



The IAEA Transport Safety Appraisal Service (TranSAS)

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1. Introduction

Representatives of all Member States of the IAEA meet once a year in September at the General Conference in Vienna, Austria, to consider and approve the Agency's programme and budget and to address matters brought before it by the Board of Governors, the Director General, or Member States. In September 1998 the General Conference adopted resolution GC(42)/RES/13 on the Safety of Transport of Radioactive Materials. In adopting that resolution the General Conference recognized that compliance with regulations that take account of the IAEA Regulations for the Safe Transport of Radioactive Material (the IAEA Transport Regulations) is providing a high level of safety during the transport of radioactive material. Good compliance requires that the regulations are implemented effectively. The General Conference therefore requested the IAEA Secretariat to provide a service for carrying out, at the request of any State, an appraisal of the implementation of the Transport Regulations by that State.

In response to this request the Director General of the IAEA offered such an appraisal service to all States in letter J1.01.Circ, dated 10 December 1998. The first Transport Safety Appraisal Service (TranSAS) was undertaken and completed at the request of Slovenia in 1999. A report on the results of that appraisal was published and released for general distribution in the early fall of 1999.

In each of the General Conferences since 1998, resolutions focused on transport safety have commended the Secretariat for establishing the TranSAS, commended those States that have requested the appraisal service and encouraged other States to avail themselves of this service (see GC(43)/RES/11, GC(44)/RES/17, GC(45)/RES/10, GC(46)/RES/9) and GC(47)/RES/7.

Six appraisals have been carried out to date as follows:

•Slovenia	21-24 June, 5 July 1999
•Brazil	15-26 April 2002
•United Kingdom	9-21 June 2002
•Turkey	3-14 March 2003
•Panama	9-20 June 2003
•France	28 March-8 April 2004

This presentation provides an overview of the Transport Safety Appraisal Service and summarizes the major findings from the appraisals completed to date.

2. Overview of the Transport Safety Appraisal Service

This overview will address the following:

- The objective of TranSAS;
- The scope of the appraisal;
- The TranSAS process.

2.1 The objective of TranSAS

The objective of TranSAS is to assist any requesting State with ensuring a high level of safety during the transport of radioactive material by reviewing its implementation of the IAEA Transport Regulations and by making recommendations and suggestions for improvement where appropriate.

2.2 The scope of the appraisal

The general scope for any TranSAS includes:

- An appraisal of the State's regulatory practices for transport safety with respect to the requirements of the IAEA Transport Regulations and related international standards and guidelines, covering all modes of transport (i.e. road, rail, maritime and air);

The specific scope for a TranSAS may include particular emphasis on any aspect of the appraisal as requested by the State.

2.3 The TranSAS process

The normal sequence of events in the TranSAS process are as follows:

- Inquiries about TranSAS
- submission of a request to the Agency for TranSAS;
- a pre-mission visit by the TranSAS team leader to the State to meet with key representatives in the State and to prepare a preliminary agreement for the TranSAS mission;
- preparations for the TranSAS mission;
- the TranSAS mission which will conclude with an exit meeting based on the preliminary findings; and
- submission of the final appraisal report to the requesting State.

Details on these events are provided in the following.

Inquiries

In response to initial inquiries the Agency will provide the TranSAS Brochure and the TranSAS Questionnaire.

The TranSAS Brochure provides background information on the establishment of TranSAS and a general overview of the process involved in TranSAS

A TranSAS Questionnaire was developed to provide a common basis for the appraisals, to assist a State in preparing for an appraisal and to assist a TranSAS team in carrying out the appraisal. The TranSAS Questionnaire contains detailed questions in the following eight key topical areas:

- legislative and governmental responsibilities;
- the authority, responsibilities and function of the regulatory body;
- the organization of the regulatory body;
- the authorization process;
- review and assessment;
- inspection and enforcement;
- the development of regulations and guides;
- emergency preparedness for transport.

Other topical areas have been added in cases where specific emphasis was requested by a State.

Submission of a request

A request for TranSAS is usually submitted by a country through its permanent mission to the IAEA in Vienna. The initial response and follow-up require the establishment of the points of contact in the Agency and in the country requesting the TranSAS. These contacts carry out the preparations for a pre-mission visit.

The pre-mission visit

A pre-mission visit serves to confirm the objectives and scope for the mission. This will be done by discussing TranSAS with key representatives of the regulatory authorities, and of one or more major organizations involved in transporting radioactive material and by preparing a preliminary agreement for the mission.

The preliminary agreement

The preliminary agreement to be developed during the pre-mission visit should address the following:

- the objective of the appraisal;
- the scope of the appraisal;
- the tentative dates for the appraisal;
- the funding for the appraisal where appropriate;
- a listing of the activities to be completed by the Agency and by the State during the period leading up to the appraisal;
- a preliminary schedule of activities during the appraisal;
- working facilities required during the appraisal.

Activities to be completed by the State

The main activities to be completed by the State prior to the appraisal include the following:

- the completion and transmittal to the IAEA of the detailed TranSAS Questionnaire;
- ensuring the availability of key personnel from the authorities during the appraisal;
- arranging the logistics for the appraisal, including accommodation and local transportation for the team members.

Activities to be completed by the IAEA

The main activities to be completed by the IAEA prior to the appraisal include the following:

- recruiting the TranSAS team (this includes obtaining the necessary approvals for the recommended team members);
- providing the TranSAS team with the completed questionnaire and guidelines for the appraisal;
- arranging for travel of the team members to and from the State.

The appraisal

The appraisal includes the following;

- A preparatory session for the TranSAS team;
- An entrance meeting involving presentations by key representatives from the authorities concerning their responsibilities for the safe transport of radioactive material;
- Discussions to obtain clarifications and additional or more detailed information;
- Preparation of the draft report of findings;
- Ongoing feedback on the draft report of findings;
- Visits to transport organizations and facilities as appropriate;
- The exit meeting to present and discuss the findings.

The appraisal report

The appraisal report includes the findings for each area considered in the appraisal, together with a background discussion and a basis for any finding (tied to an international regulatory requirement or recommendation). The findings are presented as recommendations, suggestions and good practices which for TranSAS have been defined as follows:

- A recommendation is advice on improvement in the reviewed area. It can, but need not be, an indication of shortcomings either in the national statutory legislative and regulatory regime or in the methods of fulfilling the requirements;
- A suggestion is either an additional proposal in conjunction with a recommendation or it may stand on its own. A suggestion should stimulate the regulatory body's management and staff to consider ways and means of enhancing performance;
- A good practice is a recognition of a current practice that goes well above the norm. It has to be superior enough to be worth bringing to the attention of other nuclear regulatory bodies as a model in the general drive for excellence.

3. Overview of Findings from Completed Appraisals

3.1 Summary of findings from the appraisal for Slovenia

The TranSAS team made recommendations and suggestions with regard to the legislative framework, competent authority approvals and inspections. One of the recommendations, with regard to approvals for “special arrangement” shipments, was acted on immediately in order to incorporate some specific requirements in the draft legislation on the transport of dangerous goods. It was recognized that action with regard to the other recommendations and suggestions would take some time.

The team also identified some good practices and was impressed in particular by the fact that Slovenia had already published a Slovenian translation of the latest edition of the IAEA Transport Regulations, the Basic Safety Standards and other IAEA documents. These publications are provided, free of charge to university libraries and public libraries. Internet is also used to make Slovenian regulations readily accessible.

3.2 Summary of findings from the appraisal for Brazil

In general the appraisal concluded that, although some improvements are recommended, all areas of transport safety are well addressed in Brazil and some good practices are valuable for the safe transport of radioactive material.

There is some potential for improvement for harmonizing revision to the national transport regulations with revisions to the regulations from the international modal organizations.

It would also be useful to develop formal agreements between ministries in areas of overlapping responsibilities. The responsibilities for regulating, licensing and inspection should be more clearly separated from the operational and promotional functions. More formality in procedures could be used to enhance compliance assurance aspects of regulating the transport of radioactive material.

Good practices were noted in particular in the area of emergency response. The capabilities for responding to an emergency and the very practical guidelines would be very worthwhile for other competent authorities to consider.

Another good practice involves the emphasis on preparing and evaluating transport plans and the practical application of these plans for assuring compliance.

3.3 Summary of findings from the appraisal for the United Kingdom

The appraisal of the safety of the transport of radioactive material in the UK considered multiple aspects of transport, including transport by all modes (i.e. road, rail, sea and air); the intermodal exchange of packages (i.e. road–rail, road–air and rail–sea); the design approval, manufacture, operation and maintenance of packages; inspection and enforcement activities; and planning and responding to emergencies.

The appraisal showed that “the regulatory framework in the UK for the transport of radioactive material is well developed; that the UK is committed to a sound safety culture in its transport regulations; that, in general, the regulation of this transport is handled well; and that the competent authority and the other involved regulatory bodies should be commended for their efforts. In all of these areas, and in other associated areas, the appraisal found much to praise. Specifically, the appraisal did not find any issues that were safety critical.”

However, there were a number of areas identified in which improvements could be made. The appraisal resulted in 3 recommendations and 21 suggestions.

The appraisal also identified 15 areas of good practice that can serve as a model for other transport competent authorities to emulate. The good practices identified in the maritime and air transport operational areas were deemed to be especially noteworthy.

3.4 Summary of findings from the appraisal for Turkey

The transport of the relatively small number of packages of radioactive material is well controlled in Turkey. Customs regulations specify permission from the Turkish Atomic Energy Commission (TAEK) for import of radioactive material. Only companies licensed by TAEK can import, export, transit and transport radioactive material. Each shipment of radioactive material is subject to a permit from TAEK. A comprehensive database with information on the use, storage and movements of radioactive material is updated on a continuous basis. This high level of control and monitoring enhances the safety of the transport of radioactive material in Turkey.

A draft revision of the national transport regulations based on the 1996 edition of the IAEA Transport Regulations has been used in Turkey when the requirements of these IAEA regulations became effective for international transport during 2001. It was recommended that these draft regulations be approved formally as soon as possible.

3.5 Summary of findings from the appraisal for Panama

The responsibilities for implementation of the regulations for the transport of radioactive material in Panama and through the Panama Canal are clearly defined in the laws and regulations and are well understood by the authorities involved. Highly qualified personnel are available to carry out the activities required for the small number of radioactive material shipments in Panama. Highly qualified personnel and significant resources are used to ensure safe transport of radioactive material through the Panama Canal.

With regard to radioactive material shipments in Panama procedures and resources need to be developed to be able to take care of the increasing regulatory requirements resulting from revisions to the IAEA Transport Regulations and an expected increase in the number of shipments of radioactive material in Panama.

A considerable number of good practices has been identified with regard to shipments through the Panama Canal, which are under the jurisdiction of the Panama Canal Authority. A very high level of safety is achieved by rigorous requirements concerning compliance with all applicable regulations, by control of the shipments through the Canal and by highly developed emergency preparedness capabilities.

3.6 Summary of findings from the appraisal for France

The comprehensive legal framework with responsibilities identified in considerable detail and with Memoranda of Understanding in areas of overlapping responsibilities, provides a good basis for implementation of the Transport Regulations.

Generally, the implementation of the regulations is done in accordance with IAEA requirements. Some areas for possible improvements have been identified. In general these relate to keeping guides and procedures up to date and being able to demonstrate that all the requirements of the regulations have been met.

The findings include a considerable number of good practices, in particular in the area of maritime transport.

3.7 TranSAS reports

The findings, as well as more general information about each TranSAS mission are provided in more detail in the individual TranSAS reports. The reports for Brazil, the United Kingdom, Turkey, Panama and France are available electronically on the IAEA web site:

<http://www-pub.iaea.org/MTCD/publications/download.asp>

In the search box on this page type in: TranSAS

Information on how to order hard copies of these reports is also available on this web site.

4. Conclusion

The safety record for the transport of radioactive material on a worldwide basis has been excellent. Good regulations and good implementation of the regulations have helped to achieve these results. Just as it is necessary to continue updating the regulations, taking into account new requirements for transport as well as developments in technology and radiation protection, it is also necessary to continue reviewing the implementation of the regulations.

The review of the implementation of the regulations by the TranSAS missions to date has generally confirmed regulatory practices that support the safe transport of radioactive material but has also identified areas where improvements could further enhance the safe transport of radioactive material. In addition, some of the identified good practices could be beneficial for other States.

The General Conference has recognized the benefits of TranSAS missions and has continued to encourage other States to make use of this service.

Positive feedback about the value of a TranSAS mission has been received from all countries that have had a mission.