simple additional procedures are followed. In practice, all member countries of the European Community, except the United Kingdom and France prohibit postal shipments.

5. NATIONAL LEGISLATION ON THE TRANSPORT OF DANGEROUS GOODS

A complete description of all existing regulations at national and regional level in the Member States of the Community would be very lengthy and would rapidly become out of date. It was therefore decided to make a broad comparison between the regulations in force in each Member State at the time of writing this report, and the international agreements, concentrating on the stringency of the regulations and differences in classification, packaging and labelling requirements.

International transport by sea and air is entirely governed by the international agreements and this analysis of national regulations has therefore been restricted to transport by road, rail and inland waterway.

5.1. DENMARK

Road
Denmark has been a party to the ADR agreement since 1 August 1981 and the aim is to issue a body of national rules very similar to the ADR agreement.
Technical specifications similar to the ADR have been adopted for class 2 (compressed gases), class 6.1. (poisonous substances) and class 8 (corrosive substances).
The regulations for classes 3 (inflammable liquids), 5.1. (oxidizing substances) and 5.2. (organic peroxides) will be in line with ADR in 1986. For classes 4 (inflammable solids) and 6.2. (repugnant substances and substances liable to cause infection) there are no regulations for national transport in Denmark. The regulations for class 1 (explosives) are very old and different from the ADR regulations.
Labels according to EEC directive 67/548/EEC (paragraph 6.3.) are permitted for national transport of dangerous goods in Denmark.

Rail
Denmark applies the RID regulations for the national transport of dangerous goods by rail and in addition prescribes separation of wagons carrying dangerous goods: any wagon carrying dangerous goods must be between wagons not carrying dangerous goods.

Inland Waterway
There are no navigable inland waterways, but the Baltic agreement has great importance in Denmark.

5.2. BELGIUM

Road
Since 15 March 1976 Belgium has had national regulations on the transport of dangerous goods. For 95% of the goods these regulations are the same as the ADR rules.
For the other 5% the national rules are stricter than ADR for goods of class 3 (inflammable liquids), class 1 (explosives) and class 5.1 (goods which contribute to combustion).
The national rules are less strict than ADR for gas-oil.
The special driver training according to ADR rules is controlled by the government and also applied for national transport.
Rail
The RID agreement has been extended in Belgium to cover national transport.

Inland Waterway
The ADNR rules apply to 90% of the national inland waterway transport of dangerous goods.
Since 1948 the other 10% is covered by national regulations which are less severe but apply mainly to small harbour tenders.

5.3. FRANCE

Road
The French legislation concerning the transport of dangerous goods is laid down in the regulation of 15 April 1945 as amended which is very extensive.
As rules of this kind have been developed in France earlier than in other nations, the international agreements have not been the basis for this legislation.

The main differences from the ADR are:
- the classes are different from the ADR and have been further divided into categories and groups with their own prescriptions;
- the labels are slightly different and they must be applied to all vehicles carrying dangerous goods, including packaged goods;
- the form of the transport document is more strictly defined.
To meet a decision of 30 July, 1975, vehicles transporting dangerous goods with a weight above 10 tons must have a speed governor set at 80 km/h. There are routeing prescriptions and prescriptions concerning days on which it is prohibited to drive trucks with dangerous goods. The special driver training is applied to a more extended field than in the ADR regulations.
Rail
RID is applied to national transport by rail in France.

Inland waterway
For inland navigation the ADNR regulations are applied or a domestic set of regulations which are, according to the French authorities, very similar to the ADNR regulations.

5.4. IRELAND

Road
Ireland has not yet acceded to the ADR agreement.
The reason given is that the inland transport of dangerous goods is not of a very great importance and the entire ADR agreement must be translated into Irish in order to be approved by the Irish Parliament. However Ireland's domestic legislation (Dangerous Substances Regulations 1980) is very similar to the ADR agreement and refers to ADR in all the main points.
Differences with ADR regulations are:
- some general rules concerning the routeing of dangerous goods;
- packaging and labelling in accordance with the Community Directive 67/548/EEC (paragraph 6.3.) or other international or national regulations is deemed to comply with the Irish regulations.
The Irish Regulations contain general rules for the special training of drivers.

5.5. LUXEMBOURG

Road
ADR is applied to national transport.
Rail
The RID convention is applied to national transport.

Inland Waterway
The ADNR agreement is applied to transport of dangerous goods along the Moselle.

5.6. THE NETHERLANDS

Road
National transport of dangerous goods by road has to meet the regulations of the V.L.G. (Vervoer Over Land van Gevaarlijke Stoffen) which is in fact the same as ADR plus:
- rules for routing of dangerous goods
- extensive professional training requirements
- special conditions for explosive goods (class 1)
- more extensive information requirements.
The Netherlands has special driver training for road tankers which is strict and applies also to national transport.

Rail
National transport of dangerous goods by train has to meet the regulations of the VSG (Vervoer per Spoor van Gevaarlijke Stoffen) which is the same as the RID plus special requirements for chlorine trains.

Inland Waterway
National transport of dangerous goods by inland navigation is governed by the VBG (Vervoer per Binnenvaart van Gevaarlijke Stoffen) which is the same as ADNR.
The VLG, VSG and VBG are part of a general law on transport of dangerous goods.
5.7. FEDERAL REPUBLIC OF GERMANY

Road
The regulations on the carriage of dangerous goods by road in the FRG are laid down in the Gefahrgutverordnung Strasse (GGVS). These regulations are very similar to the ADR. The differences mainly concern authorization for other dangerous goods to be carried and additional types of packaging. The FRG has an official driver training scheme for road tankers which has resulted in a reduction in the number of offences against safety rules.

Rail
The regulations on the carriage of dangerous goods by rail in the FRG are laid down in the Gefahrgutverordnung Eisenbahn (GGVE) which has the same relation with the RID as the GGVS with the ADR.

Inland Waterway
ADNR is applied for the carriage of dangerous substances on the inland Federal waterways with the exception of the Danube. For the Danube a separate set of regulations exists made under the auspices of the Danube Commission.

5.8. U.K.

Road
The existing UK legislation concerning the transport of dangerous goods by road is very extensive and complicated, consisting of about 34 sets of regulations. It is intended to introduce in the near future five sets of regulations which will enable a big part of the existing legislation to be revoked. The proposed regulations are:

a) Classification, Packaging and Labelling Regulations which will control the packaging and the labelling for conveyance by road of all dangerous substances.
b) Dangerous Substances in Harbour Areas Regulations which will cover loading, unloading and storage of dangerous substances in ports.

c) Dangerous Substances (Conveyance by Road in Packages etc) Regulations which will cover the remaining operational aspects of road conveyance of dangerous substances not covered by the Road Tanker and Tank Container Regulations made in 1981 and the Classification, Packaging and Labelling Regulations listed above.

d) Explosives (Conveyance by Road) Regulations which will control the conveyance of explosive by road.

e) Classification and Labelling of Explosives Regulations which will control the labelling of explosive articles and substances.

All these regulations will be made under the 1974 Health and Safety at Work Act and will be consistent, so far as possible, with the Recommendations of the United Nations Committee of Experts on the Transport of Dangerous Goods. The programme is now well advanced. The UK uses the Hazchem Hazard code for placarding.

Rail
RID does not apply to domestic rail transport in the UK. British Rail have their own detailed requirements which are contained in the British Rail List of Dangerous Goods and Conditions of Acceptance. These safety provisions cover labelling, inspection, container specifications, marshalling of wagons and the actions to be taken in the event of an accident. British Rail's provisions are consistent with RID, so far as possible.

Inland Waterway
The only legislative controls for dangerous goods on British Waterways Board waterways are bylaws prepared under the Petroleum (Consolidation) Act 1928 for petroleum spirit and carbide of calcium and, under the Explosives Act 1985 for explosives. However, the Board have recently introduced contractual Terms and Conditions for the transport of dangerous goods on their waterways.
5.9. GREECE

Road
Greece is not a party to the international ADR agreement. The reason given is that the ADR agreement is still under study before it is submitted to the Parliament. There is no national legislation on the transport of dangerous goods in Greece and there is no special training for drivers of vehicles transporting dangerous goods.

Rail
Greece is party to the international RID agreement. Information about the rules for national rail transport is not at present available.

Inland navigation
Inland navigation in Greece in fact consists of short sea-crossings. It is very doubtful if the transport of dangerous goods within Greek territorial waters meets any rules.

5.10. ITALY

Road
In Italy a set of rules was laid down in August 1980 based on the ADR classification and following 90% the ADR regulations. However some derogations are possible and regulations for national transport are less tough than for international transport. There is a special driving licence for international drivers transporting dangerous goods delivered by the "Motorizzazione", but no specific driving licence is required for internal transport of dangerous goods.

Rail
The RID regulations apply both to national and international transport of dangerous goods by railway in Italy.
Inland Waterways

Transport on inland waterways is governed by the rules of the merchant navy and the general rules for road transport of dangerous goods. For short-sea crossings that take less than two hours it is possible to meet less severe rules than in the IMDG-code.

5.11. SPAIN

Spain, as a new Member State of the Community, is following the ADR and RID regulations for the international transport of dangerous goods.

For domestic transport, the Spanish regulations are practically copies of the international ones with minor amendments.

As regards road transport, the T.P.C. (Reglamento Nacional de Transportes de Mercancías Peligrosas por Carretera) is applied and T.P.F. (Reglamento Nacional de Transportes de Mercancías por Ferrocarril) for rail transport.

5.12. PORTUGAL

Portugal as a new Member State applies the ADR and the RID regulations for international and national transport.

6. CURRENT REGULATORY PROBLEMS

The international conventions and agreements listed in the previous sections of this report cover most aspects of the transport of dangerous goods, but they have not yet been ratified by all countries, including some Member States of the Community, and the provisions of the agreements are not always effectively enforced. A number of current problems in the regulation and control of the transport of dangerous goods and wastes are discussed in this section of the report.
6.1. SEA TRANSPORT

The European Commission only has observer status within IMO, which is the major international body in this field. The Commission is not a full member of the 1982 Memorandum of Understanding on Port State Control, but is a non-voting member of the Port State Control Committee, the supervising body for the Memorandum of Understanding. A more systematic and structured coordination of Member States' positions within these organisations would be helpful. There are several specific issues on which action is needed:

- The various Codes applicable to the bulk carriage of dangerous goods have not yet been incorporated into the legislation of all Member States.

- Annex I and II of MARPOL 73/78 have not been ratified by Ireland and Annex III has only been ratified by six Member States.

- The IMDG Code does not deal with pollution of the marine environment by dangerous materials - an extension of the Code to include pollution is under consideration within IMO.

A general reduction of the risk of accidents to vessels at sea would reduce the risk of marine pollution resulting from accidents, particularly in busy areas. The supervision of traffic by Vessel Traffic Management Systems (VTS) seeks this objective, and further precautionary measures applicable specially to ships carrying dangerous goods could be introduced (special crew training, advance notification and position reporting).

When accidents do occur there is sometimes insufficient information on the hazard involved and the action to be taken. VTS systems including advance notification and position reporting would assist in identifying and locating a potential hazard, and would help the emergency services to choose appropriate response measures.
6.2. INLAND TRANSPORT

International Transport
The ADR and RID Agreements are applied by most Member States of the Community, but the ADR Agreement has not yet been ratified by Greece and Ireland. Although the necessary regulations exist in most Member States, it is not certain that the existing international agreements and conventions on the transport of dangerous goods are adequately enforced. ADR requires drivers of bulk tankers carrying liquid dangerous goods with a capacity of more than 3,000 litres to hold a special licence. But this requirement does not apply to tankers of less than 3,000 litres or to the transport of packaged goods.

National Transport
Chapter 5 of this report clearly illustrates the major differences between Member States in the regulation of internal transport of dangerous goods. Some Member States have regulations closely based on ADR and RID, but others have national regulations which differ from those for international transport. These differences can cause problems for vehicles or loads making journeys with national and international stages, and for the packaging and labelling of goods made for several markets. The objective of establishing the internal market by 1992 set out in the revised Treaty, suggests that attempts should be made to resolve these problems to ensure the free movement within the Community of dangerous goods, subject to agreed controls.

6.3 DIFFERENCES IN CLASSIFICATION

Two main systems are in existence for the classification of dangerous goods in transport:

a) The older systems used for rail, road and inland waterway (ADR, RID and ADNR)

b) The system used for sea and air (IMDG and ICAO - TI).

As is shown on the conversion list in Annex IV of this report the numbering of the classes of ADR/RID and IMDG/ICAO is almost the same. However there are still differences in the classification of substances.
The ADR/RID and ADNR systems contain restricted and non-restricted classes of dangerous goods. Goods of a restricted class may be accepted for carriage only if they are listed and then only under the conditions specified. Goods of a non-restricted class which are listed may be accepted only under the specified conditions. It is obvious that this system can give rise to difficulties for new goods, or for wastes which are composed of more than one substance, since absence from the list can mean either that carriage is prohibited, because the substances belongs (or seems to belong) to a restricted class, or that acceptance is without conditions in a non-restricted class.

In the IMDG/ICAO system all goods or group of goods are mentioned or have an "entry". However, even this list, based on the UN Recommendations, is not sufficiently exhaustive as to ensure that any goods presenting a hazard and falling in the definitions of a particular class will be included in that class. Moreover there are some goods that present more than one hazard, so that this system of classification can also give problems.

Harmonization

Effective 1 May 1985, the ADR and RID agreements have been modified in order to harmonize with the UN Recommendations which are the base of the IMDG Code and the ICAO Technical Instructions. The principal changes in ADR and RID are additional classifications in Classes 3 (inflammable liquids), 6.1 (toxic substances) and 8 (corrosive substances).

These three classes are now each-divided into three groups: very dangerous, dangerous and less dangerous according to the prescriptions of packaging for maritime transport. Moreover the classification of some goods which present two or more kinds of danger have been changed according to the UN Recommendations.

The ADNR Regulations are also being revised to meet the UN Recommendations and this work is scheduled to be completed in 1987.
A remaining difference with the U.N. Recommendations after the revision are the differences in flash points. This raises problems, in the case of inflammable liquids.

In ADR and RID these are subdivided according to flash points:

under 21°C

21°C to 55°C

55°C to 100°C, no classification beyond that range.

The United Nations subdivision is as follows:

under -18°C

-18°C to 23°C

23°C to 61°C, no classification beyond that range.

The changeover to the UN system of subdivision would cause problems, because in Europe the ranges concerned are also applied in industry and for industrial safety.

For example at present a liquid with flashpoint between 61°C and 100°C is a substance of class 3 in ADR/RID/ADNR but not a dangerous substance in the IMDG Code.

EC Classification, packaging and labelling Directives

The classification system specified in Council Directive 67/548/EEC and its amendments concerns substances placed on the Community market and it differs significantly from the system recommended by the UN for transport of dangerous goods. The numerical criteria used to define the toxicity of groups of substances are different, and some of the classes in the Directives, such as carcinogenic or mutagenic, are not used in transport labelling. The same substance may therefore be classified and labelled differently for transport and marketing purposes.

10 OJ No L 196 of 16.8.1967
6.4 DIFFERENCES IN LABELLING AND PACKAGING

If a dangerous substance is classified in different ways, the labelling requirements will also be different. Moreover three different systems of pictograms are used which are generally similar, but not identical.

The systems are:

- labels according to EEC directive No 67/548/EEC (with a number of amendments) concerning labelling and packaging of dangerous goods which are put on the market. Illustrated in Annex V.
- labels according the inland transport agreements (ADR, RID and ADNR). Illustrated in Annex VI.
- labels according to the UN recommendations (IMDG and ICAO-IT). Illustrated in Annex VII

In the case of single layer package (eg drums) it is likely that both transport and supply labels will be needed.

These differences are probably not sufficient to cause serious difficulties in dealing with accidents, but they are of significance for shippers and can cause problems at the sea-land interface.

Different interpretations of the UN Recommendations for the testing of packaging can give rise to different functional tests and, as a result, variations in the types of packaging approved in different countries. This has sometimes resulted in new types of packaging being rejected at international borders.

6.5. DIFFERENCES IN HAZARD ACTION CODES

There are differences of view about the value of a code to assist the emergency services at incidents and about which code should be adopted. For a decade the United Kingdom has used an emergency action code known as "Hazchem", whilst the French "Kemler" code has been adopted in ADR and RID. The Hazchem coding system has been adopted by a number of other countries outside Europe. Various
attempts have been made to decide on one of these two codes as the only standard or, alternatively, to find an internationally acceptable compromise. No agreement has been forthcoming.
The Hazchem code provides specific guidance on the action to be taken initially by the fire service: The Kemler code is basically a code which gives information on the hazardous properties; it gives little useful action guidance to the emergency services except some advice on when to avoid the use of water.
However, the "Kemler" danger numbers and UN substance numbers which must be given on the danger labels under the ADR and RID are - in contrast to the more comprehensive details required under the Hazchem code - legible even from fairly long distances owing to their type size. This is particularly important if rescue teams are unable to get near to the vehicle involved in the accident (e.g. because of fire).

6.6 DIFFERENCES IN SEGREGATION REQUIREMENTS.

A serious problem arising from the differing requirements of rail/road and sea regulations is the segregation of dangerous goods within a wagon or container.
The philosophy behind the segregation requirements of the IMDG code is that incompatible dangerous goods should not be loaded in the same wagon or container. This is intended to avert problems caused by dangerous reactions between substances if their packaging is damaged.
In the ADR/RID these requirements were only retained for relatively few substances such as explosives and for more fragile types of packaging such as glass.
Thus the segregation requirements for sea transport are much more stringent than for rail/road transport.
6.7. SPECIFIC PROBLEMS FOR WASTES

The international conventions and agreements on the transport of dangerous goods do not cover all types of waste and problems can arise in classifying wastes of mixed or variable composition. The classification system developed by ADR/RID (paragraph 3.5.) will help to reduce these difficulties if it is widely adopted.

A list of toxic and dangerous substances and materials requiring priority consideration is included in the Annex to Directive 78/319/EEC on toxic and dangerous waste, but it is a minimal list and is not complete or precise. Nine Members States have adopted regulations to control toxic waste, but their national regulations are somewhat divergent and are based on varying definitions of waste. Some Member States have adopted classification systems based on the major components of the waste, others use the industrial activity generating the waste, or in some cases both.

A harmonised classification system for waste materials is needed to ensure the effective implementation of Community Directives on wastes, in particular the Directive on the transfrontier movement of dangerous wastes, and the Commission is working on the more precise and uniform definition of toxic and dangerous wastes.

In general, national and international regulations and agreements on the transport of dangerous substances do not make special provisions for wastes and within the Community, only the Federal Republic of Germany has set-up specific procedures for the transport of hazardous wastes.
7. CURRENT INTERNATIONAL INITIATIVES

7.1. SEA TRANSPORT

A number of initiatives are presently under consideration within the framework of the International Maritime Organisation (IMO), which concern both the prevention of pollution and the safety of navigation. In particular an extension of the IMDG Code to cover pollution of the marine environment by packaged goods is under consideration as a mean of implementing Annex III of the MARPOL convention.

The Commission within the framework of the Memorandum of Understanding on Port State Control (MOU) has signed the final declaration of the "Safe Ships on Clean Seas" Ministerial Conference that took place in April 1986. Community initiatives are also presently under consideration to extend the existing means of controlling and reducing pollution caused by hydrocarbons at sea to include other harmful substances. The first step will consist of the implementation of the Council decision of 6 March 1986 establishing a Community information system for the control and reduction of pollution caused by the spillage of hydrocarbons and other harmful substances. The COST 301 research project referred to in Section 2.3. is concerned with the management and control of maritime traffic by shore-based centres. The purpose of these centres is the reduction of the risks of collision, stranding and ramming and enhancement of safety at sea, and the prevention of pollution of seas and coastal areas. The results and conclusions of the research phase will be available in April 1987.

7.2. INLAND TRANSPORT

The international bodies governing the ADR, RID and ADNR agreements hold meetings several times a year to discuss amendments and revisions to the agreements. Important current issues are:

- prescriptions for Intermediate Bulk Containers (IBCs)
- regulations for the transport of waste
- prescriptions for tank containers
- new substances
- new materials for packaging
- revision of class 5.2. (organic peroxides)
- extending driver training requirements to all dangerous goods (now only for tank vehicles)
- inspection of vehicles
- several editorial and technical amendments
- introduction of a new class 9 for substances dangerous to the environment.

These meetings are attended by experts from 20 to 30 countries and several non-governmental organisations. These experts are often supported by complete divisions in their national administration. The Commission of the European Communities has an observer at many of these meetings. Activities of the EEC can only be useful when they fit in the framework of these existing agreements, e.g. Community Directive 84/631/EEC on the transfrontier shipment of dangerous wastes refers to the International transport agreements.

For the European road safety year 1986, the Commission has made a study of the possibilities of a monitoring system for dangerous goods and waste, and plans to sponsor a pilot project.

7.3. RADIOACTIVE MATERIALS

Initiatives at worldwide level on the transport of radioactive materials

A revised version of the IAEA Regulations for the Safe Transport of Radioactive Materials (Safety Series No. 6) was issued in 1985. Substantial changes have been made and this edition supersedes all the previous editions of the regulations. The Agency recommends that these regulations should be adopted in a period of 3 to 5 years (not later than 1990) with the view to achieving worldwide harmonisation of their application.
The target date for adoption of the 1985 edition of the Safety Series N° 6 chosen by all the international organisations concerned with the transport of radioactive materials (IMO, UPU, UN, ICAO, ADR, RID, ADNR) is 1 January 1988 and this date applies to the Members States of the European Community.

Initiatives at Community level on the transport of radioactive materials

In response to the Resolution of the European Parliament of 22 January 1982 on the transport of radioactive materials, the Commission set up a special permanent working party consisting of national experts and representatives of the Commission; the Chairman and Secretariat are provided by the Commission. Among other things, this group advises the Commission on the preparation of proposals for Community activities and studies all the problems associated with the transport of radioactive materials.

Based on the assistance of the experts mentioned above and in the light of Directives 80/836/Euratom and 84/467/Euratom laying down the basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation, the Commission concluded in 1984 and in its Communication to Council on "The Development of Community Measures for the Application of Chapter III of the Euratom Treaty 'Health and Safety'" of 20 August 1986 (COM(86)434) that the following actions should be envisaged at Community level:

- the development of a more uniform standard for the training and provision of information for the personnel involved in the transport of radioactive materials;

- the formulation of criteria for technical and medical assistance in the event of abnormal or accident situations to be incorporated into bilateral or multilateral agreements between Member States;

11 OJ N° C 40/42 of 15.2.1982
- the examination of the feasibility of establishing and maintaining an information network on emergency provisions for transport accidents in border regions or at sea.

The Commission also convened the experts of the Special permanent Working Party on 17 October 1984 to examine the technical, radiological and regulatory aspects of the Mont Louis incident, and to consider the view of the European Parliament. The conclusions of the working party are summarised in Annex III.

7.4. HAZARDOUS WASTES

In the framework of OECD, a Ministrial Conference on cooperation concerning tranfrontier movements of hazardous waste has issued recommendations for effective control of such movements, including an international notification, identification and control system, and the establishment of a legally binding international agreement. This is intended to implement the principle that member countries will not apply less strict controls on movements of hazardous waste involving third countries than they would for movements including only member countries.

8. CONCLUSIONS AND RECOMMENDATIONS

The earlier chapters of this report describe the extensive network of international agreements covering the transport of dangerous materials by sea, road, rail, air and inland waterway. These agreements are subject to continual revision and updating by international groups of experts to increase their effectiveness and improve harmonisation of the classification, packaging and labelling of dangerous materials.

International agreements generally apply only to international transport but some countries have adopted the same requirements for internal transport of dangerous goods. However, several member states of the European Community have not yet ratified all the international agreements, and not all the states which have done so apply them to internal transport. The Commission's primary objective is to ensure the full implementation of all the relevant international agreements in Member States - the long-term objective should be a single, unified system applicable to both national and international transport by all modes. This will clearly take a long time to achieve, but the Commission can play a valuable role in coordinating the position of Member States in international negotiations, and encouraging the international organisations to take further steps towards a unified system. At Community level action is needed to achieve greater harmonisation of the regulations covering the transport of dangerous goods within and between Member States.

The transport of dangerous wastes should be included in agreements and regulations on the transport of dangerous goods in general, but as a first step an international method for classifying the hazard of waste materials is needed. The Commission supports the efforts of international organisations to develop an agreed classification system for wastes and the Commission's own work on the uniform classification of wastes is a contribution to this effort.
In the case of radioactive materials all the relevant international conventions incorporate the IAEA Regulations and the revised 1985 Edition of the Regulations will be incorporated into the conventions by January 1988. As indicated in its communication to the Council on the transport of radioactive materials within the Community (COM(84)233 final), the Commission contributes to the continuing development of the IAEA regulations and promotes the uniform application of their requirements throughout the Community.

In its communication to the Council on the consequences of the Chernobyl accident (COM(86)327) and on the development of Community measures for the application of Chapter III of the Euratom Treaty (COM(86)434), the Commission has made clear its intention that all transport of radioactive materials both within and between Member States should be subject to a uniform set of provisions based on the IAEA Recommendations.

The objective of full international harmonisation of the transport of dangerous materials is the long-term goal, but there are a number of specific actions which the Commission could take immediately - these are listed below.

8.1 SEA TRANSPORT

The Commission should attempt to achieve a more systematic and structured co-ordination of Member States' positions within the framework of IMO and other relevant international bodies.

A reduction of accidents to vessels at sea decreases the risk of pollution from polluting cargoes. Highly frequented areas need measures to reduce accidents, such as the supervision of traffic by Vessel Traffic Services (VTS). The possibility of providing VTS systems with additional information on vessels carrying dangerous cargoes so that they can be more closely supervised should be studied.
An initiative should be taken to assess whether existing international agreements on safety at sea (STCW, COLREG etc.) adequately cover the specific problems of the carriage of dangerous goods by sea.

Community instruments should be proposed to ensure the implementation of the requirements of all relevant international agreements by all Member States. In particular instruments should be proposed to ensure the proper implementation of Annex II (prevention of pollution by liquids carried in bulk) and Annex III (prevention of pollution by harmful substances carried in packages) of MARPOL 73/78.

The Commission will also submit proposals on:
- the establishment of a mandatory notification system for ships, including passenger ships and ferries, etc., carrying dangerous goods by sea in packages, tank-wagons, tank-lorries, portable tanks or freight containers, and a reporting system for insufficiencies or incidents liable to reduce the manoeuvrability of such ships, for leakages of dangerous goods within the ship and for discharges of dangerous goods at sea;
- the improvement of means of detecting and prosecuting violations of safety and pollution regulations.

A draft Directive on the first point is in the process of being finalized.

8.2. INLAND TRANSPORT

In this area Community action should be directed to filling in the gaps in the network of international agreements, especially as regards dangerous wastes, and ensuring their uniform implementation throughout the Community in relation to both national and international transport.

The Commission should propose a Council Directive which obliges all Member States to apply the provisions of the international agreement for the transport of dangerous goods by road (ADR) to international transport. For inland waterways similar provisions could be adopted as soon as the relevant agreement (ADNR) has been revised and harmonised with the other agreements.
The Commission's efforts will also be directed to ensuring that Member States adopt regulations for national transport based on the same principles as those applied to international transport, and that national regulations are progressively brought into line with the international agreements. The objective will be to achieve the free movement of dangerous goods and a free market for transporting them within the Community, subject to agreed controls and high standards of protection for man and the environment. The regulations should include the transport of dangerous wastes, taking into account the particular nature of wastes. The Commission will make a proposal to this end by the end of 1988.

Road transport of dangerous goods

Studies have shown that the vast majority of road accidents involving the transport of dangerous goods are "normal" traffic accidents mainly caused by human failure. Moreover checks on enforcement have shown a high proportion of breaches of national and international regulations on the transport of dangerous goods. Priority in Community action to improve the safety of transporting dangerous goods by road should therefore be given to improvements of human performance and to a better enforcement of existing rules.

The Commission should consider the following actions:

1. A directive requiring Member States to accept on their territory road vehicles transporting dangerous goods or wastes internationally in conformity with the requirements of the ADR agreement.

2. A directive on the training of drivers of vehicles carrying dangerous goods or wastes in packages.

3. A directive on the training of road transport managers concerned with the transport of dangerous goods or wastes.

4. A directive on the enforcement of regulations on the transport of dangerous goods and wastes by road.
8.3 HARMONISATION OF CLASSIFICATION AND LABELLING

Products placed on the Community market must be labelled according to the requirements of Directive 67/548/EEC and its amendments; the square format labels required by the Directive (illustrated in Annex V) were based on the ADR and RID labels current at the time. However, these transport agreements were later harmonised with the UN Recommendations which prescribe diamond shaped labels (illustrated in Annexes VI and VII). The result is that the user labelling required by directive 67/548/EEC differs from transport labelling.

There are also small differences between the size and wording of the ADR/RID and IMDG transport labels, and some labels are available in one system and not in another. However, the basic symbols used by all three systems to identify dangerous substances are identical and confusion between different labels carrying the same symbol is unlikely. The differences sometimes mean that packages have to have two labels, but industry is reluctant to change well-established and recognized labels.

Nevertheless the objective should be a single Community system for all hazard labelling which is compatible with the labelling requirements of the international transport agreements, and is based on unified classification criteria for the toxicity and other hazardous properties of dangerous substances.

The classification of dangerous substances is based on the results of tests of toxicity, corrosiveness, irritancy etc., which use laboratory animals and, in this context, the need to reduce the use of animals in testing whenever possible should be taken into account.

The long-term objective of fully unified classification and labelling requirements for hazardous substances, including wastes, for both transport and marketing purposes should be vigourously pursued. This may require modification of Community instruments and
the Commission will launch a study of how best to harmonise Community classification and labelling requirements with those of the international transport agreements.
RESOLUTION
on the environment and in particular the accident involving the Mont Louis

The European Parliament,

A. having regard to the disastrous effects on human life and the environment which may result from accidents such as that involving the French vessel, the Mont Louis,

B. having regard to the Community action programmes on the environment of 22 November 1973 and 13 July 1977, and Parliament's resolutions of 22 January 1982 (1) and 6 June 1983 (2), which called on the Commission to ensure the application of uniform rules in the Member States for the transport of hazardous substances and products,

C. whereas, hitherto, only a single political agreement (of 9 June 1984) has been reached on improving the rules applying to the transfrontier shipment of hazardous wastes,

D. whereas it is clear from the sinking of the Mont Louis that national protective measures are inadequate and that there is no evidence of genuine cooperation at international or European level,

1. Calls on the Commission to submit as a matter of priority proposals for Council Regulations to regulate effectively the general subject of the transportation of dangerous and radioactive substances and wastes;

2. Calls on the Commission and the Member States of the European Community, bearing in mind the North Sea Conference that is due to take place in Bremen at the end of October 1984, to
(a) urge that all agreements concerning the protection of the North Sea and other seas be ratified forthwith by all the countries concerned;
(b) check that all dangerous and radioactive substances are covered in these agreements and to propose addenda thereto where appropriate;
(c) avoid using ports of countries which have not ratified these agreements, with the aim of reducing the risk of accidents;

3. Asks the Governments of the Member States to comply strictly with minimum conditions for the movement of high-risk dangerous and radioactive substances and wastes, and particularly:
— to fix special transport routes,
— to provide all those concerned with advance information,
— to provide for plans and effective safety and prevention measures for the avoidance of catastrophes, and for their publication,
— to guarantee the training of drivers and accompanying personnel,
— to provide for the organization of treatment facilities for victims;

4. Instructs its President to forward this resolution to the Council and Commission and the Government of the Member States.

(1) OJ No C 40, 15.2.1982
(2) OJ No C 184, 11.7.1983
RESOLUTION

on environmental issues of current relevance
— the transport of radioactive substances
— dioxin residues in waste incineration plants
— formaldehyde

The European Parliament,

having regard to:

A. the recent collision in the North Sea, in which a cargo vessel carrying dangerous and radioactive substances was sunk,
B. the levels of dioxin which have been measured in the used air from waste incineration plants,
C. the fact that the Council has still not introduced the Directive on the determination of environmental acceptability, and
D. the concentrations of formaldehyde in enclosed spaces which have been recorded in the Federal Republic of Germany,
E. the fact that the public in the European Community is being exposed to risk from the continual succession of accidents and incidents involving dangerous substances,
F. the frequently inaccurate and scientifically unsound reporting of such incidents in certain media,
G. its resolution of 24 May 1984 on air pollution in enclosed spaces and formaldehyde (1),
H. the demands put forward in the report of the Committee of Inquiry into the treatment of toxic and dangerous substances by the European Community and its Member States (Doc. 1-109/84),
I. its resolution of 22 January 1982 on the transport of radioactive substances and waste (2),

1. Calls on the Commission to submit to it a report specifying:
   (a) the dangers which arise from the instances cited above,
   (b) the measures which the Commission has instituted to meet the demands that Parliament made as long ago as 1981 in connection with the transport of radioactive substances and the practical results, if any, of the concerted action project in the field of navigation aid systems, instituted by the European Economic Community in 1983, and in addition the action which, in the estimation of the Commission, may help in the future to prevent ships carrying dangerous substances from becoming involved in accidents while sailing in busy stretches of Community territorial waters,
   (c) the legal rules which govern the inspection of used air from waste incineration plants in the individual Member States, the countries where traces of dioxin have been detected in the used air from waste incineration plants, the threshold values beyond which a danger to the public must be assumed to exist and the steps which the Commission proposes to take in this area,
   (d) the legal rules laid down in the individual Member States to regulate concentrations of formaldehyde in enclosed spaces and the action which the Commission has already taken or plans to take on the demands of Parliament;

2. Instructs its President to forward this resolution to the Commission, the Council and the Governments of the Member States.

(1) OJ No C 172, 2. 7. 1984, p. 167.
(2) OJ No C 40, 15. 2. 1982, p. 42.
ANNEX III

Viewpoints of the special CEC Permanent Working Party on the transport of radioactive materials
Brussels, 17 October 1984, fifth meeting


These two viewpoints are presented below.

A. Viewpoint of the Special Working Party on the lessons to be learnt from the Mont Louis accident with regard to responsibility in the transport of radioactive materials.

The Working Party recognizes the need for a rapid exchange of information in accident situations relating to the international transport of radioactive materials, so as to enable governments to respond quickly to public concern in these matters.

Recommendation

The Members of the Special Working Party are of the opinion that the Mont Louis accident did not cast doubt on the adequacy of the existing regulations relating to the safe transport of radioactive materials.

The Working Party therefore sees no reason to make any changes from the point of view of radiation safety in these regulations.

The Special Working Party, which met on 17 October 1984, discussed in detail the resolution of the European Parliament and reached the following conclusion with regard to the transport of radioactive materials:

1. In view of the fact that the European Parliament has not yet had an opportunity to discuss the report by the Special Working Party forwarded to it by the Commission on 4 May 1984, the Working Party recommends that the Commission point out the existence of that report to the European Parliament together with the conclusions that the Commission, to the extent to which it is concerned, has drawn with regard to the measures to be taken within the Community framework.

2. The Working Party considers that the European Parliament should not consider additional measures relating to the safe transport of radioactive materials.

3. The Working Party wishes to draw the attention of the Commission to the viewpoint that it adopted unanimously with regard to the lessons to be learn in this field from the accident involving the Mont Louis.

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## ANNEX IV

### CONVERSION BETWEEN CLASSIFICATION SYSTEMS

Classification systems.

<table>
<thead>
<tr>
<th>Description of the hazard</th>
<th>ADNR categories</th>
<th>ADR/RID categories</th>
<th>IMDG categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosive substances and articles</td>
<td>I a</td>
<td>1 a</td>
<td></td>
</tr>
<tr>
<td>Articles filled with explosive substances</td>
<td>I b 1</td>
<td>1 b 1.1 to 1.5</td>
<td></td>
</tr>
<tr>
<td>Igniters, fireworks and similar goods</td>
<td>I c</td>
<td>1 c</td>
<td></td>
</tr>
<tr>
<td>Gases: compressed, liquefied or dissolved under pressure</td>
<td>Id 2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Substances which give off inflammable gases on contract with water</td>
<td>I e 4.3</td>
<td>4.3</td>
<td></td>
</tr>
<tr>
<td>Substances liable to spontaneous combustion</td>
<td>II 4.2</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Inflammable liquids</td>
<td>III a 3</td>
<td>3</td>
<td>3.1 to 3.3</td>
</tr>
<tr>
<td>Inflammable solids</td>
<td>III b 4.1</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>Substances which contribute to combustion</td>
<td>III c 5.1</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td>Toxic substances</td>
<td>IV a 6.1</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>Radioactive substances</td>
<td>IV b 7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Corrosive substances</td>
<td>V 8</td>
<td>8</td>
<td></td>
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<tr>
<td>Repugnant substances</td>
<td>VI 6.2</td>
<td>6.2</td>
<td></td>
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<tr>
<td>Organic peroxides</td>
<td>VII 5.2</td>
<td>5.2</td>
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<tr>
<td>Miscellaneous</td>
<td>-</td>
<td>-</td>
<td>9</td>
</tr>
</tbody>
</table>
DANGER LABELS - DIRECTIVE 67/548/EEC

**ANNEX V**

**E**
- Explosive
- Explosionsgefährlich
- Εκρηκτικό
- Explosive
- Explosif
- Esplosivo
- Ontplofbaar

**O**
- Brandneuerende (oxidierende)
- Brandfördernd
- Οξειδωτικό
- Oxidizing
- Comburant
- Comburent
- Oxyderend

**F**
- Let antændelig
- Leichtentzündlich
- Αταν εύφλακτο
- Highly flammable
- Facilement inflammable
- Facilmente infiammabile
- Licht ontvlambaar

**F+**
- Yderst let antændelig
- Hochentzündlich
- Έξυπνος εύφλακτο
- Extremely flammable
- Extrêmement inflammable
- Estremamente infiammabile
- Zeer licht ontvlambaar

**T**
- Giftig
- Giftig
- Τοξικό
- Toxic
- Toxique
- Tossico
- Vergiftig

**T+**
- Meget giftig
- Sehr giftig
- Αταν τοξικό
- Very toxic
- Très toxique
- Molto tossico
- Zeer vergiftig

**C**
- Δαστέριστο
- Διαφωτικό
- Corrosive
- Corrosif
- Corrosivo
- Corrosief

**Xn**
- Sundhedsskadelig
- Mindergiftig
- (Gesundheitsschädlich)
- Ενιβαλμένος
- Harmful
- Nocif
- Nocivo
- Schadelijk

**XI**
- Lokalirriterende
- Reizend
- Επιθωτικό
- Irritant
- Irritant
- Irritante
- Irriterend
ANNEX VII

GENERAL INTRODUCTION

IMDG CODE - PAGE 0020
Amdt. 21-83

IMDG DANGER LABELS