For reasons of economy, this document will not be available at the meeting. Participants are kindly asked to bring their copies to meetings and not to request additional copies.
A. INTRODUCTION

The Transport Safety Standards Committee (TRANSSC) is a standing body of senior experts in the transport of radioactive material; established by the Deputy Director General, Head of the Department of Nuclear Safety and Security. TRANSSC advises the Deputy Director General on the overall programme for the development, review and revision of standards relating to the safety of transport of radioactive material. Its objective is to achieve consensus, quality, coherence and consistency in the development of international standards for transport safety.

TRANSSC has a broad role in advising the Agency on safety standards. While the development of transport standards is the primary role of TRANSSC, TRANSSC also has an obligation to coordinate its activities with other safety standards committees to ensure transport safety issues are addressed and addressed appropriately. TRANSSC works closely with the Secretariat, the other Safety Standards Committees and the Commission on Safety Standards to ensure that its activities fit consistently and coherently within the Agency’s safety standards program.

The 17th Meeting of TRANSSC was held during 7-10 October 2008. A total of 74 persons, representing 30 Member States and 12 International Organizations attended this meeting (Ref.1).

The references cited in the report and listed at the end of the report have been made available to the TRANSSC members either as hard copies or as electronic copies.

B. PROCEEDINGS OF THE MEETING

1.0 OPENING SESSION

Ms. E. Amaral, Director, Division of Radiation, Transport and Waste Safety, IAEA, welcomed the participants to the seventeenth meeting of TRANSSC. In her opening remarks she drew attention to the Agenda which was significantly different from those used in the past meetings. The intent was to encourage discussions among the members of the Committee with the ultimate aim of providing constructive advice / recommendations to the Secretariat on the development of the transport portfolio taking into consideration the Commission of Eminent Persons report on the 20/20 Vision for the Future. She encouraged active participation by everyone in the discussions. She informed the Committee about two important meetings which took place in the past two weeks, viz., that of the Board of Governors and the General Conference. The Board of Governors approved the proposed
amendments to TS-R-1. This means that the publication of the 2009 edition of the Regulations is now underway. The General Conference passed a resolution on transport of radioactive material. Ms Amaral also reported that the round table discussion on denials of shipment which was held on the sidelines of the General Conference was successful, and she urged members of TRANSSC to consider what they could do to contribute to sustainable solutions to the problem. Finally she wished the participants a fruitful time at the meeting.

Mr. B. Brach, the TRANSSC Chair, in his opening remarks welcomed the participants to the meeting. He introduced Mr J. Stewart, the new TRANSSC coordinator and Head, Transport Safety Unit (TSU) who brings with him rich experience and knowledge to IAEA and to the transport community as a whole. He thanked the members for their contributions to the Technical Meetings, Consultancy Meetings and Correspondence Groups. He would welcome the feedback of the Committee to the new format of the meeting. Informing the Committee about the process that the draft Regulations went through after it was approved by TRANSSC 16, he said that comments were received from the other safety Committees of the Agency, viz., RASSC, WASSC and NUSSC. It was recommended by the Commission on Safety Standards (CSS) that because of the large number of comments, a quality review of the draft regulations should be carried out by the TRANSSC Chair. He recalled the mail sent by Mr. N. Bruno, as acting Head, TSU, IAEA, inviting comments from TRANSSC members. Subsequently he received a large number of comments which he resolved and closed the issue with the Chair of the CSS thereby enabling the Secretariat to submit the draft regulations to the Board of Governors for approval.

2.0 ADMINISTRATION ITEMS

2.1 Conduct of meeting

Mr. Brach presented the provisional Agenda of the meeting. He drew attention to the proposal to create three working groups for two agenda topics. This was to encourage increased discussion in smaller groups. The results of the Working Group deliberations would be brought to plenary for discussion. He pointed out that the agenda item 8 which refers to developing the agenda for the next TRANSSC meeting was new. In response to his invitation for comments on the agenda prior to adoption, Mr. Hinrichsen suggested that a discussion of the results of the recent Technical Meeting on databases be included in the agenda. Mr. Ershov suggested that the discussions include the Conference proposed to be held in Russia in September 2009. Mr. Stewart suggested the inclusion of proposed PATRAM 2010 in the agenda. The discussion of the two conferences was added to Agenda Item 7.0, “Other Business”.

These amendments were accepted and the Agenda was adopted as modified. The revised Agenda is given in Ref.2.

Mr. Brach presented the terms of reference of the meeting.

There were no questions on the terms of reference (Ref.3).

2.2 Administration

Mr. J. Stewart outlined the administrative arrangements for the meeting. He pointed out that the Secretariat would be producing a draft meeting report during the week which would be produced for review by the end of the meeting. He thanked Mr. Bruno for managing the TSU
before he took over the Unit and appreciated his efforts in getting TS-G-1.1 published and two other safety guides to the press.

2.3 Review of previous meetings

Mr. Stewart informed the members of TRANSSC about the outcome of the General Conference (GC52) which concluded on 5 October 2008. There was a GC resolution on transport of radioactive material. Transport featured high on the list of importance at the General Conference. Transport is a highly political issue and New Zealand must be credited for their efforts and work in developing the resolution. Highlights of the GC resolution include continued recognition of the record of safety of radioactive material transport, of the many initiatives underway to improve communication, cooperation, reviews, and safe transport, with increased attention to address denials of shipments. Copies of the GC resolution were made available to the Committee.

Mr. Delattre, Scientific Secretary CSS, informed the Committee that since TRANSSC16 two meetings of CSS were held, one in May and the second in September. Many policy papers were produced. Several issues regarding the structure and the format of safety requirements and safety guides were addressed. He would provide details on these issues during his presentation under the agenda item, 3.4, “The future of safety standards”.

TRANSSC Chair took up the report of TRANSSC 16 Meeting Report Rev. 1. There were no comments on the report. The TRANSSC 16 Report was approved by the members of the committee (Ref.4).

Mr. Stewart presented to TRANSSC a proposal of the Secretariat to maintain an action record sheet. The purpose of this sheet is to keep track of the implementation of the recommendations of TRANSSC. The sheet lists the recommendations of the TRANSSC and the actions taken on each recommendation. The action sheet would list the actions recommended, the responsibilities, status of implementation of the action and notes with respect to the action. He invited the members to consider the proposal and sought the approval of the action record sheet by TRANSSC. He informed the Committee that three actions were completed following TRANSSC 16. The action sheet following TRANSSC 16 was made available to members during the meeting. They were asked to update actions before leaving. USA raised a question relating to Action point 16.3 of the report. The TRANSSC Chair offered to take up this matter directly with the TRANSSC member outside the meeting. Time restraints precluded the discussion of actions and status of actions.

While no comments regarding the format were made, the U.S. commented that the actions and status for TRANSSC 16.3 recorded on the form were incorrect. The format was approved without any change. An updated copy with actions from this meeting is given in Ref.5. As discussion was limited at TRANSSC to the form, TRANSSC members were given the opportunity to comment on the contents of the action sheet form at then end of the meeting (during refreshments).

3.0 THE TRANSPORT PORTFOLIO NOW AND IN THE FUTURE
3.1 What is used in Member States?

TRANSSC Chair introduced the next item on the agenda. He requested TRANSSC to consider the projected growth of the nuclear industry, the growing need for transport of radioactive material, the possible changes that may arise in the transport scene, the challenges that will be encountered by the transport community and how these challenges should be met. He requested TRANSSC record their expectations of and suggestions to the Secretariat during their deliberations in the working groups. Mr. Stewart requested the members to provide the status of implementation of the transport safety standards in their States in the form which was sent to the members.

Following the introduction, TRANSSC Chair invited the members of the Committee to make presentations on application of transport portfolio in their States. Please see Ref. 6. The following paragraphs summarize recommendations offered by Member States in their respective state reports. The recommendations were received by TRANSSC and the Transport Unit as input for future.

Regulations:
The overview of the Member States revealed that most States were either in the process of making the transition from the 1996 edition of the IAEA Regulations towards adopting TS-R-1 (2005) Edition of the IAEA Regulations or had adopted the 2005 edition. Because of the frequent revisions of the regulations many countries expressed concern over the stability of the regulations. It was recommended that the regulations should adopt simpler and easy-to-use language. It was also suggested TS-R-1 should be made computer friendly. Some members suggested that a comprehensive list of the corresponding paragraph numbers of the various regulations for transport of radioactive material should be developed.

Safety Guides:
Most of the members stated that they were using the advisory material, TS-G-1.1 TS-G-1.2 and TS-G-1.3. Some Member States used the Safety Series on quality assurance for the transport of radioactive material. Most of the representatives noted the need for and use of the Schedules and expressed a keen desire in the publication of the Schedules. Some members advised that TS-G-1.1 should be published together with TS-R-1. It was felt by some of the members that the safety guides should be published in the other Agency languages.

Training:
The training material was useful to all Member States but it had to be updated. Many members suggested that the training material should be in simple language. The visual aids should not repeat the regulatory language. It was felt by some of the members that the training material should be published in the other Agency languages. Most members felt that the training material should be prepared for different levels of target audience.

Databases:
It was reported that the database, PACKTRAM, was very useful and that there is an urgent need to update it at regular intervals. Some members suggested that Competent Authorities should be authorised to upload the approval certificates to PACKTRAM themselves. A small number of members were interested in EVTRAM but commented that the database should be
simplified and made user-friendly. SHIPTRAM and EXTRAM were not used extensively. It was clear that the list of national competent authorities was much used. PACKTRAM data was circulated among the TRANSSC members.

INTERTRAN
A small number of Member States were using INTERTRAN for risk analysis either for risk analysis at the national scale or for risk analysis in limited contexts. The majority of members did not use INTERTRAN for risk analysis either because they had alternative codes (e.g. RADTRAN in USA) or they did not use any such computer codes for making risk analysis.

Brochure and video:
The brochure was found useful by many while some did not find it useful enough. Some advised that it should be made available in all the Agency languages. The video was found useful to varying degrees by the members. Many members suggested that more such video films should be made for different target audiences and in all the Agency languages.

TranSAS mission:
A few States reported on TranSAS missions in their countries but many States had not taken up TranSAS missions. In some States integrated safety appraisals have been conducted by the Agency and such appraisals included transport.

HyperTRANS:
Many States had used HyperTRANS. A Russian version of HyperTRANS was in use in the Russian Federation which was being updated on the basis of the Russian regulations. In some States HyperTRANS was not used. A few members expressed the view that it would be useful to have an updated version of HyperTRANs or a similar package.

Conferences:
Many countries expressed satisfaction for the IAEA conference on transport of radioactive material held in 2003. Many members felt, however, that such conferences should be held not very frequently but from time to time. Conferences should not be backward looking. Instead, they should anticipate and address the future challenges such as the coming into vogue of newer nuclear technologies, new isotopes and decommissioning.

CRPs:
Many States had taken part in some of the CRPs conducted by the Agency over the years. Some had not availed themselves of the opportunity. The representative of UK suggested a CRP on the issue of competent authority approval of packages for long term storage and one on the kind of decommissioning waste that may need to be transported and the impact of such transport on the regulations.

TECDOCs
Many States referred to the usefulness of the Agency TECDOCs on various topics relating to safe transport of radioactive material.
Coordinated work in Europe:

Mr. Sallit made a presentation of the Association of EU Competent Authorities. The objective of the association was to promote cooperation among the members of the association to maintain a high level of safety, common and harmonised approach and exchange information and resources. There were about 10 members in the association and more were expected to join shortly. While initially limited to EU members, the association is not meant to be exclusively for the EU States. The US commented that, in their view, the formation of regional associations can adversely impact uniform implementation of the transport regulations. It was also noted that the purpose and objective of this group overlapped with those of TRANSSC and the Radioactive Materials Transport Study Group (RTSG).

European Applicants Guide

Mr. F. Nitsche made a presentation on European Applicants Guide. The aim was to enable the user to take into account all the relevant aspects in making application for approval of packages or documentary evidence that a package design not subject to CA approval meets the applicable regulatory requirements.

Co-ordinated work in North America

Mr. R. Boyle made a presentation about the coordination efforts between Canada and USA. The output of the work would be a guidance material which will ensure uniformity and consistency in the assessment of applications for approval. Mr. Boyle stated the guidance material would be provided to the IAEA upon its completion.

Co-ordinated work in South America

Mr. J. Lopez Vietri spoke about coordination efforts among Argentina, Brazil and Chile in assessing a Type B(U) package for containing radioactive material. The effort would result in uniformity and consistency in the assessment of packages for design approval.

Australian Guide

Mr. S. Sarkar spoke in detail about the Safety Guide made in Australia which presented the regulatory requirements in simple language that will assure compliance with the requirements.

3.2 Where we are

Mr. Bruno made a presentation on the Current Transport Portfolio. He listed the Safety Standards which have been published and those which are going through the process. The portfolio included the databases which are being used to varying degrees. He spoke about the training material that is used in the various Agency-sponsored training programmes. He mentioned that the material has been translated into Spanish for the benefit of the Spanish-speaking participants. Speaking about the TranSAS missions undertaken by the Agency, he pointed out that such missions were conducted in an elaborate manner involving a number of experts (approximately 12 – 15 experts) in a given mission with a questionnaire comprising over 200 queries whereas the integrated regulatory review service includes transport as one of the components with one expert doing the appraisal. There is significant difference in the
emphasize on transport between the two appraisals and he would not say that one replaces
other. Mr. I. Rahim, IMO, pointed out that, in accordance with the decision of the
International Steering Committee, IMO has formally launched a multimodal project
developing appropriate training material in cooperation with IAEA, ICAO and UNECE. The
output of the project would be a free-to-use e-learning course on safety of transport of
radioactive material.

3.3 What is 2020?

In his presentation on Global Safety Regime / 2020, Mr. K. Mrabit of the Department of
Nuclear Safety described the views of the Commission of Eminent Persons which was
appointed by the Director General. In the Commission of Eminent Persons report on the 20/20
Vision for the Future, the anticipated growth in nuclear power utilization world wide, referred
to as the ‘Global Nuclear Order” foresees that safe and secure nuclear technology should be
available to those seeking it. The Commission stresses international cooperation and nuclear
security and recommends that all new entrants should be encouraged to sign the various
safety conventions. The Commission emphasises the need for safety reviews and recommends
new services that may be warranted under the increased use of nuclear energy to be developed
by the Agency.

3.4 The future of safety standards

Mr. D. Delattre, Scientific Secretary, CSS outlined the road map on the safety standards
structure, long term structure and format of safety requirements, criteria for the long-term set
of safety guides. He provided a long term list of Safety Guides. He summarised the letter
from the Chairman of the CSS to the IAEA DG on the accomplishments of and the plans for
the CSS. The Chairman encouraged consideration by TRANSSC of these activities which will
directly impact TRANSSC and the transport safety standards and guides, such as reformatting
of TS-R-1, consolidation of existing transport safety guides with other programmatic guides,
and elimination of definition section in TS-R-1 and the safety guides.

3.5 Where we want to go

Mr. J. Stewart made a presentation on the expectations of the Secretariat. He emphasised the
need to define the documents and services provided by the IAEA which are necessary to
ensure safe and sustainable transport within the global safety regime and the importance of
examining internal and external transport within the global safety regime and the importance of
examining internal and external influences and defining the timescales of changes that impact
on the transport portfolio. He sought recommendations of TRANSSC on specific issues like
improving the regulatory language and self assessment by Member States. He asked
TRANSSC to provide guidance to the Secretariat in identifying the priorities of the transport
community.

In the discussion that followed the presentation by the Head, Transport Unit, the Member
State needs and plans were examined. The participants were requested to deliberate on the
questions what the Member State needs and plans are from now to 2020; what factors could
influence these plans; how TRANSSC can support Member States and how the Agency can
support Member States plans. For this purpose three working groups were constituted. Mr.
Faille, Mr. Duffy and Mr. Hinrichsen agreed to Chair the working groups.
The results of the deliberations were reported by the Chairs of the respective groups. The results of the deliberations were reported by the leaders of the respective groups. The following items were reported from the Working Group deliberations: All the groups expressed interest in:

1. Regulatory stability
2. Synchronised publication of TS-R-1 and TS-G-1.1,
3. Harmonization of TS-R-1 with the other UN Regulations,
4. Translation of the Agency transport safety standards into the UN languages, preferably published simultaneously,
5. Early publication of the Schedules,
6. Simplifying the training material and developing different levels of training material for different target audiences,
7. Updating of PACKTRAM and the list of National Competent Authorities.

Other suggestions related to addressing radioactive material with multiple hazards, transport of NORM and orphan sources, reconvening inter-agency meetings, separating the design requirements from the operational controls during transport in the regulations, providing self-assessment protocols, encouraging coordination among competent authorities, sharing of information and experience among the members, harmonization of package certification, revising of the text of the regulations outside TRANSSC, setting time scale for revisions and utilise the various media including You-tube, Facebook and Wikipedia for information sharing. During the discussions that followed members generally supported the views expressed by the working groups. It was suggested that the Agency should extend the necessary additional help to new competent authorities. The outcome of the deliberations of the working groups is summarised in Ref.7.

TRANSSC Chair informed the Committee that the Secretariat had agreed to produce a draft paper outlining the actions arising from these recommendations in the near term and long term before the end of the year.

4.0 THE DEVELOPMENT OF DOCUMENTS/PRODUCTS

4.1 Transport Requirements

Mr. N. Bruno, IAEA, made a presentation on the Status of Transport standards. He first took up the revision of the transport regulations, TS-R-1 (2005). He informed the members that the changes to TS-R-1 (2005 Edition) were presented to the Board of Governors in September 2008 and the Board approved the changes to be incorporated in the proposed revised edition of the regulations, viz., TS-R-1 (2009). Mr. Bruno dwelt at length on the table of changes to TS-R-1-2005. In his presentation on the resolution of all TRANSSC comments on TS-R-1 he described how the comments which were received by the Secretariat at different stages were resolved before they were incorporated in the draft revision of TS-R-1 (2009).
4.2 Transport Guides

Advisory Material: DPP DS425, Rev 0 Advisory Material TS-G-1.1

The discussion that followed focused on how we should approach this update and whether we should plan for missing one cycle, or delaying the next review or printing an interim update. There was an extended but useful debate over the pros and cons of approving the DPP for the proposed publication of an Edition of the Advisory Material corresponding to the 2009 Edition of TS-R-1. TRANSSC discussed whether in recognition of the time and resources required to prepare a revised TS-G-1.1 (2009 conforming edition), a more efficient course of action would be to wait until TRANSSC has reviewed the proposals submitted for the TS-R-1 2009 review cycle at TRANSSC 19, October 2009, and then determine whether to proceed with a 2009 or a 2013 conforming revision to TS-G-1.1.

TRANSSC accepted the suggestion made by TRANSSC Chair that the DPP be held till the TRANSSC 19, October 2009, meeting and the Secretariat offered to develop a working document to initiate the 2009 review of TS-G-1.1 and TS-R-1 but this would not be a formal Agency Safety Standards publication. This suggestion was accepted by the Committee.

Schedules

Mr. Y. Zhao introduced the draft Schedules (DS 387) to the regulations. After briefly describing the preparation of the draft safety guide, he informed the Committee that after TRANSSC 16, 120 comments were received which were duly resolved by Consultants. He then invited the attention of TRANSSC Members to the two versions of the flow chart diagram which is intended to be included in the Schedule to guide the reader to determine the UN number appropriate to the radioactive material to be transported and sought the opinion of the members as to which of the two versions would be more suitable for inclusion in the Schedules. TRANSSC members discussed problems in both versions of the flow charts and Mr. Sannen offered to assist the Secretariat correct the flow charts.

During the discussion that followed the presentation, the members expressed the view that there was an urgent need for the publication of the Safety Guide and, therefore, to resolve the flow chart discrepancies.

The Secretariat will (In consultation with Mr. Sannen) make the necessary amendments to the preferred diagram to make it consistent with TS-R-1 (2009) and communicate it to Mr. Zhao which will then be forwarded to the TRANSSC members for their comments. Electronic communication and closure would be used.

4.3 Issues being worked on

Mr. Zhao briefed the Committee about the status of ongoing issues on transport standards. He explained how the large number of issues were addressed by a few working groups and corresponding groups which were formed at the behest of TRANSSC Chair in view of the need for addressing the issues within a short time given the limited resources available to the Agency. The Committee noted that there were about 117 issues to begin with and the present number of outstanding issues was about 16. Of these, 9 were closed, 2 needed more work and 5 are expected to be addressed soon.
TRANSSC decided that the work should continue. The Secretariat should draw attention to the issues in the recent consultancy on testing and other technical meetings of particular relevance to TRANSSC relating to publication of the reports.

4.4 Potential issues

Mr. T. Cabianca, UK, made a presentation on a computer system to generate $A_1$, $A_2$ and exemption values. He pointed out that these values need to be reviewed in the light of the current ICRP recommendations. He felt that draft revised $A_1$ / $A_2$ values derived using the new ICRP data may be ready by 2011. The Health Protection Agency of UK would welcome suggestions and input from TRANSSC members and others.

Ms. Varley gave a brief account of the consultancy on INTERTRAN which was held in Vienna in early August 2008. The Consultancy was attended by experts from the Japan, Romania and USA. They examined the IAEA package INTERTRAN2 and suggested that the programme had to be updated and that the code had to be upgraded. The Consultants came up with three options, viz., (1) use RADTRAN6; (2) upgrade RADTRAN 4.19SI (INTERTRAN2) or (3) Other. They also recommended that appropriate training programmes should be developed for using the code so that the user is made familiar with the interpretation of the results. The consultancy also recommended that the Agency examine the need for a CRP for upgrading the computer code. The goal is to produce a computer code with improved documentation, guides and training package.

Members expressed the view that the Computer Code should be upgraded and that the Secretariat should promote the use of the code.

TRANSSC recommended that:

1. The Secretariat facilitate exchange of information in connection with the work on re-evaluation of $A_1$ and $A_2$ values.

2. The Secretariat should not have a role in the development of a risk assessment code but should promote the use of such a code.

4.5 BSS

Ms. R. Czarwinski, Head, Radiation Safety Section of the Division of Radiation, Transport and Waste Safety presented a paper on the Basic Safety Standards Draft 1.0. She clarified that BSS’s role as the international benchmark for Radiation Safety Standards across all fields would be retained and that close contact with ICRP would be maintained during the revision of BSS. The TRANSSC members had a number of comments on the BSS related to interfacing and harmonising with key safety requirements between BSS and TS-R-1, greater linkage between safety and security and optimization and dose constraints. It was suggested by members that certain radionuclides currently listed in TS-R-1 should be included in the BSS and vice versa. Concerns were expressed about possible inconsistencies in exemption values and in the TS-R-1 and BSS requirements for markings on consumer products.

Ms. Czarwinski suggested that TRANSSC members should discuss their comments on BSS draft 1.0 with the members of RASSC and WASSC in their States and consolidate the comments at the national level and communicated to the Agency. TRANSSC 17 advice on BSS is placed in Ref.8
The following views were expressed and were generally accepted by TRANSSC:

- Separation of government and competent authority requirements from requirements established for registrants and licensees would be helpful to some.
- Amending the exemption values will be important—it may require a change to TS-R-1 and it may be important to “transition” the change.
- Warnings/markings and hazard information is important in transport.
- A format change could be a problem.
- Control of exposure in transport is an issue of importance (controlled and supervised areas are not appropriate in some transport situations).
- TS-R-1 should be developed to ensure it will fully implement the BSS requirements.
- The consequence of changes should be analyzed if only column 3 of Table I.1 is retained.
- If column 2 of Table I.1 is deleted it may be important to look at specific changes in NORM etc in transport.

4.6 Proposed Standards

Mr. George Philip of NS, made a presentation on the Technical and Scientific Support for the Regulatory Body. The discussion centred around two options, viz., publication of a New Safety Guide or integration into the safety guide, GS-G-1.1. The advantages of each option were explained by Mr. Philip. There was very limited TRANSSC member discussion on this topic.

The Committee consensus supported the development of the document as a stand-alone Safety Guide.

A later comment from the French TRANSSC member recommended that TRANSSC should change its position and that integration of the proposed material on TSS into the Safety Guide, GS-G-1.1 would be the preferred option. France considers that it is important that this guidance covers the wide range of situations from full integration of TSO with the regulatory body through to separate organization. A second TRANSSC member supported this view. The TRANSSC Chairman notes that, as mentioned in the discussion, the Criteria for the Long Term Set of Safety Guides, as approved by CSS, will require the Secretariat to justify in the DPP the need for the additional safety guidance and to justify why the need cannot be achieved by expanding the scope of an existing safety guide, in this case such as GS-G-1.1. France considers that it is important that these guidance cover the wide range of situations from full integration of TSO with the regulatory body through to separate organization.

4.7 Other Transport Requirements

Reports of modal bodies

Mr. Kervella, Economic Commission for Europe, UN, made a presentation on UN papers of significance. The next meeting of the UN Sub-Committee of Experts on Transport of
Dangerous Goods is scheduled for 1 – 9 December 2008. This would be the last meeting of this biennium. The Sub-committee will adopt the changes to the UN Model Regulations that will be published as 16th revised edition in 2009. The changes will be adopted into the modal regulations, IMDG Code, ICAO- Technical Instructions, ADR and RID to take effect from 2011.

Mr. Binet, European Commission, informed TRANSSC that the EC regulations affecting transport of radioactive material were being reviewed in terms of impact.

Ms. Rooney, International Civil Aviation Organization, confirmed that the ICAO Technical Instructions reflected the 15th revised edition of the UN Model Regulations. She added that the facilitation panel of ICAO had recommended that Member States should facilitate transport of radioactive material. She observed that there were instances of little or no communication between the competent authorities for transport of radioactive material and the civil aviation authorities in many countries and requested the TRANSSC members to coordinate more effectively with their respective civil aviation authorities.

Mr. Brennan, International Air Transport Association, informed the Committee that work on the 2009 edition of the IATA regulations had been completed. These regulations reflect the ICAO TI, that is, the 15th revised edition of the UN Model Regulations.

Mr. Tisdall, International Federation of Airline Pilots Associations, confirmed that IFALPA was continuing to coordinate with ICAO in addressing the issue of denial of shipment.

Mr. Rahim, International Maritime Organization, informed TRANSSC that amendments to the IMDG Code based on the 15th revised edition of the UN Recommendations on the transport of dangerous goods and proposals from IMO Member States, IGOs and NGOs had been approved by IMO. The consolidated text of the IMDG Code incorporating the latest set of amendments (34-08) could be accessed in the IMO DOCS web-site.

Mr. Malesys, International Organization for Standardization, informed TRANSSC that work was in progress regarding leakage testing and trunnions and will resume regarding transport of UF₆.

Mr. Gorlin, World Nuclear Association, said that WNA had developed a communication package on transport of radioactive material, and it was now cooperating with other parties with a view to a potential campaign.

Mr. Dekker, World Nuclear Transport Institute, assured TRANSSC that WNTI was continuing to cooperate with IAEA activities relating to the review of TS-R-1 and was actively involved in the activities of International Steering Committee on Denial of Shipments and took part in the regional workshops. WNTI is one of the hosts of PATRAM 2010.

UN documents to TRANSSC
Mr. Bruno made a presentation on the proposed revision to Special Provision 290, SP290. The discussion that followed centred around the need for marking RADIOACTIVE outside an excepted package.

TRANSSC Chair recommended that the views of members of the Committee on this matter be sent electronically within the next two weeks to TRANSSC Chair and TRANSSC Coordinator. The recommendation was accepted by the Committee.

Mr. Bruno presented the following UN papers:
ST/SG/AC.10/C.3/2008/103
ST/SG/AC.10/C.3/2008/101
ST/SG/AC.10/C.3/2008/98
ST/SG/AC.10/C.3/2008/97

The presentations were followed by detailed discussions.

TRANSSC noted that in ST/SG/AC.10/C.3/2008/98 the reference to TS-G-1.1 should be corrected. TRANSSC further noted that ST/SG/AC.10/C.3/2008/99 is for advance information to the UN committee pending TRANSSC action (see para 3) of ST/SG/AC.10/C.3/2008/99 and TRANSSC members should ensure their UN counterparts are aware of this.

In addition, TRANSSC recommended that:

- TRANSSC members to comment on ST/SG/AC.10/C.3/2008/103 within 2 weeks.
- TRANSSC members to comment on ST/SG/AC.10/C.3/2008/101 within 2 weeks.
- TRANSSC members to comment on ST/SG/AC.10/C.3/2008/98 within 2 weeks.
- TRANSSC members to comment on ST/SG/AC.10/C.3/2008/97 within 2 weeks.

4.8 Process for developing standards

MANSYS 0.2

Mr. Delattre provided a brief overview of the Management System for approval of documents. The CSS approved long term structure and format of safety standards. The policy has been developed. Now the Secretariat is addressing the procedure for implementation of the policy. This approach is based on the management system for all which identifies the responsibility of every player. A consultancy including the Chairs of the four Safety Committees is planned for reviewing the MANSYS document. MANSYS would be available late next year.

4.9 Process for developing TS-R-1

Mr. B. Brach, TRANSSC Chair introduced the topic and referred to the email which he had sent earlier this year on the review process of TS-R-1.

TRANSSC Chair informed the members about the informal consultancy that he led following TRANSSC 16. The key elements that emerged in the correspondence exchange included the necessity of document control, tracking of the changes to the Regulations and record and decision on disposition of the comments. Comment resolution should be done outside
TRANSSC, for example, in consultancies and technical meetings. TRANSSC should comment on the resolutions. A decision needs to be taken as to what happens to the accepted comments, if it is decided that they do not warrant revision of the Regulations. A periodicity of a review of the changes was proposed.

Mr. Stewart presented the Quality Plan of the Transport Safety Unit for developing TS-R-1. He identified the stakeholders in the development of the transport safety requirements. He indicated that a generic quality plan had been developed and that on the basis of the generic plan a specific plan for the next review cycle would be produced and maintained by the Unit. The plan would be reviewed three months before each TRANSSC meeting. The plan that he presented should be treated as indicative beyond TRANSSC1. He identified the key issues, viz., document control, and making documents available 2 months before the meeting. He asked TRANSSC whether 45 days would be acceptable in place of 2 months. TRANSSC procedures would be implemented as closely as possible. The Quality Plan is owned by the unit. TRANSSC being an important stakeholder, the Unit needs to address the concerns of TRANSSC and respond.

TRANSSC Chair informed the members about the informal consultancy that he had following TRANSSC 16. The key elements that emerged in the correspondence exchange included the necessity of document control, tracking of the changes to the Regulations and disposition of the comments. Comment resolution should be done outside TRANSSC, for example, in consultancies and technical meetings. TRANSSC should comment on the resolutions. A decision needs to be taken as to what happens to the accepted comments, if it is decided that they do not warrant revision of the Regulations. A periodicity of a review of the changes should be established. Many representatives welcomed that activity and stated that it improved the transparency and the efficiency of the process. One representative questioned whether the process was a two-year or four-year process, and whether the meeting schedule aligned with meetings of the UN. It was noted that the Quality Plan did not appear to include a possible reformatting of TS-R-1 as may be required by the new MANSYS document, and it was not clear that the existing TRANSSC review/revision process was clearly reflected in the Quality Plan. Mr. Stewart clarified that the two-year review as mandated by the Board of Governors would continue and that the endeavour would be to align the process with that of the other UN agencies. The next review cycle would commence in January 2009. A flowchart would be developed indicating the review process. ICAO suggested that there should be scope for input from the other UN agencies to IAEA on the review of regulations. ICAO also suggested that some flexibility should be introduced in the system and that a fast mechanism should be created to address urgent needs, should they arise. In response to a query from Mr. Stewart as to whether such a fast track mechanism can be introduced in the system, Mr. Delattre responded in the positive. ICAO further recommended that the IAEA/UN coordination meetings be reinstituted to facilitate planning and communication. Germany and United Kingdom agreed to extend the necessary support to the Transport Safety Unit in developing a flowchart on the preparation of safety documents.

*It was decided that TRANSSC members would provide their comments on the Quality Plan in one month to the Secretariat.*

4.10 Coordination between transport and other areas

Joint working group of TRANSSC and WASSC

Mr. Stewart placed before TRANSSC a proposal for a working group with WASSC. He outlined the advantages in setting up such a working group and invited members to serve in
the working group. The potential areas for working together are: Fissile-excepted material, interim storage, recovered sources, LSA/SCO and clearance levels for transport waste. Upon obtaining approval from TRANSSC and WASSC it is proposed to set up a joint working group and produce a position paper by March 2009. It is proposed to organize a special session at the joint meeting of TRANSSC, RASSC and WASSC in June 2009 in Vienna. The representatives of Brazil, France, South Africa, United Kingdom and United States expressed interest in participation in the joint working group.

More members were invited to participate in the working group and inform Mr. Stewart by 30 November 2008 of their intent to participate.

Transport of recovered sources:
Mr. R. Heard, Waste Technology Section, NEFW, IAEA drew the attention of the members to the need for the safe transport of recovered disused sources. In the absence of appropriate certified packages one has to resort to transport of recovered sources under special arrangement but it would be difficult to obtain approval from many competent authorities. Air transport would be expensive. Sea transport posed difficulties as many ports did not accept radioactive material. Non-availability of valid special form radioactive material certificates, suitable containers, valid package approval certificates and proper documentation and limited funding compound the issue.

A side meeting was organised to provide advice on packages for source recovery.

Advice on Notification of transit:
Mr. H. Mansoux, Division of Radiation, Transport and Waste Safety, IAEA, sought clarification from TRANSSC as to (1) whether there was a requirement in TS-R-1 for notification to transit States and (2) whether there was a gap in the provisions for notification of Category 1 and 2 sources as per the Code of Conduct / Import Export Guidance on the one hand and TS-R-1 on the other.

TRANSSC clarified that (1) there was a requirement for notification to transit States based on the activity of the radioactive material in TS-R-1 and that (2) there may be a difference between the notification requirements of TS-R-1 and the provisions in the Code of Conduct.

5.0 THE DEVELOPMENT OF IAEA SECURITY DOCUMENTS

Ms. A-M. Eriksson-Eklund informed TRANSSC that the transport security guidance document had just been published as IAEA Nuclear Security Series No. 9. It was presently available on the IAEA website and printed copies would be available in a few weeks. The Nuclear Security Section was working on Security Fundamentals. They were preparing three documents on security of radioactive materials, security of nuclear materials and detectors and response. It is proposed to constitute a working group to address the transport security concerns. Safety and security should work together. Mr. Stewart made a brief presentation identifying the potential areas for safety and security experts to work together. These included verification of packages at borders, development of a computer code, for risk assessment and safety regulations contra security requirements.
6.0 DENIALS OF SHIPMENTS

Mr. J. Rolstone of UK provided an update on Denials and Delays of Shipment. He reported on the activities of the International Steering Committee. The committee has developed an action plan. A database has been developed by IMO and IAEA. There are currently 90 reports in the database. All the Member States have been requested to identify their National Focal Points (NFP). To date, 60 had been nominated, but there remained some significant omissions. TRANSSC members were encouraged to ensure that their country had made a nomination. It is proposed to enable the NFPs to directly upload their data to the IAEA website. In PATRAM 2010, it is proposed to include a session on denials of shipment. Based on the feedback from the first regional workshop which was held in Montevideo in 2007, four regional workshops were conducted in May-June 2008. Region-specific action plans have been developed for each region. Regional networks have been created. It is planned to invite all the network coordinators for a meeting in Vienna early next year. The NFPs are expected to interact with the industry, carriers and public authorities in their countries. Performance indicators to measure the success of the actions initiated by the Steering Committee have been developed. A web-page on denials is being developed by the Agency. A round table conference was hosted by Canada during the recently concluded General Conference which was held in Vienna during 29 September to 3 October 2008. The speakers and participants at the meeting recognized the need for taking the necessary measures. Mr. Rolstone suggested that NFPs should be involved more in addressing the issue. They should be brought together to exchange their experience. He felt that there was a need for workshops in Northern Europe and North America. He pointed out that it was not only an industry problem but a regulator’s problem as well. It was pointed out by members that, in some situations, there was a disconnect between the regulators and the industry. Lack of communication was seen as central to the issue. Ms Rooney requested a list of NFPs which she would forward to the seven regional offices of ICAO so that they could establish communication links in their respective regions. Mr. Stewart agreed to a suggestion that the Agency should compile a list of the authorities that interact with ICAO, IMO, and UN.

The discussion that followed centred on questions as to whether denials actually existed. The impact of the transport regulations on denials was examined. There was need to distinguish between denials of shipment for non-compliance and other reasons. One possibility which was considered was the impact of the introduction of Type C packages on the transport of Co-60 by air. Inconsistency in interpretation of regulations by Member States was seen as a cause for effective denials or delays. The Committee examined possible “additional” regulatory burden (variations from the norm) applied in some Member States.

Three working groups were formed to address the issues raised. Mr. Cottens, Mr. Ardouin and Mr. Boyle agreed to Chair the working groups.

The Chairs of the three working groups provided their reports to the Committee. All acknowledged that TRANSSC could play a role in providing solutions, but wanted greater dialogue with the steering committee to establish what it could do. It was acknowledged by all the groups that denials exist. However, a clear definition of what constituted denials need to be developed. There was unanimity that refusal of a shipment due to non-compliance with the regulations did not constitute denials. Security concerns, variations in the national regulations and additional administrative procedure were viewed as reasons for denials. Differences in the implementation and interpretation of standards were another reason.
Suggestions made for alleviation of denials included better communication between the competent authorities and the other public officials such as customs, simplification of RPPs at airports and sea ports, training of transport operators and carrying out acceptance check at airports. Member States should publicise the specific deviations in the national regulations from the international regulations so that carriers and consignors would be prepared to take them into account. The Agency should compile these deviations. It was suggested that communication among the Agency, the International Steering Committee and the competent authorities should be improved. Mr. Rolstone stated that he would inform the outcome of the deliberations of TRANSSC to the International Steering Committee. A summary of the outcome is at Ref 9.

In the IAEA Latin America Regional Training Course on Safe Transport of Radioactive Material developed in Buenos Aires, 23 June to 4 July 2008, was the first time that an item specially devoted to "Denials and Delays of Shipments" was included as a separate Module.

*It was decided that Mr. Rolstone should present a summary of this discussion to the Steering Committee.*

*Further the Secretariat would develop a draft action plan on the issue of denials of shipment for TRANSSC to be reviewed at the next meeting of the International Steering Committee.*

[Post meeting note – the Secretariat will establish a reference group of TRANSSC members to advise on the action plan]

### 7.0 OTHER BUSINESS

IAEA Safety Glossary review and revision:

Mr. D. Delves, Safety Standards and Applications Unit, NS, made a presentation on harmonization of safety terminology. He gave a brief introduction of the IAEA Safety glossary the purpose of which was to provide consistent terminology for an integrated system of standards. The glossary was descriptive and not prescriptive. It included hard definitions which have been accepted for long, soft definitions which were of relatively recent origin and other definitions such as those used in conventions over which the Agency had no control. He traced the evolution of the terminology used in the safety standards over the years. At present there is not much reference to security terminology.

*The Secretariat will request the four Safety Standards Committees (TRANSSC/WASSC/RASSC/NUSSC) to review and comment on the IAEA Safety Glossary following the same review process as currently used for the IAEA safety standards and guides. The Secretariat expects to submit the Safety Glossary for TRANSSC review in early to mid 2009.*

Safety Framework for Nuclear Power Source Applications in outer Space:

Mr. Delattre very briefly informed TRANSSC about the safety framework for nuclear power source applications in outer space.

PATRAM 2010:

TRANSSC Chair informed the Committee about the proposal to hold PATRAM 2010 in the autumn of 2010. It would be hosted by the Department for Transport United Kingdom. Details would be provided at the next TRANSSC meeting when the issue would be included on the agenda.
ATOMTRANS 2009:
Mr. Ershov informed TRANSSC about the conference on Transport of radioactive material which is proposed to be held in St. Petersburg during 21 – 26 September 2009. He briefly described the programme of the conference and the themes of the various sessions. About 330-400 participants were expected at the conference where 150-180 papers are likely to be presented.

8.0 AGENDA FOR TRANSSC 18

Due to time limitations and the meeting room reservation expiring, TRANSSC 17 was not able to discuss agenda topics to be considered for discussion at the next TRANSSC meeting, tentatively scheduled for June 2009. As a result, items for the Agenda for TRANSSC 18 were invited by the Chair.

It was decided that TRANSSC members should send their suggestions to the Secretariat within two months.

9.0 REVIEW OF DRAFT MEETING REPORT OF TRANSSC 17

The Secretariat committed to have the report available on the TRANSSC 17 web page by 4 PM on 10 Oct 2008. TRANSSC 17 members would be provided an opportunity to provide comments on the draft meeting report by November 30, 2008.

*It was decided that the draft meeting report of TRANSSC 17 should be posted on the TRANSSC website in one week. TRANSSC members should send their comments on the draft report to the IAEA Transport Unit by the end of November. The report should be updated by the end of the year.*
References

1. List of participants
2. Revised Agenda
3. Terms of reference
4. TRANSSC 16 Meeting Report
5. Action Record Sheet Format
6. TRANSSC 17 - Member State Feedback Rev.0
7. TRANSSC 17 - Advice on transport portfolio Rev.0
8. TRANSSC 17 advice on BSS
9. TRANSSC 17 - TRANSSC Activities that can assist in the resolution of Denial Rev 2