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from: Secretary-General of the European Commission,
signed by Mr Jordi AYET PUIGARNAU, Director

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to: Mr Javier SOLANA, Secretary-General/High Representative

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Parliament concerning the fifth report of the standing working group on safe
transport of radioactive materials in the European Union

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COMMISSION OF THE EUROPEAN COMMUNITIES

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**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE
EUROPEAN PARLIAMENT**

**CONCERNING THE FIFTH REPORT OF THE STANDING WORKING GROUP ON
SAFE TRANSPORT OF RADIOACTIVE MATERIALS IN THE EUROPEAN UNION**

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COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT

CONCERNING THE FIFTH REPORT OF THE STANDING WORKING GROUP ON SAFE TRANSPORT OF RADIOACTIVE MATERIALS IN THE EUROPEAN UNION

PREAMBLE

The transport of radioactive materials is in constant development due to their increasing use in medicine, agriculture, industry and research, alongside the transport of nuclear material (fresh or spent fuel) for the production of nuclear energy, including the growing quantities of radioactive wastes from decommissioning of nuclear installations.

In general, around 1.5 million packages (7500 packages every working day) circulate every year in the European Union. Contrary to widespread perception, radioactive materials are not exclusively connected with nuclear electricity production. In fact, the transport of radioactive materials associated with electricity production (usually referred to as “nuclear material”) represents only a small percentage of the total number of transports of radioactive material. The great majority of these shipments consists of radiopharmaceuticals and other radionuclides for medical, scientific and industrial applications. Nevertheless, certain operations may cause major concerns (as for example the recent transport of plutonium from the USA to France).

In recent years, issues related to the transport of all types of hazardous materials have been seen against a background of increasingly negative publicity (Erika, Prestige). This is also true for radioactive materials, although no accident or incident with safety consequences has occurred during the transport of such materials.

It is therefore necessary to dispel this unjustified lack of trust in the transport of radioactive materials and restore public confidence. Transparency of transport activities and involvement of the public are essential for this purpose. It is also important to demonstrate that this activity has the same level of safety across the EU (hence the harmonisation of the procedure for transport, safety certification of packages, emergency procedures, etc.). Crisis management experience has shown that efficiency in decision-making by government authorities is increasingly dependent upon public trust and the willingness of citizens to be involved in that process. National competent authorities and similarly the public and its representatives need to be well informed of the general state of safety and security in the transport field. This is the purpose of this Communication.

INTRODUCING THE FIFTH REPORT

The Commission, at the request of the European Parliament¹, set up a Standing Working Group (SWG) of national experts with specific competence in the safe transport of radioactive materials. The SWG is a consultative committee that organises the exchange of information

¹ European Parliament Resolution published in OJ C 40 of 15.02.1982, p. 43.

on the application of regulations covering the international transport of radioactive materials (TRAM), both inside the Community and between EU Member States and third countries.

By means of periodic reports, the Commission, through the SWG's recommendations, informs the European Parliament and the Council of the current status and developments in the transport of radioactive materials.

The previous (fourth) report by the SWG forms part of a communication from the Commission to the Council and the European Parliament which was adopted by the Commission on 8 April 1998². The European Parliament adopted a resolution on the Commission's communication on 14 February 2001³.

The fifth SWG report has been completed in the light of the current situation following the enlargement of the EU on 1 May 2004. In this new political context, there is a clear need to review some issues related to the transport of radioactive material, due to the differences between new and old Member States as regards the legislative framework for transport and the provisions needed to achieve the same level of safety.

SUMMARISING THE MAIN ISSUES ASSESSED BY THE FIFTH REPORT

The report attached to this Communication brings together the collective knowledge of many European experts and stakeholders from the transport sector and constitutes a significant reference document for all those interested in this field.

The SWG has made good use of the extensive expertise and knowledge drawn from periodic domestic and international conferences and meetings devoted to discussions on transport issues. The report highlights a number of transport matters that are receiving particular attention. The most important issues are summarised below.

Harmonisation of the application and enforcement of transport requirements in Member States

In a growing market for trade in goods in an enlarged EU, monitoring and demonstrating the efficiency of the existing requirements is a challenge for the regulatory bodies with responsibility for safety and security in this specialised field of transport. Therefore, it is important to establish clear requirements in the EU. While the requirements are clear within the individual MS, there are often minor differences between them causing confusion between MS. It would therefore seem justified to harmonise the regulatory requirements and, in addition, to harmonise the assessment procedures in the licensing and inspection processes. There are already very similar national regulations following the implementation of various international requirements (ADR⁴, RID⁵, ICAO⁶ and IMDG⁷); however, it is important to achieve consistent application of these requirements. That goal may be reached if common assessment procedures are developed for all competent authorities.

² COM (98)155 final adopted by the Commission on 08.04.1998.

³ Final 65-0040/2001, Rapporteur Mr Hatzidakis.

⁴ The European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR).

⁵ The Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID).

⁶ The International Civil Aviation Organisation's Technical Instructions.

⁷ The International Maritime Dangerous Goods Code.

From January 2005, all EU member States except Ireland and Malta are signatories to the ADR, which applies to the international transport of dangerous goods by road between all EU member States except Malta, Cyprus and Estonia. Together with the RID, this Agreement ensures common packaging requirements and certification standards.

Contamination issue

The surface contamination on some nuclear fuel packages is one of the issues that received wide publicity in the late 90s immediately after the last report.. Many Member States have investigated the causes of this surface contamination and a consensus has been achieved on the measures necessary to limit surface contamination and to reduce its impact. However, to allay concerns, improvements have been made to decontamination operations and the number and magnitude of significant contamination events have decreased. Improved training and operational procedures have been successfully implemented. For example, experience in Germany shows that since resumption of shipments in March 2001, non-fixed surface contamination has been kept well below the permissible limits by the implementation of appropriate measures. These include procedures for loading, handling, transport, transfer and unloading of spent fuel casks to prevent contamination, as well as improvements to decontamination methods, contamination detection and contamination measurements.

Security in transporting radioactive materials

The terrorist attacks of 11 September 2001 have led to increased attention being paid to the security of all nuclear activities, including transport. However international concern about the security of radioactive material in transport is not new. Prior to 11 September 2001, a robust international regime of protection existed for the transport of certain types of radioactive material. As for all industrial activities, however, there is a need to reassess the adequacy of previous approaches in the light of changing threat levels.

In December 2002, the United Nations Sub-Committee of Experts agreed to include measures for the security of all dangerous goods by all modes of transport within its Model Regulations. In the normal course of events, all these security measures would then be incorporated into the various mandatory modal provisions on the international transport of dangerous goods. Thereafter, subsequent revision of EC Directives 94/55 (road transport) and 96/49 (rail transport) implementing the ADR and RID agreements do require Member States to apply these provisions in domestic law from 1 July 2005.

Inadvertent movements and illicit trafficking

The International Atomic Energy Agency (IAEA) defines illicit trafficking as any intentional unauthorised movement or trade (particularly international) of radioactive materials with criminal intent. 540 confirmed trafficking incidents have been reported since 1993 to the IAEA. About 90% of the incidents recorded involved radioactive sources, or low-enriched, natural and depleted uranium. It is of course likely that there are more incidents occurring worldwide than are detected or reported.

In Europe, while there is no specific regulation on the prevention of illicit trafficking, the provisions of the Basic Safety Standard (BSS) for protection against the dangers of ionising radiation provide the basis for national operational safety.

Accordingly, each Member State of the European Union should have established a system of notification, licensing, inspection and enforcement to take account of and control the use, storage, transport etc. of radioactive material. Within this system, it is the responsibility of each operator (licensee) to account for all the material in its possession in accordance with the requirements of the competent authority. In addition, Council Directive 2003/122/Euratom provides for control of the movement and storage of high activity sources.

In April 2004, the United Nations Security Council (UNSC) passed Resolution 1540⁸ which requires states to ensure that they have the infrastructure in place to address the threat posed by non-state actor involvement in any aspect of weapon of massive destruction (WMD) proliferation. It decides that states shall in no way support non-state actors involved in such activities and that states shall enact and enforce the necessary laws to prevent these activities in their territories. The resolution requires states to monitor and control sensitive technologies, materials, and equipment within their territories. And it invites states with the resources and expertise to assist others that may need help in fulfilling the resolution's requirements. This resolution could serve as a legal basis leading to speed the works of the EU against illicit trafficking of radioactive materials for use in dirty bombs for example.

Emergency arrangements: cooperation between Member States

Despite the extensive application of stringent safety controls under the current Regulations, transport accidents involving packages containing radioactive material have occurred and will continue to occur. Emergency response actions are needed to ensure that adequate levels of radiation protection are maintained.

In most countries, the primary responsibility lies with the carrier and consignor to provide their own contingency plans for such emergencies and to inform the relevant authorities.

Communication and cooperation between Member States are essential. Mutual assistance is important since an emergency may affect several countries. Additionally, some countries may have special facilities that could help with an emergency elsewhere. Cooperation will help establish similar approaches and integrated responses.

Application of INES to transport

The International Nuclear Event Scale (INES) is a means of communicating the safety significance of a radiological event to the media and general public, in the same way as severity scales exist for natural phenomena such as earthquakes, wind or avalanches. The INES was internationally implemented in 1991 but has in practice been applied only to nuclear facilities and not to all transport events.

Notification and rating provide a good means of informing the public and media on events in the transport of radioactive materials. This is also a good way of sharing experience with other countries.

In June 2001, the European Commission organised a meeting for an exchange of views between experts and representatives of European competent authorities concerning the

⁸ Adopted by the Security Council at its 4956th meeting, on 28 April 2004

application of the INES to radioactive material transport events. The European Commission consulted the Member States on the draft application protocol prepared during this meeting. The document discussed at European level was forwarded to the IAEA, which recognised the need for further development if the INES was to be fully applied to transport.

The existing incident/accident notification system, mandatory since 1 January 2003 under the Dangerous Goods Transport Regulations of the ADR and RID in the EU Member States, must be taken into account in any further development. The SWG expressed concern that any dual system would not be appropriate. The application of the INES system is therefore supported on a voluntary basis for a trial period to gain practical experience in Member States.

Denial of Shipments

A major issue for users of radioactive materials is the denial of shipment by some carriers, sea ports and airports. There are problems with all modes of transport, sometimes due to the perception of possible hazards rather than the reality.

These situations, which are linked to perception and not to safety issues, may negatively affect future transports by sea. Denial of sea transport can cause an increase in the number of transports by road. A similar “denial” situation has been observed for transport by air: some airlines consider that the transport of radioactive material gives them more problems than financial benefits and they have decided not to carry out these activities. Negative public perception, labour problems and extra costs are some of the problems cited by carriers. The problem with the denial of shipments is that radionuclides intended for use in medical prevention, diagnosis or treatment are prevented from reaching patients. This is a particular problem in areas of the world where the only means of transport of such radionuclides is by air. The current regulatory system provides adequate safety but does not include special provisions to facilitate the rapid distribution of medical isotopes when warranted.

INTERNATIONAL AND COMMUNITY ACTIONS

In recent years, both safety and security during transport have become matters of international importance. In consultation and collaboration with Member State competent authorities and relevant international organisations, the IAEA continues to play a pre-eminent role in the international approach to transport regulation, aiming to obtain the broadest possible consensus on standards for the safe and secure transport of radioactive material.

The European Commission should continue with its coordination role to ensure consistency between the work at Community and international level. This activity was carried out through the SURE⁹ programme (1998-2002) and the supported studies described in section 5.2 of the report.

For this activity to continue, the Fifth Report underlines the need for a new transport safety programme covering six main areas, with legislative initiatives to be launched where appropriate.

⁹ Council Decision of 14 December 1998 adopting a multiannual programme (1998 to 2002) of actions in the nuclear sector, relating to the safe transport of radioactive materials and to safeguards and industrial cooperation to promote certain aspects of the safety of nuclear installations in the countries currently participating in the TACIS programme (1999/25/Euratom)

- 1) The first aim of this programme is to support the international review and revision of the transport regulations and supporting safety guides to ensure safety and security.
- 2) A second aim is to promote and strengthen the system of safety and security in transport, in line with the latest scientific and technological developments and taking account of current and projected radioactive material transport practices and procedures.
- 3) A third aim is to further develop emergency preparedness and response and to prevent illicit trafficking.
- 4) A fourth aim is to assist and guide new EU Member States in the development and implementation of their national regulatory infrastructure. The goal of this is to ensure uniformity and consistency in the interpretation and application of the Community requirements (i.e. comprehensive safety standards, provisions, good practices and operational procedures) at all levels of transport.
- 5) A fifth aim is to promote transparency in the provision of information to, and communication with, the public and the media in order to improve the public perception of transport safety.
- 6) Finally, the last aim is to reduce denials of shipments and to remove barriers to competition.

SUGGESTIONS FOR A STEP FORWARD

The most recent study,¹⁰ funded in 2004 by the Commission to examine the certification methodology of EU States for allowing the joint agreement of packages, has led to discussions within the SWG but also internationally at the level of the IAEA. One of the study's recommendations is that "the European Commission should organise the development of a harmonised comprehensive guidance material and should provide it to the IAEA in view of worldwide harmonisation if possible."

Those who discussed this topic agreed that a standard applicant's guide would assist in the development of harmonised approaches to the approval of packages and facilitate competent authority approval of non-domestic packages. Harmonisation issues can be encountered at every stage in the complex implementation chain and they can vary from State to State. Examples include varying interpretations of regulatory provisions, variations in modal and national schedules for implementation, different time frames and requirements for a transport package in the various countries through which it could be transported, etc. The industry is also increasingly faced with complicated and often convoluted routings in response to licensing requirements and carrier availability. This can lead to increased transportation costs, shipment delays and indirect shipment paths.

An EU legislative proposal for harmonising procedures and administrative requirements for the transport of radioactive materials would appear to be highly necessary and beneficial. This

¹⁰ Examination of the Certification Methodology of EU States and Applicant Countries and Associate Recommendations for Allowing Joint Agreement/Certification of Packages Related to the National and International Transport of Radioactive Materials. Final Report to the Commission of the European Communities. Contract No 4.1020/D/02-001.

proposal should include the harmonisation of transport documentation to ensure that package certification issued by one Member State is accepted by all other EU countries. Such harmonisation should provide a necessary platform of stability for transportation activities and further development of facility best practices.

A second legislative initiative could address another area of concern: emergency arrangements. It is of the utmost importance that authorities are properly informed about the detailed circumstances of a transport event as well as its safety significance. Reports based on similar requirements would facilitate prompt reporting and, where necessary, intervention. The uniform implementation in the European Union of the International Nuclear Event Scale (INES) and associated guidance will ensure a common system for the notification of incidents/accidents during the transport of radioactive material and also a common methodology for the assessment of the types of incident/accidents by the competent authorities of the Member States. If no action is taken, the voluntary application of the scale may result in varying or even no use of the scale for rating and reporting events. Taking into account the subsidiarity principle, the above objectives of prompt and transparent communication will thus be better achieved at Community level.

The media, European citizens and their representatives will therefore have a common and uniform basis for understanding the severity of incident/accidents during the transport of radioactive material.

Finally, there is a need to assess and enhance security measures for the transport of radioactive materials in the EU. Following the terrorist events of September 2001, several reflections aimed at evaluating the risks associated with malevolent action against the nuclear sector and the transport of radioactive material were initiated. At IAEA level, those provisions are being developed and should result a series of recommendations. The situation is not fully satisfactory at present as the legislation has been developed in a piecemeal approach. The general framework is only starting to emerge and gaps will need to be filled rapidly. The difficulty stems from the various purposes of the recommendations, legislations and conventions existing at present. A coherent approach should look at the security of the whole supply chain: acquisition of radioactive material (RAM), transport, use, storage and final disposal of RAM. The existing legislation and recommendations should fit within a general framework of conventions on security with specific legislation developed on an ad hoc basis depending on the dangerous goods concerned.

CONCLUSIONS

The debate on the security of energy supply in the European Union and the issue of greenhouse gas emissions have also given rise to a new interest in nuclear energy. It has brought to light a new need for Community action in the nuclear sector, independent of the energy policy choices made by the Member States. The Commission has undertaken to develop and present proposals which would open the way to a true Community approach to nuclear safety and to rapidly progress towards sustainable solutions to the management of radioactive waste. The transport of radioactive materials, due to its strategic position in the process, also forms an important part of this work. The transport activity is essential for a very wide range of beneficial uses: the generation of electricity and many industrial, medical and

other applications, including the disposal of existing material when it is no longer needed. It will therefore be accepted if people are confident that it is safe. For decades, the application of regulatory requirements in a safety-conscious work environment by the transport operators has resulted in an outstanding safety record for the transport of radioactive material. To maintain this safety record, regulators and industry should continually reassess practices in the light of changes in technology and advances in assessment techniques. The European Commission will endeavour to develop with the MS and all stakeholders proposals to achieve the required level of safety and security through legislation for harmonisation when required and through common evaluation of the performance of regulators and industry. The actions detailed above will ensure that rules are properly implemented throughout the European Union and that the protection of the public is commensurate with the perceived risks and that these risks are properly assessed and presented in a transparent manner.