6th Meeting of
The Transport Safety Standards Committee
(TRANSSC VI)

IAEA Headquarters, Vienna
5-9 February 2001

REPORT OF SIXTH MEETING INCLUDING
CHAIRMAN’S REPORT

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CHAIRMAN'S REPORT

Mr Clive Young
United Kingdom
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Introduction

The sixth meeting of the Transport Safety Standards Committee (TRANSSC), TC-983.6, was held at the Vienna International Centre, 5-9 February 2001. The meeting attracted 55 participants representing the following (23) Member States: Argentina, Australia, Belgium, Brazil, Canada, China, Egypt, France, Germany, Hungary, India, Israel, Italy, Japan, Netherlands, Russian Federation, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom and the United States of America, and the following (6) International Organizations: the European Commission (EC), the International Air Transport Association (IATA), the International Civil Aviation Organization (ICAO), the International Federation of Airline Pilots’ Associations (IFALPA), the International Standards Organization (ISO) and the World Nuclear Transport Institute (WNTI).

Purpose

The functions of TRANSSC are:
- to recommend the terms of reference of all documents in the Agency’s radioactive materials transport safety standards and supporting documents programme and of the groups involved in the development and revision of those documents in order to promote coherence and consistency among the documents and between them and the other Agency safety related publications;
- to agree on the texts both of Safety Fundamental and Requirements to be submitted to the Board of Governors for approval and of Guides to be issued under the responsibility of the Director General and to make recommendations to the Commission on Safety Standards (CSS),
- in accordance with the Agency’s safety standards preparation and review process; to provide advice and guidance on a continuous programme for reviewing and revising the Agency’s radioactive materials transport safety standards and supporting documents;
- to provide advice and guidance on radioactive materials transport standards, relevant regulatory issues, and activities for supporting the world-wide application of the transport standards; and
- to identify and advise on any necessary activities in support of the transport safety programme.

Working Methods

According to its Terms of Reference, TRANSSC ordinarily meets once a year for up to five working days, with provision for extraordinary meetings to be called when required.

At this, sixth meeting, TRANSSC had a particularly heavy Agenda to consider. This was a consequence of the fact that, in addition to its routine workload, TRANSSC VI had to deal with the following issues:

- the latest edition of the IAEA’s Transport Regulations, TS-R-1 (ST-1, Revised) was being introduced into modal, regional and domestic regulations during the year 2001 and this placed a heavy burden on TRANSSC to urgently prepare/complement and disseminate guidance material to help the Member States and International Organizations to handle the transition from old to new regulation, and
- this was the first occasion when TRANSSC was required to put into practice the procedures of the new biennial review/revision process which had been developed at previous TRANSSC meetings and agreed and endorsed at TRANSSC V.

Consequently TRANSSC VI departed from its normal working procedures (where all business is usually handled in plenary session with Working Groups only being held exceptionally and on an ad-hoc basis), and worked to an
Agenda prepared by the IAEA Secretariat, which foresaw three Working Groups, working in parallel with the plenary session for the first three days of the meeting.

By the close of the meeting a total of 18 Working Papers and 60 Information Papers had been considered. The meeting was only able to complete its very full Agenda within the allotted time by dint of the hard efforts of all participants, the excellent preparatory work carried out before the meeting by Mr Pope and his staff in the Transport Safety Unit, their continuing efforts during the course of the meeting and, finally, the efforts of Mr Pope in recording and writing up the detailed report of the meeting which will be found in the following pages. I would therefore wish to record my gratitude to all concerned with making the meeting a success, including especially the Working Group leaders and Secretaries who necessarily missed part of the plenary proceedings to expedite the completion of all the tasks which TRANSSC had before it, the Secretariat staff of the Transport Safety Unit and the Conference Services of the Agency.

One issue which was not dealt with at TRANSSC VI, and which might usefully be considered at its next meeting, is the frequency with which TRANSSC meets. Consideration might be given to holding the meetings more than once a year so that its business could be dealt with under rather less pressure than was the case at this meeting, and thus obviate the need for parallel working groups to allow for full participation in all the proceedings by all the Member State and International Organization representatives present. Views on this issue are invited and may be communicated to the Secretariat.

Mr Clive Young
United Kingdom
6th Meeting of
The Transport Safety Standards Committee
(TRANSSC VI)

IAEA Headquarters, Vienna
5-9 February 2001

REPORT OF THE MEETING

Mr Clive Young
United Kingdom
and
Mr. Ronald Pope
IAEA
TRANSSAC VI - REPORT OF THE MEETING

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Sixth Meeting of the IAEA Transport Safety Standards Committee
TRANSSC VI
Vienna, Austria, 5-9 February 2001

Report of the Meeting

1. The Agenda which was followed during this 6th meeting of TRANSSC is at Annex I (Revision 3 of Working Paper No. 1).

2. Mr. Z. Domaratski, Deputy Director General, Nuclear Safety, opened the meeting by welcoming all participants to the 6th meeting of TRANSSC. The basis for Mr. Domaratski’s opening remarks is at Annex II.

3. Mr. C. Young, Chairman, welcomed all participants to TRANSSAC. Participants at the meeting are listed at Annex III.

4. The list of Working Papers and Information Papers which served as the basis of the deliberations of the Committee is at Annex IV. By close of meeting, the Committee had dealt with 18 working papers and 60 information papers. All of these papers were available to each participant, and are available in the archives of the Secretariat’s Transport Safety Unit. Many of these are also available electronically.

5. To facilitate a very heavy workload, as shown in the Agenda the Committee formed three small working groups to address the following topics:
   - (Working Group No. 1) Review and recommendation to Plenary on proposed Major Regulatory Changes;
   - (Working Group No. 2) Review and recommendation to Plenary on
     - revised advisory document TS-G-1.1 (ST-2)
     - proposed changes to advisory document
     - prioritization of issues which need to be addressed; and
   - (Working Group No. 3) Review and recommendation to Plenary on revised emergency planning document TS-G-1.2 (ST-3).

   The participants in, and recommendations of, these working groups to Plenary are at Annexes V, VI and VII, respectively.

6. The following summarizes key decisions, recommendations and actions taken by the Committee. Each item is keyed to the Agenda Item Number.

AGENDA ITEMS 10 THROUGH 14 – Issues relating to Proposed Major Changes to the Regulations, Safety Guides and Identified Problems Arising from the Revision Process

- A number of issues were discussed, and they were remanded to Working Group No. 1 to be addressed.
- It was noted by the Secretariat that the Changes of Detail identified by the September 2000 Revision Panel have been sent out for the 90-day review/comment process.
- The issue of changes identified as Changes of Detail moving to Major Changes was addressed. Since the Revision Panel, three Changes of Detail proposals have been reclassified to Major Changes. Working Group No. 1 was asked to further address this issue and recommend back to Plenary.
- **ACTION 1** – Those minor changes identified as “minTr” are changes needed to the other-than-English editions of the Transport Regulations (1996 Edition), and will be addressed as the Secretariat prepares the Errata for the French, Russian and Spanish versions of the 1996 Edition.
• The need to ensure transitional arrangements from the 1996 Edition to the next edition of the Regulations was endorsed by the Committee. However, it was noted that this was not a proposal addressed by the September 2000 Revision Panel, it was handled at that meeting as an identified problem. As a result of the guidance from the Revision Panel, proposed changes were developed in November 2000 through a consultant services meeting and TC-1156.2. The chart showing the current revision cycle process was modified to reflect the need for this change, and Working Group No. 1 was mandated to address this issue using the output from TC-1156.2 (identified in appropriate working papers as “00/MAJ/08”).

• The issue of whether the Secretariat can meet the publication date (Spring, 2003) shown in the chart on page 5 of WP 7 was discussed. The Secretariat noted that it is certainly an ambitious schedule, and will require continued focus by the Secretariat if it is to be achieved. The Secretariat noted it is its goal ‘to publish in 2003, and that it will strive to meet that date.

• It was agreed to modify the chart on page 5 of WP 7 to reflect the one change made to accommodate the input of transitional arrangements which was not included in the September 2000 Revision Panel, and to correct errors concerning the manner in which Advisory Material is to be handled in the process. That corrected chart is provided at Annex VIII. It was emphasized that this chart does not reflect the future (i.e., 2005, 2007, etc.) potential revisions. For example, this process shows ad-hoc actions which have been necessitated by the need to address transitional arrangements and naturally occurring ores; these ad-hoc arrangements are expected to be deleted in future revision cycles.

AGENDA ITEMS 15/16 – Results of the 2000 General Conference and Plans to Address Resolution Therefrom

• The Secretariat reviewed the actions which have arisen since the last TRANSSC meeting (TRANSSAC V) relative to interactions with the Board of Governors and General Conference. The latest General Conference resolution and the recent Note Verbal which was transmitted to Member States were presented – both of which were focussed on transport safety.

• Regarding the collection of data on Member State adoption and application of the Transport Regulations, it was suggested that the Secretariat contact the modal authorities soliciting inputs from the UN international modal organizations to obtain their views on the status of Member State adoption. For example, ICAO reported that all 186 of its Member States are, by convention (the Chicago Convention) required to implement the latest version of the ICAO Technical Instructions.

• ACTION 2 – The Secretariat should communicate with the ICAO and IMO to seek their formal inputs into the adoption of the Transport Regulations by individual Member States for the air and maritime (worldwide); and with the UN/ECE to obtain its input on the European States adoption of the Transport Regulations for land transport.

AGENDA ITEM 17 – Review of Co-ordinated Research Projects (CRPs)

• The status and products of the various CRPs were reviewed.
  • CRP on Accident Environments for Sea Transport (IP 09) – This CRP is completed and the TECDOC summarizing the results is expected to be published soon.
  • CRP on Risk Assessment, including development of INTERTRAN 2 (IP 34) – This CRP is completed, the INTERTRAN 2 software is ready for distribution, and the TECDOC summarizing the results is being prepared for publication.
  • CRP on uranium hexafluoride Package Behaviour in Fires (IP 10) – This CRP has been completed, the draft TECDOC was circulated to the Chief Scientific Investigators, comments have been received, and the TECDOC summarizing the results is expected to be published during 2001.
  • CRP on Accident Environments for Air Transport (IP 39) – This CRP is progressing well, and is expected to provide up-to-date data on accident environments.
• CRP on Radiological Basis for LSA and SCO (IP 11) – The final meeting of this CRP will convene in late February 2001; it will not produce the radiological basis as expected and desired; but a portion of the effort dealing with high-activity ores will proceed beyond the final Research Co-ordination Meeting and will ultimately be terminated with a Consultants Services Meeting (Brazil, Canada and South Africa).
• The Secretariat provided acknowledgement and thanks to all of those from Member States and International Organizations who have and continue to contribute to these CRPs.
• Regarding the new INTERTRAN 2 software, it was noted that the Member State users need to be warned that country-specific data must be developed if the software is to produce valid data.
• Problems have arisen with some of the CRPs because the Research Agreements reached with countries involve specific key individuals in institutes in those countries which may move to other work or lost funding for support of the work covered in the agreement.
• ACTION 3 – Member States proposing Research in the future on Co-ordinated Research Projects should strive to ensure that the work proposed is properly supported by funding.
• Relative to the LSA/SCO CRP, where the G-System was to have been developed to support a radiological basis for the LSA/SCO requirements, a great deal of additional work is needed, and it appears there is little support in Member States to pursue this. There has been no work on the G-System for a number of months.
• Australia feels that additional work needs to be undertaken to adequately deal with naturally occurring radioactive material (ores, etc.).
• ACTION 4 – Consideration should be given to convening a Consultant Services Meeting after the final LSA/SCO RCM to evaluate and recommend for TRANSSC VII consideration, alternatives that might be pursued in developing a radiological basis for LSA/SCO requirements, including assessing the exemption values for naturally occurring radioactive material.
• ACTION 5 – Alternatively to Action 4, two CSMs might be considered, one to address alternatives for LSA/SCO radiological basis, and the second to address exemption levels for naturally occurring radioactive material.

AGENDA ITEM 18 – Update on Activities of the IAEA’s CSS, Safety Standards Committees, Emergency Response Activities and INES Activities Related to Transport

• The activities and status of the Commission on Safety Standards (CSS), the Radiation Safety Standard Committee (RASSC), the Waste Safety Standards Committee (WASSC), and the Nuclear Safety Standards Committee (NUSSC), the emergency planning and preparedness activities in the Radiation Safety Section, and the International Nuclear Event Scale (INES) efforts were all reviewed.
• It was noted that the number of safety standards expected to be published during 2001 and 2002 is significantly increased over the numbers published in recent past years.
• Agreement has been reached that safety standards will be placed on the internet, available at no cost, at
  www.iaea.org/ns/coordinet
  where the current, existing standards will be placed first.
• ACTION 6 – TRANSSC applauds placing the safety standards on the internet at no cost. It further noted that earlier editions of the Safety Series documents and their supporting advisory documents also need to be placed on the internet. These are needed to support the proper implementation of earlier editions of the Regulations with package designs that have been “grandfathered” into the Regulations, and to assist (via older editions of the advisory material) in evaluating and ensuring compliance with earlier methods for assessing criticality safety. Thus, it is strongly recommended that the following earlier documents be placed on the internet along with current and future documents:
  • Safety Series No. 6, 1985 Edition (as Amended 1990)
  • Safety Series No. 7, 1985 Edition (as Amended 1990)
It was further noted that an agreement has been reached that topical suites of documents will be placed on CD-ROM for electronic use on personal computers. For example, the suite for transport would probably include the over-arching documents of Safety Series No. 115 and 120.

**ACTION 7** – TRANSSC recommends that the transport safety suite of documents on the CD-ROM include the following:

- Safety Series No. 120
- Safety Series No. 115
- Safety Standards Series No. TS-R-1 (ST-1, Revised) - 1990
- Safety Standards Series No. TS-G-1.1 (ST-2) - when published
- Safety Standards Series No. TS-G-1.2 (ST-3) - when published
- Safety Series No. 112 - 1994 Edition
- Safety Series No. 113 - 1994 Edition

The CSS noted that greater emphasis needs to be placed on expediting publication of the Safety Standards. Secretariat priorities need to be adjusted accordingly.

**ACTION 8** – TRANSSC VI, noting the emphasis placed by the CSS on the need for expedited efforts to publish outstanding safety standards, convened two working groups to facilitate review and re-endorsement of the two outstanding Guides [TS-G-1.1 (ST-2) and TS-G-1.2 (ST-3)], and recommends that both of the documents including recommended changes coming from the TRANSSC VI working groups as documented later in this meeting report, proceed to publication as soon as possible.

TRANSSC VI noted that unprecedented effort is being placed, as a result of a 2000 General Conference resolution, on the “fast-track”development of a safety standard document on “Activity Concentration Levels for use in International Trade in Commodities Containing Radionuclides”.

**ACTION 9** – TRANSSC provisionally approved the Document Preparation Profile for the “Activity Concentration Levels for use in International Trade in Commodities Containing Radionuclides” safety standard subject to members providing any additional comments to the Secretariat by the close of the meeting (see Working Paper No. 12).

TRANSSC VI took note that following review of the first draft of the “Activity Concentration Levels for use in International Trade in Commodities Containing Radionuclides” safety standard by RASSC and WASSC in April, it will be sent to TRANSSC members for review and comment.

**ACTION 10** – TRANSSC members are encouraged to respond expeditiously to the forthcoming request to review the “Activity Concentration Levels for use in International Trade in Commodities Containing Radionuclides” safety standard draft when it is transmitted for comment.

TRANSSC VI discussed the possibility of having related international organizations (such as the UN Committee of Experts, ICAO and IMO) co-sponsor the Agency’s Transport Regulations as a method for enhancing and encouraging adoption throughout the world. This would be similar to the co-sponsorship of other safety standards (e.g., see Safety Series No. 115). This has been discussed at the Interagency Co-ordination Committee, but is at a very preliminary stage.

**ACTION 11** – TRANSSC VI encourages the Secretariat to more vigorously pursue with the UN Committee of Experts, ICAO and IMO the possibility of co-sponsorship of the Agency’s Transport Regulations. The Interagency Co-ordination Committee (such as the one convened 31 January - 2 February 2001 in Vienna) is probably the best venue for pursuing this concept.
TRANSSC VI acknowledged that transport safety has been incorporated into two International Regulatory Review Team (IRRT) missions (Switzerland and Finland), and is expected to be included in one IRRT mission already scheduled for 2001 (the Czech Republic). It further acknowledged that the Transport Safety Appraisal Service missions that have been initiated (see Agenda Item 31) are similar in nature, but more comprehensive in scope than having a transport element included in an IRRT mission.

TRANSSC VI acknowledges the efforts to reduce the number of emergency-related safety standards to four, one of them being TS-G-1.2 (ST-3). TRANSSC VI was further encouraged by the report by Mr. McKenna that his review of the earlier draft of TS-G-1.2 (ST-3) showed that it was consistent with the latest draft of the emergency safety standards requirements document NS43, did not conflict with, and was a detailed enhancement of, the guidance in NS105 and NS44.

ACTION 12 – TRANSSC provisionally approved the draft version 10 of the Safety Standards document “Preparedness and Response for a Nuclear or Radiological Emergency” subject to members providing any additional comments to the Secretariat by 1 March 2001 (see Working Paper No. 13).

TRANSSC VI took note of the pending publication of the new INES users manual, and the testing of INES-like systems in France and the UK. TRANSSC VI members provided a number of detailed comments to the discussion of the INES system following presentations by Agency and Member State personnel. These comments included the following:

- Because the application of INES to transport involves many more organizations and people than are involved in its application to fixed-site nuclear facilities, the Secretariat is encouraged to make the INES users manual available in either bulk printing or on the internet.
- Although the Secretariat expects the INES system to be applied by Member States immediately the manual is published, it must be recognized that there will probably be a transition period in the States as personnel become aware and trained on the new manual.
- The Secretariat should recognize that the application of INES to transport poses different legal issues than does its application to fixed-site nuclear facilities; and these issues should be investigated by the INES Advisory Group.
- Consideration should be given to providing a trial period of one-year for the application of the new INES manual to the transport area, the system has not been effectively tested and could prove to be inconsistent and needs to be demonstrated as being stable.
- Since international transport involves different countries, it must be recognized that if more than one country uses INES for a given transport-related event, there is a significant possibility that different values will be assigned to the same event by different countries. The INES Advisory Group should consider this potential problem.
- As the use of INES in the transport area proceeds, based on the new manual, efforts should be made by the Secretariat and the INES Advisory Group to ensure they solicit and consider inputs from the transport community; this is especially critical if the expectation is that the INES system is to be applied with no trial period.
- A review of the draft 1999 INES users manual, which was basically reflected with a little additional guidance or change into the forthcoming 2000 users manual, showed that although it is better developed than the earlier attempts, still is insufficient because the area of transport is covered very poorly, has many problems, and is difficult to apply objectively.
- The attempts in INES to have the transport scale tied to the facility scale should be reviewed to ensure it does not provide misleading information. This review should include qualified transport experts from a number of Member States.
- A good link within INES between package type, contents accident severities and consequences is not currently apparent. The system needs to address all types of radioactive material packages, including industrial packages which pose a very low relative hazard but can contain large multiples of the Type A package quantities.
• The French INES-like model for transport is recognized as being more advanced than the INES system represented by the forthcoming 2000 users manual.
• The European Community will be studying and comparing INES with alternatives.
• It is not clear how the transport community can have an effective and consensus input to the needed enhancement of the INES system for transport events.
• It appears that transport inputs will need to come from individual Member State transport experts through their technical officers on the INES Advisory Group.
• TRANSSC VI acknowledges that INES is not directly a safety-related issue, but that TRANSSC has a vested interest in having the system developed properly so the potential for miscommunications is low.

AGENDA ITEMS 19/20/21 – Reports by International Organizations

• ICAO has issued its Technical Instructions (TIs). The printed copies of the TIs were mailed the end of January 2001. Currently, ICAO does not plan to issue the TIs electronically.
• The translated versions of the ICAO TIs (into French, Russian and Spanish) should be completed and mailed the end of March 2001.
• IATA’s Dangerous Goods Regulations are consistent with the ICAO TIs. ICAO has made great strides in training to the new requirements (at this time estimated to be about 90 percent complete).
• Both the ICAO and the IATA requirements reflecting the 1996 Edition of the Agency’s Transport Regulations go into effect with an implementation date of 1 July 2001 (with no transition period).
• TRANSSC VI recognized and was very grateful for the extraordinary steps taken by ICAO and IATA to accommodate the needed change in implementation date to ensure harmonization between modes.
• IFALPA noted that they have developed action limits for exposure of pilots, with levels reduced from 20 mSv/y to 6 mSv/y. Studies have shown that the major source of crew exposure results from cosmic radiation, not radiation from the transport of radioactive material.
• IFALPA has developed a guide for pilots on the transport of radioactive material, which is available on its web site.
• IMO (Information Paper No. 37) reported that the IMDG Code reflecting the 1996 Edition of the Agency’s Transport Regulations has been published and went into force effective 1 January 2001 with a one-year transition period. The deliberations on making parts of the IMDG Code mandatory continue. The DSC meeting in July 2001 will consider this issue, and it is expected that actions will be taken to make at least parts of the Code mandatory on 1 January 2004.
• IMO further reported that the INF Code went into force effective 1 January 2001.
• The EC reported on a number of transport-related studies that were undertaken and are approaching completion. These include studies on contamination, a database on accidents and incidents, inter-comparison of results from INES, radiation protection programmes, dose rate limits for consumer goods, and evaluation of EC States application of the Regulations.
• The EC has not yet acted to initiate further studies, pending a review on need, scope and resources. It is anticipated that one focus on future studies will be on harmonization within the European Community in the areas of transport documentation, certification and event reporting.
• A report on the status of efforts by ISO was presented.
• The WNTI presentation noted that the Institute has grown to 35 members from Europe, North America and Asia. WNTI has two groups with focus on certifying uranium hexafluoride package designs, and on developing issue papers used at the Agency meeting in November on implementation issues. Information Paper No. 32 represents a summary of one of the products of the latter effort, and the periodic briefings during Agency technical committee meetings represents some of the output from the former.
• WNTI is also developing database methodology for capturing radioactive material shipment data. It will be tested using nuclear fuel cycle data, and when developed may then be provided to the Agency for consideration of use in the still undeveloped SHIPTRAM database.
AGENDA ITEM 23 – Information and data services

- The status of the various information and database services was reviewed, including
  - the National Competent Authority List (now available on the Agency’s web site)
  - the packaging certificate (PACKTRAM) database
  - the shipment (SHIPTRAM) database
  - the event (EVTRAM) database
  - the exposure (EXTRAM) database

- **ACTION 13** – The Secretariat should place the latest edition of the PACKTRAM database TECDOC (TECDOC-1171) on the web site, and change this to newer editions as issued.

- **ACTION 14** – The Secretariat, as and if it proceeds on EVTRAM, should look at providing a simplified method for inputting data.

- **ACTION 15** – TRANSSC VI again confirmed that low priority should be given to further efforts on EVTRAM and EXTRAM until and unless additional resources become available.

- **ACTION 16** – The Secretariat is encouraged to explore modifying the text in the PACKTRAM TECDOC to ensure it is understood that the database is only as complete as the information provided by member states and that there may be other package designs available that are not included; in this case, the certificates will still be valid as issued by the relevant competent authority.

- TRANSSC VI acknowledged the efforts being made by the Secretariat to place data and information on the web site as reported in IP 17, and encourages that these efforts continue.

- **ACTION 17** – The data contained in the “Requirements for the Safe Transport of Radioactive Material” section of the web site dealing with the proposed changes addressed by the September 2000 revision panel (three separate files, accessible by ID and password) should be removed by the Secretariat.

- The Secretariat noted that this is the location at which it will start placing PDF files of documents for the forthcoming September 2001 technical committee and November 2001 revision panel meetings.

- **ACTION 18** – TRANSSC VI recommends that the PDF file containing TECDOC-1194 be retained on the web site beyond the end of the calendar year, and that further advice of TRANSSC be sought during the TRANSSC VII.

- **ACTION 19** – TRANSSC VI endorsed the efforts of the Secretariat concerning the solicitation and dissemination of information on how Member States adopt and/or implement the Transport Regulations. However, it is recommended that the Secretariat should specifically seek inputs on a Member State’s plans for adopting/implementing the 1996 Edition of the Transport Regulations, and this should include whether they adopt directly, by reference, or in principal; and this information should be included in what is placed on the web site.

- **ACTION 20** – TRANSSC VI took note of the efforts to provide new software, called SafeTram, reflecting the 1996 Edition of the Transport Regulations, which will replace the earlier HyperTrans!, which reflects the 1985 Edition of the Transport Regulations. The Secretariat is encouraged to include Safety Series No. 112 and 113 in the suite of documents to be included in this software. Further, TRANSSC VII would like advice concerning whether the software will be cost-free, and if not, what the cost would be. It noted that it will only be useful if provided at no or low cost. The Secretariat should also consider linking TECDOCs onto this software.

- **ACTION 21** – TRANSSC VI recommends that the Secretariat monitor the Agency’s plans to place suites of documents on CD-ROMs, and to determine and report back to TRANSSC VII relative to the status of the development of SafeTram, and the need for continuing the development of SafeTram.
AGENDA ITEM 24 – Development of correlation of paragraphs between international regulatory documents

- **ACTION 22** – The Secretariat should send out electronically, not in PDF format but the original Word format, the tables included in WP 10. The Secretariat should also consider sorting the tables, column-by-column, so the requirements can be assessed in ascending order for each organization’s regulatory document.
- **ACTION 23** – The Secretariat may wish to assess UPU requirements and add them to this assessment.
- **ACTION 23** – The Secretariat should consider adding the final version of this table to SafeTram.
- **ACTION 24** – The Secretariat should expand this table to include ADN and ADNR when they become available (Mr. Ridder, Germany can serve as a source for these regulatory documents).
- **ACTION 25** – The Secretariat should place the completed table up on the web site. When completing this action, the Secretariat should note on the table the date on which is was valid (i.e., place text “as of …date…”).
- **ACTION 26** – When the table is completed, an analysis is needed of the paragraphs in TS-R-1 that have not been used by the other regulatory organizations, defining why they weren’t used and whether consideration should be given to removing this text from the Agency’s Regulations. Also, the table should be used to guide resolution of all differences between TS-R-1 and the other international regulatory documents.
- TRANSSC VI recognizes that this table, when completed, will serve as a valuable tool to guide the on-going revision cycle and, if maintained, could assist in future revision cycles.

AGENDA ITEM 25 – Training Activities

- TRANSSC VI took note of the extensive efforts which continue to be undertaken by the Secretariat on training – including both development of training materials consistent with TS-R-land the organizing and convening of regional training courses; as well as initial efforts to develop training material for the new INTERTRAN software.
- India noted that it would like to be considered as a host for a training course, possibly in the 2002 to 2004 time frame.
- TRANSSC VI also took note that India made an offer to host an INTERTRAN2 course when the training material is completed. In completing the training material and preparing for training courses, the Secretariat should also take advantage of experience that has resulted from training on INTERTRAN2 and similar risk assessment models in China, Japan, India, USA and other Member States.
- The Secretariat should recognize that the INTERTRAN2 training programme being prepared should focus on people who have a need for in-depth application of the software, not simply treating it as a “black box”.

AGENDA ITEM 26 – Communications and Public Information

- TRANSSC VI took note of the recent effort to finalize the brochure and video as presented in IP 19. It was noted that any efforts in providing an updated video should build upon the present video which is viewed as an excellent communication and training tool.
- **ACTION 27** – Member States are requested to offer video or film clips of various transport activities to ensure the revised video represents an international view of transport. The Secretariat will notify TRANSSC members and TRANSSC VI attendees when the types of clips needed are identified.
AGENDA ITEM 27 – Interagency Co-ordination

- TRANSSC VI took note of the significant efforts undertaken by the international organizations through the Interagency Co-ordination group. It was primarily through earlier efforts that the adjustments to adoption and transition dates were accomplished which has led to the current 2001 harmonized approach.

- **ACTION 28** – The Secretariat should take all necessary steps to continue the Interagency Coordination effort, and enhance this effort if possible.

- TRANSSC VI noted that ADR and RID do not have requirements for Type C packages in their current regulations.

- **ACTION 29** – The Secretariat should communicate to ADR and RID that they do not have Type C package requirements in their regulations and discuss with them the potential problems this introduces.

- **ACTION 30** – The Secretariat should respond to TRANSSC VI’s concerns with TECDOC-1194. TRANSSC VI noted that the newly issued TECDOC-1194 needs to have corrections issued as an Errata. The Secretariat should transmit the Errata agreed in WP 17, Rev. 1 to those who have already received the document by mail, and correct the PDF file on the web site or include an Errata on the PDF file on the web site within two weeks of the end of the TRANSSC VI meeting. This Errata needs to address problems with Table III and para. 4.3.5.

- TRANSSC VI noted that the partially-completed table on cross-mapping of requirements in the regulatory documents will provide a valuable tool for identifying and facilitating corrections to differences between the various documents. The Secretariat was recognized for taking the initiative in developing this table, and is encouraged to expedite completion of the table.

AGENDA ITEM 28 – Report of and decisions relating to Working Group 1 on Proposed Regulatory Changes

- The working paper representing the results of WG 1 is at Annex V. A number of recommendations are made on both major and change of detail proposed changes. Plenary endorsed all of the recommendations with the following comments:
  - On 00/MAJ/01, dealing with non-compliance, it was acknowledged that as this requirements is applied, experience may show the need to modify and possibly enhance the requirement in future editions. Some approach is needed, and the next revision panel will need to be prepared to address comments arising from the 120-day review process.
  - On 00/MAJ/02, dealing with training requirements, guidance is going to be needed.
  - **ACTION 31** – The Secretariat needs to work with the UN committee of Experts and the modal organizations, perform a consistency check, and prepare a working paper for the next revision panel on whether the wording in the proposed change is consistent with text in these regulatory documents. Alternatively, Member States could undertake this evaluation and provide comments in their responses to the 120-day review.
  - Relative to 00/MAJ/03, dealing with consumer products, endorse to be sent for 120-day review process.
  - Relative to 00/MAJ/04, dealing with change in the A1 value for Cf-252, endorse moving forward based on IP 38 to have this change considered in the 120-day review process; however, the other possible changes to Cf-254 and Cm-248 should not be pursued at this time, but must be proposed in a future revision cycle.
  - Relative to 00/MAJ/05, dealing with solar insolation, TRANSSC endorses this change to go forward for 120-day approval.
  - **ACTION 32** – The Secretariat shall add the chart having associated guidance material provided by Japan (at the last page of Working Paper No. 14) to its transmittal for this change in the 120-day approval process.
• Relative to 00/MAJ/06, dealing with the allowed dose rate increase for packages containing liquids following testing, TRANSSC VI endorses this proposal (some word changes may be needed but this can be handled by Member States in responses during the 120-day review process).

• Relative to 00/MAJ/07, dealing with additional pressure differential requirements for transport by air, TRANSSC VI endorses the proposal as modified in Working Paper No. 14. This will require development of a rationale during the 120-day review process.

• **ACTION 33** – The UK will prepare the rationale for the change proposed in the modified 00/MAJ/07.

• Relative to 00/MAJ/08, dealing with “grandfathering” based on the work of TC-1156.2, TRANSSC VI endorses this “ad-hoc” proposal recognizing that all supportive data developed by TC-1156.2 needs to be transmitted for consideration during the 120-day review process, and significant comments can be expected during the review process. The dates in Table XV will need to be closely analysed based on the transition for a 10-year to a 2-year revision cycle.

• **ACTION 34** – The Secretariat will send appropriate information paper from TC-1156.2 along with the proposed changes relating to 00/MAJ/08 for the 120-day review process.

• **ACTION 35** – Member States should consider, in responding to 00/MAJ/08 during the 120-day review process, providing advisory material to supplement the proposed changes to the Regulations.

• Relative to 00/COD/09, dealing with restricting the use of overpacks, etc. to unpackaged LSA-I and SCO-I, this proposed Change of Detail should be changed to a Major Change, and on this basis endorses the proposed change for consideration in the 120-day review process.

• Relative to 00/COD/12, dealing with information requirements in transport documents, this proposed Change of Detail should be changed to a Major Change, and on this basis endorses the proposed change for consideration in the 120-day review process.

• Relative to 00/COD/23, dealing with beryllium and deuterium content limits, this proposed Change of Detail should be changed to a Major Change, and on this basis endorses the proposed change for consideration in the 120-day review process.

• **ACTION 36** – The Secretariat shall take action to reclassify 00/COD/09, 00/COD/12, and 00/COD/23 as Major Changes, and incorporate them into the forthcoming 120-day review process.

• Relative to 00/COD/11, relating to calculation of criticality safety index, TRANSSC VI endorses the use of the 2nd alternative shown in IP5.

• **ACTION 37** – The Secretariat needs to confirm which option was placed on the web site for the 90-day rule consideration.

• On page 24 of the Chair Report of TC-405.9, “UN3326” should have a space between “UN” and the numbers, i.e., it should be changed to “UN 3326” as presented in 00/min/01.

• With these comments, TRANSSC VI endorsed the report from Working Group 1, and thanked the chairman and members of this working group for their diligent efforts.

**AGENDA ITEM 29 – Report of and decisions relating to Working Group 2 on Review of Advisory Material and Identified Problems**

• The report of Working Group 2 is at Annex VI.

• Relative to Task 1, regarding endorsement of the latest draft of TS-G-1.1, the recommendations presented in the report of the working group were accepted with the exception that for AL2, “maximum permissible” should be deleted.

• On this basis, TRANSSC VI endorses proceeding with the publication process for TS-G-1.1 on a high priority basis.
**ACTION 38** – The Secretariat should expedite the publication of TS-G-1.1 based upon the inputs from TRANSSC VI.

Relative to Task 2, regarding the proposed changes to the advisory material for the next revision, all of the recommendations in the first table were agreed by Plenary with one exception. For these, the Secretariat, after completing TS-G-1.1 as noted above, should then develop text reflecting the proposals in the table for consideration by the next revision panel.

**ACTION 39** - Regarding UK/00/21, the UK will assess their previous input and provide modified input for consideration at the next revision panel.

Relative to Task 3, regarding prioritisation of identified problems, the Working Group provided a list in terms of level 1* (highest priority) to level 3 (lowest priority). It did not have time to assess in detail the level 2 and 3 priority problems. The level 1*, item 1 problem on exemptions is to be handled on an ad-hoc basis in the ongoing revision cycle.

**ACTION 40** – Australia, South Africa, UK, Canada and the EC will collaborate to develop a Major Change input for consideration on the 120-day review process in sufficient time to be considered with the other Major Changes. This will be handled in this revision cycle in the same manner as the “grandfathering” issue. The proposal must be complete per previous guidelines for it to be considered by the revision panel.

The level 1, Item 5 problem on radiation levels of packages is to be handled by a correspondence group, where the UK (Stewart) will serve as focal point. Participants will be those Member States/international organizations that submitted proposals in this area (Canada, France, UK and WNTI).

**ACTION 41** – Based upon actions from the radiation levels of package correspondence group, the issue is to be placed into the next revision cycle.

The level 1, Item 6 problem on criticality/fissile material problems is to be handled by a correspondence group, where France (IPSN) will serve as focal point. It is anticipated that most of the work can be accomplished electronically, and the IAEA will be kept informed as an observer to the work.

The problem of contamination was viewed as being of high priority, and will be handled by a Co-ordinated Research Project.

The first level 2 item (criteria for assessing and reviewing changes) should be accomplished through a CSM.

The revision of the CA and QA documents (Safety Series Number 112 and 113) shall be moved to the top of the level 2 priority list.

**ACTION 42** – For all remaining level 2 and level 3 problems, the Secretariat will complete the comments column of the table and transmit the results to TRANSSC VI participants and TRANSSC members.

With these comments, TRANSSC VI endorsed the report from Working Group 2, and thanked the chairman and members of this working group for their diligent efforts.


The report of Working Group 2 (without its attachment) is at Annex VII.

The findings of the working group were accepted with the following changes:

- The use of the relative potential hazard calculation was deemed not to be useful, and it should be removed from the main body of the text and from Annex III where it is used in examples.
- The Euro Cards should be added to Annex II.

**ACTION 43** – Mr. Ridder (Germany) shall transmit electronically Euro Cards reflecting the Class 7 requirements consistent with the 1996 Edition of the Transport Regulations to the Secretariat in sufficient time that they can be included in the document without delaying the publication process.
• The table in Appendix C shall be updated to the latest and a correct version from NRPB.
• **ACTION 44** – The Secretariat shall co-ordinate with the UK competent authority and with NRPB to obtain electronically an updated table for Appendix C in sufficient time that the document can proceed with the publication cycle without delay.
• With these comments, TRANSSC VI endorsed the report from Working Group 3, endorsed TS-G-1.2 for publication (with the changes noted), and thanked the chairman and members of this working group for their diligent efforts.

**AGENDA ITEM 31 – Appraising and assessing transport Safety (TranSAS)**

• The report on TranSAS was provided in IP 21.
• TRANSSC VI regrets that, in spite of the strong encouragement by the General Conference that Member States avail themselves of the TranSAS service, that greater progress has not been made.
• TRANSSC noted that two requests were received for this service in 2000, and yet only one pre-mission action has been undertaken and that there is yet no commitment for completing the two requested missions.
• TRANSSC further noted that this lack of response to these requests appears to be inconsistent with the emphasis placed on these missions by the General Conference and by the Deputy Director General of Nuclear Safety in his opening remarks to TRANSSC VI.
• TRANSSC VI encourages the Secretariat to work to develop an agreed procedure for responding to and funding the TranSAS missions.
• Brazil noted that even the pre-mission visit for their requested TranSAS effort provided valuable means of communicating internally to the country and assisting them in resolving some of their problems. Brazil looks forward to completion of this mission.
• **ACTION 45** – The Secretariat should provide inputs to Brazil and Turkey in the near future on how and when it intends to respond to their requests for TranSAS missions.

**AGENDA ITEM 32 – Status of CRP on contamination**

• The status of the response to the letter of invitation for a Co-ordinated Research Project (CRP) on contamination is provided in IP 22.
• TRANSSC VI places a high priority on this CRP, with a primary focus on developing a radiological model for establishing a sound basis for contamination requirements. The priority is sufficiently high that potential participants agreed that it should be expeditiously undertaken even though it must be done at no cost to the Agency (except for potential staff travel to meetings).
• The following countries/organizations indicated they would submit proposed research agreements by the end of March 2001:
  • Canada (potential)
  • France
  • Germany
  • India
  • Japan
  • UK
  • USA
  • WNTI
• France agreed to host a 2 ½ day preliminary meeting in Paris (at the TN headquarter) for all who submit proposals to the Secretariat by the end of March 2001. The purpose of the meeting will be to agree on problems to be addressed, comprehensive terms of reference, tasks to be undertaken by each participant, and schedule to be followed.
• ACTION 46 – Potential participants in the contamination CRP submit short-form proposals (available on the Agency’s website) electronically (followed by signed, hardcopy versions) to the Secretariat no later than 31 March 2001.
• ACTION 47 – Secretariat co-ordinate with Transnucleaire-Paris to arrange and communicate arrangements of preliminary meeting to be held the afternoon of 2 May, and on 3-4 May 2001.

AGENDA ITEM 33 – Review of Agency’s transport safety programme

• The review of the Agency’s transport safety programme was accomplished using IP 23 and IP 23, Add 1.
• TRANSSC VI noted that the transport safety programme has experienced a decrease in budget in 2001 and the draft 2002/2003 budget shows another significant decrease (the draft budget shows an under funding in this area of $100,000).
• ICAO indicated that the Interagency Coordination, for which the IAEA has had (and should continue to have) the lead, has proven to be invaluable in assisting the modal organizations in harmonizing relative to the Class 7 regulations. If the Agency cannot support future meetings in a meaningful way, because of decreased budgets, then the effectiveness of the group could suffer.

AGENDA ITEM 34 – Status of actions on TRANSSAC V recommendations

• The status of actions on the 83 recommendations made by TRANSSAC V was provided in IP 24.
• ACTION 48 – Relative to TRANSSAC V Action 22, TRANSSC VI recommends that no further action be taken by the Secretariat to include text in any part of the Transport Regulations dealing with its ability to interpret those regulations.
• ACTION 49 – Relative to TRANSSAC V Action 23, the Secretariat should make corrections to the four paragraph text on contamination recommended by technical management in NSRW and by an expert in communications, and then forward it to TRANSSC members for review prior to placing the text on the Agency’s transport safety web site.
• ACTION 50 – Relative to TRANSSAC V Action 71, TRANSSC VI endorses the development of emergency management schedules for Class 7 material for the IMO. A correspondence group shall undertake this task. Members of the group are: R. Pope (IAEA), C. Young (UK), F. Nitsche (Germany), and B. Pettersson (Sweden). The development of these schedules needs to be completed in sufficient time that they can be considered by the IMO DSC in July 2001.

AGENDA ITEM 35 – Reports from Member States and RTSG

• The reports made by Member States and the Chairman of RTSG are summarized in Annex IX.

AGENDA ITEM 36 – Status of international conferences

• PATRAM 2001 is scheduled to convene 3-7 September 2001 in Chicago, IL, USA.
• The next INucE transport conference is scheduled to convene 5-7 November 2002.

AGENDA ITEM 37 – Plans for TRANSSC VII

• Mr. Dicke reviewed in detail the decisions taken by TRANSSC VI relative to the ongoing review/revision process. These are summarized in Annex X. TRANSSC VI endorsed the document.

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1 The report provides a detailed and updated status of the proposed changes to the Transport Regulations as of 25 April 2001.
• **ACTION 51** – The Secretariat will prepare to send all proposed major changes out for review no later than 30 April 2001. This could include the Australian/South African/Canadian/UK/EC Major Proposed Change on naturally occurring radioactive material which includes ores and consumer products; the inclusion of this proposal depends upon receipt of additional inputs (by way of the Internet) from these bodies (see WP 15, top of page 9). This will be accomplished through the Secretariat sending a circular letter, and the Secretariat posting on the website responses as they are received.

• **ACTION 52** – Regarding the Major Changes, the Secretariat should strive to send out for the 120-day review no later than 1 May 2001, and a distribution date of 15 April is preferred.

• **ACTION 53** – The Secretariat shall continue to work closely with the international modal organizations and the UN Committee of Experts to facilitate and expedite the implementation of changes into their regulatory documents.

• **ACTION 54** – Any extra advisory material needed should come from those originally proposing changes. The Secretariat shall solicit those contributions.

**AGENDA ITEM 38 – Presentation/discussion of results of TC-1156.2**

- Mr. L. Baekelandt introduced and discussed the results of the November 2000 TCM to Produce Draft Topical Documents on Provisions for the Application of the Regulations for the Safe Transport of Radioactive Material (TC-1156.2), as presented in the Chairman’s Report copied as IP 25. The results of those efforts were introduced as:
  - IP 26 – Draft TECDOC on Radiation Protection Programmes for Transport of Radioactive Material
  - IP 27 – Report from TC-1156.2 on Transitional Arrangements for the New 2 Year Revision Cycle

- IP 58, which was submitted by Argentina, provided detailed comments on the Draft TECDOC on a Radiation Protection Programme (RPP) for Transport. Addenda to this document were provided as follows:
  - IP 58, Add. 1 – submitted by France
  - IP 58, Add. 2 – submitted by Germany
  - IP 58, Add. 3 – submitted by Belgium

- It was agreed that based upon these inputs, the Secretariat should proceed to complete and issue the RPP document as a TECDOC. Furthermore, it was agreed that an ad-hoc working group would convene on the afternoon of Friday, 9 February 2001 to provide additional inputs to the Secretariat on the draft RPP TECDOC.

• **ACTION 56** – The Secretariat should revise the Radiation Protection Programme draft TECDOC (a) considering all of the inputs from TRANSSC VI, and any additional comments that are provided by 15 March 2001. The Secretariat should solicit comments by email from interested parties prior to making it final. The publication of this document should be given a high priority and, if possible, when published it should be placed on the Transport Safety web site.

- There were no comments on the transitional arrangements documents represented by IP 27 and IP 28.

**AGENDA ITEM 39 – Other business**

- TRANSSC VI was consulted on a recommendation from an earlier technical committee that Member States contribute guidance documents for the Secretariat to place on its website for use by other countries.
- TRANSSC VI endorsed the collection and dissemination of guidance documents.
- **ACTION 57** – The Secretariat should solicit relevant guidance documents from Member States.
• Comments were provided by France at the end of the meeting on the proposed DPP on Activity Concentrations Levels for us in International Trade in Commodities Containing Radionuclides. This was assigned the identifier as IP 60, and is available from the Secretariat on request. Additional hand-written comments were provided by India to be passed on to the relevant Scientific Secretary.

• Mr. Dicke presented WP 18, which was prepared as the meeting progressed, and provides a summary of the actions to be taken regarding TRANSSC VI decisions on changes to the transport regulations. This document, which is key to furthering the on-going revision process, is included as Appendix XI.

• WP 17, which is an errata for TECDOC 1194 was introduced. It was noted that this still contained errors.

• **ACTION 58** – The Secretariat will work to correct the errors in TECDOC 1194 and re-issue a revised version on an expedited basis.

• It was proposed from the floor that, in light of the fact that TRANSSC will be re-constituted at the end of 2001, and for the sake of continuity, the Secretariat should consider inviting Mr. C. Young, UK to continue as the chairman of the Committee.
INTERNATIONAL ATOMIC ENERGY AGENCY
DIVISION OF RADIATION AND WASTE SAFETY

6th Meeting of
The Transport Safety Standards Committee
(TRANSSC VI)

IAEA Headquarters, Vienna
5-9 February 2001

PROVISIONAL AGENDA
The TRANSSC VI meeting is scheduled to convene in Plenary in Room C-04.

During part of the TRANSSC VI meeting, it is planned that three small working groups (WGs) will meet. Countries and International Organizations with more than one person attending TRANSSC are requested to volunteer alternates or experts to participate in these WG meetings. Plenary will continue concurrent with the WG meetings.

These working groups will tentatively meet beginning Monday afternoon and continue through approximately Wednesday noon. Two of these WGs will address specific regulatory revision matters and the third will address the redrafted Safety Guide on Planning and Preparing for Emergency Response to Transport Accidents [TS-G-1.2 (ST-3)].

The three groups will then report back to Plenary on the outcomes of their deliberations, and will make recommendations to assist Plenary in seeking consensus action regarding these matters.

The rooms in which these groups will meet are
- C-0451 – Working Group No. 1 on reviewing and advising TRANSSC Plenary on proposed major Regulatory changes
- C-0453 – Working Group No. 2 on reviewing and advising TRANSSC Plenary on proposed Advisory Material changes and on Identified Problems
- C-0749 – Working Group No. 3 on reviewing and advising Plenary on the January 2001 draft of TS-G-1.2(ST-3)

Tentatively, TRANSSC VI is scheduled to convene at:
- 09:30 hours on Monday, 5 February 2001,
- 09:00 hours on Tuesday through Thursday, 6-9 February 2001; and
- will adjourn at approximately 17:00 hours on Monday through Thursday, and at approximately 12:00 hours on Friday.
## TRANSSC VI AGENDA

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Opening of the meeting (15 minutes) - Z. Domaratzki, Deputy Director General, Nuclear Safety, IAEA</td>
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<tr>
<td>2.</td>
<td>Statement by the Chairman (10 minutes) – C. Young, UK, DETR</td>
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<td>3.</td>
<td>Administrative information (5 minutes) – R. Pope, IAEA, Head, TSU</td>
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<td>4.</td>
<td>Introduction of new TRANSSC Members/Alternates (5 minutes) – R. Pope</td>
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<td>5.</td>
<td>Review of TRANSSC Terms of Reference (5 minutes) – (IP 1) R. Pope</td>
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<tr>
<td>6.</td>
<td>Discussion/Adoption of the Agenda (5 minutes) – (WP 1) C. Young</td>
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<tr>
<td>7.</td>
<td>Review and adoption of TRANSSAC V Chairman’s Report (10 minutes) – (WP2) C. Young</td>
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<tr>
<td>8.</td>
<td>Status of the draft of the document <em>Advisory Material on the Safe Transport of Radioactive Material</em> [TS-G-1.1 (ST-2)] (20 minutes) – (IP 2, IP 2 Add 1, IP 31, IP 33) R. Pope</td>
</tr>
</tbody>
</table>

**BREAK**

10. Report on Revision Panel Meeting (40 minutes)
- Chairman’s Report – (IP 4) R. Boyle
- Overview of Recommendations – (IP 4) G. Dicke

11. Revision actions since the September 2000 Revision Panel Meeting (20 minutes) – (IP5) G. Dicke

12. Request volunteers for structuring the working groups (*TRANSSC members designate alternates to attend*). (5 minutes) – C. Young
- WG-1: Review/advise TRANSSC Plenary on proposed Regulatory changes (WP 4, WP 11, IP 38, IP 40, IP 41, IP 42)
- WG-2: Review/advise TRANSSC Plenary on proposed Advisory Material changes and Identified Problems (IP 2, IP 2 Add 1, IP 6, IP 7, WP 5)
- WG-3: Review/advise Plenary on draft of TS-G-1.2 (ST-3) (IP 3, WP 3, WP 6)

**LUNCH BREAK – 12:45 HOURS TO 14:00 HOURS**
# ANNEX I

## MONDAY AFTERNOON – CONVENE: 14:00 HOURS

<table>
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<tr>
<th>TranSSC VI Agenda</th>
<th>Working Group Meeting in Parallel with Plenary</th>
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<td>12. CONTINUED – Introduce the papers for the working groups:</td>
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<tr>
<td>• WG-1: Review/advise TRANSSC Plenary on proposed Regulatory changes (5 minutes) - (WP 4, WP 11, IP 38, IP 40, IP 41, IP 42) <strong>G. Dicke</strong></td>
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<tr>
<td>• WG-2: Review/advise TRANSSC Plenary on proposed Advisory Material changes and Identified Problems (5 minutes) - (IP 6, IP 7, WP 5) <strong>R. Pope</strong></td>
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<tr>
<td>• WG-3: Review/advise Plenary on draft of TS-G-1.2 (ST-3) (5 minutes) - (IP 3, WP 3, WP 6) <strong>R. Pope</strong></td>
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<tr>
<td>13. Review/amend the Regulatory Revision Process for the 2003 revision of the Regulations (50 minutes) – (WP 7) <strong>G. Dicke</strong></td>
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<td>14. Working Groups (20 minutes) – <strong>C. Young</strong></td>
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<tr>
<td>• Agree structure and leaders of working groups</td>
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<td>• Agree terms of reference and working procedures for working groups</td>
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<tr>
<td>• Working Groups convene in parallel with TRANSSC VI Plenary</td>
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<tr>
<td><strong>BREAK</strong></td>
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<td><strong>PLENARY MEETING</strong></td>
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<tr>
<td>15. Overview of the Agency’s General Conference Resolutions (RES) and Director General’s Note Verbale relating to the Transport Safety Programme (10 minutes) – (IP 8) <strong>R. Pope</strong></td>
<td></td>
</tr>
<tr>
<td>16. Plans for actions requested by September 2000 General Conference Resolution (10 minutes) – (IP 8) <strong>R. Pope, M.T. Brittinger</strong></td>
<td>Working Group No. 1 to convene in Room C0451</td>
</tr>
<tr>
<td>17. Status of and discussion concerning current Co-ordinated Research Projects</td>
<td>Working Group No. 2 to convene in Room C0453</td>
</tr>
<tr>
<td>• Sea Transport CRP (5 minutes) – (IP9) <strong>X. Bernard-Bruls</strong></td>
<td>Working Group No. 3 to convene in Room C0749</td>
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<tr>
<td>• Risk Assessment CRP (10 minutes) – (IP34) <strong>X. Bernard-Bruls</strong></td>
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<td>• UF6 CRP (5 minutes) – (IP 10) <strong>R. Pope</strong></td>
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<td>• Air Transport CRP (15 minutes) – (IP 56) <strong>G. Dicke/K. Rooney</strong></td>
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<tr>
<td>• LSA/SCO CRP (15 minutes) – (IP 11) <strong>G. Dicke</strong></td>
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<tr>
<td><strong>MONDAY – ADJOURN: 17:00 HOURS</strong></td>
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TRANSSC VI Agenda

TUESDAY MORNING – CONVENE: 09:00 HOURS

PLENARY MEETING

<table>
<thead>
<tr>
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<th>Working Group Meeting in Parallel with Plenary</th>
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<tr>
<td>18.</td>
<td>Update on the activities of the IAEA’s CSS, Safety Standards Committees, emergency response actions and INES related to transport</td>
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<tr>
<td></td>
<td>- Commission on Safety Standards (CSS) report (15 minutes) – (IP 30, IP 36) A. Karbassioun, D. Dilaatre; NS, Safety Coordination; Overall Structure of Safety Standards</td>
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<tr>
<td></td>
<td>- Radiation Safety Standards Committee (RASSC) report (15 minutes) – A. Bilbao (NSRW)</td>
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<td></td>
<td>- Discussion of and TRANSSC comments on DPP for a Safety Guide titled &quot;Activity Concentration Levels for use in International Trade in Commodities containing radionuclides&quot; (20 Minutes) – (IP 12, IP 13)</td>
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<tr>
<td>T. Boal (NSRW)</td>
<td>- Potential impacts on TS-R-1 (ST-1)</td>
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<td>- Action on DPP by TRANSSC</td>
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<td></td>
<td>- Waste Safety Standards Committee (WASSC) report (20 minutes) – (IP 29) K. Hioki, NSRW</td>
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<td></td>
<td>- Discussion of CSS, RASSC and WASSC issues (20 minutes) – C. Young</td>
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MORNING BREAK

- Nuclear Safety Standards Committee (NUSSC) report (15 minutes) – P. Hughes (NSNI)  |
- Status of draft of Emergency Planning and Preparedness documents including discussion of and TRANNSC comments on Emergency Planning and Preparedness issues including report on status of Preparedness and Response for a Nuclear or Radiological Emergency, Safety Standards Series No. GS-R-2, DS43 (30 minutes) – (IP 14, IP 15)  |
- T. McKenna (NSRW)  |
  - Potential impacts on TS-G-1.2 (ST-3)  |
  - Action on/comments on draft by TRANSSC  |
- Status of the INES system application (30 minutes) – D. Delattre (NSNI)  |
  - Status of the updated INES manual  |
  - CSS request for future efforts for transport and sources  |
  - Member State experience with INES or INES-like systems  |
  - Future plans  |
  - Discussion and comments by TRANSSC  |
  - French experience with applying an INES-like system (15 minutes) – (IP 35) V. Pertuis, France  |
  - Japanese Comments on INES (5 minutes) – (IP 44) Y. Tamura, Japan  |

12:30 HOURS – ADJOURN FOR LUNCH
### TRANSSC VI Agenda

#### TUESDAY AFTERNOON – CONVENE: 14:00 HOURS

**PLENARY MEETING**

<table>
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<tr>
<th>19. Reports by International Organizations on Status of Adoption of 1996 Edition of the Agency’s Transport Regulations</th>
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<tbody>
<tr>
<td>• ICAO (10 minutes) – K. Rooney</td>
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<td>• IATA (10 minutes) – J. Abouachaar</td>
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<td>• IMO (10 minutes) – (IP 37) TBD</td>
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<tr>
<td>• UN/ECE (Road/Rail) (10 minutes) — <em>(covered in report by interagency coordination)</em></td>
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<tr>
<td>• UN Committee of Experts (10 minutes) – <em>(covered in report by interagency coordination)</em></td>
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| 20. EC Transport-related events and R&D activities (10 minutes) – L. Rossi |
| 21. Status of IMO deliberations on making IMDG Code and INF Code mandatory (10 minutes) – (IP 37) R. Pope |
| 22. Reports by non governmental representatives |
| • IFALPA (10 minutes) – A. Tisdall |
| • ISO (10 minutes) – P. Malesys |
| • WNTI (10 minutes) – B. Dekker |

#### AFTERNOON BREAK

23. Information and data services |

• Databases (30 minutes) – (IP 16) **M.T. Brittinger** |
  • National Competent Authority List |
  • PACKTRAM |
  • SHIPTRAM |
  • EVTRAM |
  • EXTRAM |
  • IMO Desk Study |
  • Placing data and information on the web |
    • General overview (10 minutes) – (IP 17) **M.T. Brittinger** |
      • Status of current assessment of world-wide adoption and plans for adoption (10 minutes) – (WP 8) **R. Pope** |
        • Discussion and advice by TRANSSC |
    • SAFETRAM – the replacement for HyperTrans (20 minutes) |
      – (WP 9) **M.T. Brittinger** |
        • Discussion and advice by TRANSSC |

**TUESDAY EVENING – ADJOURN (17:10 hours)**
TRANSSC VI - REPORT OF THE MEETING

ANNEX I

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<th>TRANSSC VI Agenda</th>
<th>Working Group Meeting in Parallel with Plenary</th>
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</thead>
<tbody>
<tr>
<td><strong>WEDNESDAY MORNING CONVENE: 09:00 HOURS</strong></td>
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<tr>
<td><strong>PLENARY MEETING</strong></td>
<td>Working Group No. 1 to convene in Room C0451</td>
</tr>
<tr>
<td>24. Development of correlation of paragraphs between international regulatory documents (20 minutes) – (WP 10) <strong>X. Bernard-Bruls</strong></td>
<td>Working Group No. 2 to convene in Room C0453</td>
</tr>
<tr>
<td>• Discussion and advice by TRANSSC</td>
<td>Working Group No. 3 to convene in Room C0749</td>
</tr>
<tr>
<td>25. Training Activities (20 minutes) – (IP 18) <strong>M.T. Brittinger</strong></td>
<td>Working Group completes work by 1015 hours</td>
</tr>
<tr>
<td>• Training Courses</td>
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<td>• Training Materials</td>
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<tr>
<td>• Development of INTERTRAN-2 training course (IP 49)</td>
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<tr>
<td>26. Communications and Public Information (20 minutes) – (IP 19) <strong>M.T. Brittinger</strong></td>
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<tr>
<td>• Brochure</td>
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<td>• Video</td>
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<tr>
<td>27. Report on Interagency Co-ordination (20 minutes) – (IP 20) <strong>G. Dicke</strong></td>
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**WEDNESDAY MORNING BREAK**

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**Wednesday Continued**

**WEDNESDAY MORNING, RECONVENE WITH FULL PLENARY: 1045 HOURS**

28. WG 1 report to Plenary on proposed Regulatory Changes

- Report/recommendations of WG (30 minutes) – **WG Leader**
- Discussion and decisions by Plenary (60 minutes) – **C. Young**

**Lunch Break**

- Discussion and decisions by Plenary (Continued) (70 minutes) – **C. Young**
- Secretariat summarize Plenary decisions on revisions to the Regulations (20 minutes) – **G. Dicke**

**AFTERNOON BREAK**

29. WG 2 report to Plenary on proposed Advisory Material changes and Identified Problems

- Report/recommendations of WG (30 minutes) – **WG Leader**
- Discussion and decisions by Plenary (60 minutes) – **C. Young**

**Wednesday, Adjourn: 17:00 hours**

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IAEA Hosted Evening at the ZWÖlf APOSTELKELLER
## TRANSSC VI Agenda

### THURSDAY, CONVENE: 09:00 HOURS

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<th>29.</th>
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<tr>
<td></td>
<td>Secretariat summarize decisions on proposed changes to Advisory Material (20 minutes) – X. Bernard-Bruls</td>
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<td></td>
<td>Secretariat summarize Plenary recommendations on Identified Problems (20 minutes) – R. Pope</td>
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<table>
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<tr>
<th>30.</th>
<th>WG 3 Report to Plenary on proposed actions/changes to the January 2001 draft of TS-G-1.2 (ST-3)</th>
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<tr>
<td></td>
<td>Report/recommendations of WG (20 minutes) – WG Leader</td>
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<td></td>
<td>Discussion and decisions by Plenary (30 minutes) – C. Young</td>
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**BREAK**

<table>
<thead>
<tr>
<th>30.</th>
<th>(Continued) WG 3 report</th>
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<tbody>
<tr>
<td></td>
<td>Secretariat summarize Plenary recommendations on TS-G-1.2(ST-3) (10 minutes) – R. Pope</td>
</tr>
</tbody>
</table>

### G. Dicke

31. Appraising/assessing transport safety
   - Report on Transport Safety Appraisal Service (20 minutes) – (IP 21) G. Dicke

32. Status of inputs on, and discussion of potential CRP on Contamination (20 minutes) – (IP 22 and other IPs as provided) R. Pope
   - Communication from Secretariat
   - Communications from Member States

33. Review of the overall Transport Safety Programme (IP 23) – (30 minutes) R. Pope
   - Calendar year 2001
   - Calendar years 2002-2003

### LUNCH BREAK

**RECONVENE: 14:00 HOURS**

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<tr>
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<th>Status of actions on recommendations by TRANSSAC V</th>
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<tr>
<td></td>
<td>Conclude review of recommendation and actions (IP 24) – (60 minutes) R. Pope</td>
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<td></td>
<td>Discussion – (30 minutes) C. Young</td>
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**BREAK**

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<th>35.</th>
<th>Reports from representatives of Member States on their regulatory activities and issues</th>
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<td>(Information Papers as provided)</td>
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<td></td>
<td>Member States – (40 minutes) TRANSSC Members</td>
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<td>RTSG – (10 minutes) C. Young</td>
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<table>
<thead>
<tr>
<th>36.</th>
<th>Status of International Conferences (Information Papers as provided)</th>
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<tr>
<td></td>
<td>PATRAM Symposia – (5 minutes) L. Blalock, USA</td>
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<tr>
<td></td>
<td>INucE Conferences – (5 minutes) C. Young, UK</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>37.</th>
<th>Plans for TRANSSC VII</th>
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<tr>
<td></td>
<td>Items to be covered relative to the ongoing review/revision process – (15 minutes) G. Dicke</td>
</tr>
<tr>
<td></td>
<td>General arrangements and plans – (10 minutes) R. Pope</td>
</tr>
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</table>

### THURSDAY ADJOURN
## TRANSSC VI Agenda

### FRIDAY, CONVENE: 09:00 HOURS

38. Presentation/discussion of findings from TC-1156.2 –Development of draft topical guidance documents
- Chairman’s Report (IP 25) – (15 minutes) **L. Baekelandt**
- Guidance TECDOC on Radiation Protection Programme (IP 26, IP 32) – (30 minutes) **L. Baekelandt**
  - TRANSSC Decisions/guidance on RPP draft Guidance Document – (10 minutes) **C. Young**
  - Guidance on Two-Year transitional arrangements (IP 27) – (30 minutes) **J. Stewart / X. Bernard-Bruls**

### MORNING BREAK

- TRANSSC Decisions/guidance on Two-year transitional arrangements guidance – (10 minutes) **C. Young**
- Guidance on Compliance during Transition from SS No. 6 to TS-R-1 (IP 28, TECDOC-1196) – (20 minutes) **C. Young**

39. Other business

40. Close of meeting – **C. Young**

**ADJOURN**
Basis of the Opening Remarks by the Deputy Director General,
Department of Nuclear Safety
Mr. Zygmund Domaratzki
IAEA Headquarters, Vienna
15-19 May 2000

Ladies and Gentlemen,

May I welcome each of you here today. I take this opportunity to formally open this Sixth meeting of the Transport Safety Standards Advisory Committee.

As you will see by looking around this room, we once again have an extremely large representation of experts at this meeting. This attendance is one indicator of the importance that is being placed on the Agency’s Transport Regulations by the regulators and the regulated throughout the world.

We recognize that the Transport Regulations maintained by the Agency are used as the basis for all other radioactive material transport requirements in regulatory documents throughout the world to control and facilitate safety.

Similarly, the Agency’s Board of Governors and General Conference have shown a keen interest in the Transport Regulations in recent years. This has included discussions and resolutions at:

• the Diplomatic Conference which adopted the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management; and

Common themes in these forums have included:

• Recognizing that some Member States are concerned about the safety of radioactive material shipments, especially relative to those shipments made by sea;
• Requesting that the IAEA develop a transport safety appraisal system;
• Directing that the IAEA continue to cooperate closely with other international organizations involved in transport safety to harmonize the content and adoption schedules by modal organizations; and
• Recognizing that compliance with the IAEA’s transport Regulations provides a high level of safety.

Relative to the request for appraisals, I would like to call you attention to the newly established Transport Safety Appraisal Service that can be provided. We have undertaken one such mission, have requests for two additional missions, and have also provided similar support in two International Regulatory Review Team missions. These efforts can provide individual Member States with the guidance they need to enhance their transport regulatory control efforts. They need not be limited to developing countries, but can be used to assist advanced countries as well. With the attention that has been paid in the past few years to sea
transport, those who ship by sea should give serious consideration to this service.

I also recognize that a significant amount of effort, world-wide, has gone into arranging for the harmonized adoption of the 1996 Edition of the Agency’s Transport Regulations. To some extent, it was through the efforts of this body last May that we have managed to arrange with the air, sea and land modes a harmonized adoption process during 2001. I thank you for your efforts there.

I am overwhelmed in looking at your terms of reference that you have a number of functions to undertake.

To prepare for this meeting, the Secretariat has assembled more than 50 working and information papers.

The agenda is complex.

You will definitely be challenged to complete the many tasks before you during this week.

The results of your efforts this week will be documented in a summarized form by your Scientific Secretary and Chairman in a report which the Secretariat will issue shortly.

Your Chairman has been and will also continue to represent you at Commission on Safety Standards meetings, the next one of which will convene in May of this year.

Your Chairman is Mr. Clive Young of the Department of Environment, Transport and the Regions in the United Kingdom.

He comes well qualified to chair this meeting, serving as the United Kingdom’s Competent Authority, and also serving as the Chair of the Radioactive Transport Study Group. He was also chair of TRANSSAC IV and TRANSSAC V.

Although you have a heavy workload, I am confident that under the leadership of your Chairman, it will be possible to achieve good results.

The Secretariat is grateful for the effort you have made to travel here this week. I look forward to receiving your contributions as the advisory body for transport safety.

On the lighter side, I hope that it will be possible for you to enjoy Vienna a little bit during your stay. I see that an evening at a fine restaurant in old Vienna is being planned and hosted by the Secretariat for this evening.

Again, welcome -- and, thank you.
## ANNEX III

### List of Participants

<table>
<thead>
<tr>
<th>MEMBER STATES</th>
<th>MEMBER STATES (Continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. Young, Chairman *</td>
<td>UK</td>
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<tr>
<td>Lopez Vietri, J.*</td>
<td>Argentina</td>
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<tr>
<td>Mountford-Smith, T.*</td>
<td>Australia</td>
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<tr>
<td>Baekelandt, L.</td>
<td>Belgium</td>
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<tr>
<td>Cottens, E.*</td>
<td>Belgium</td>
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<tr>
<td>Sannen, H.</td>
<td>Belgium</td>
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<tr>
<td>Bruno, N.*</td>
<td>Brazil</td>
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<tr>
<td>Aly, A.M.*</td>
<td>Canada</td>
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<tr>
<td>Eyre, P.#</td>
<td>Canada</td>
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<tr>
<td>Plourde, K.</td>
<td>Canada</td>
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<tr>
<td>Pu, Y.*</td>
<td>China</td>
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<tr>
<td>El-Shinawy, R. M. K.*</td>
<td>Egypt</td>
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<tr>
<td>Pertuis, V.*</td>
<td>France</td>
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<td>Sert, G.#</td>
<td>France</td>
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<td>Vallée, R.</td>
<td>France</td>
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<td>Alter, U.</td>
<td>Germany</td>
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<td>Bell, K-H.</td>
<td>Germany</td>
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<td>Droste, B.</td>
<td>Germany</td>
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<td>Hoffmann, M.</td>
<td>Germany</td>
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<td>Nitsche, F.#</td>
<td>Germany</td>
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<td>Ridder, K.</td>
<td>Germany</td>
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<tr>
<td>Sáfár, J.*</td>
<td>Hungary</td>
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<tr>
<td>Nandakumar, A.N.*</td>
<td>India</td>
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<tr>
<td>Tshuva, A.*</td>
<td>Israel</td>
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<tr>
<td>Orsini, A.</td>
<td>Italy</td>
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<tr>
<td>Trivelloni, S.*</td>
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<tr>
<td>Akiyama, H.</td>
<td>Japan</td>
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<tr>
<td>Ito, T.</td>
<td>Japan</td>
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<td>Saegusa, T.</td>
<td>Japan</td>
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<td>Takahashi, K.</td>
<td>Japan</td>
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<td>Yasogawa, Y.</td>
<td>Japan</td>
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<td>Tamura, Y.*</td>
<td>Japan</td>
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<tr>
<td>Van Halem, H.*</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Ershov, V.N.*</td>
<td>Russia</td>
</tr>
</tbody>
</table>

* Designated TRANSSC member
# Designated TRANSSC alternate

### INTERNATIONAL ORGANIZATIONS

| Hallemans, J-M.# | EC | Rossi, L.* | EC |
| Rossi, L.* | IATA | Abouchaar, J. | IATA |
| Rooney, K.* | ICAO | Tisdall, A. | IFALPA |
| Malesys, P.* | ISO | Christ, R. | WNTI |
| Dekker, B. | WNTI | Lesage, M. | WNTI |

### IAEA

| R. Pope, Scientific Secretary* | |
| X. Bernard-Bruls | |
| M.T. Brittinger | |
| G. Dicke | |
| Z. Domaratzki | |
| E. Herbst | |
| S. Ohashi | |
TRANSSAC VI - REPORT OF THE MEETING

ANNEX IV

6th Meeting of
The Transport Safety Standards Committee
(TRANSSC VI)

5-9 February 2001

Final List of Working Papers

WP 1, Rev. 2 Provisional Agenda
WP 2 Chairman’s Report of fifth Meeting - TRANSSAC V
WP 3 January Draft of the Document Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material, TS-G-1.2 (ST-3)
WP 4 Major Proposed Changes to the Transport Regulations needing action by TRANSSC VI
WP 5 Terms of Reference for TRANSSC VI Working Group 2 - Reviewing and Advising Plenary on Proposed Advisory Material [TS-G-1.1 (ST-2)] Changes and on Identified Problems
WP 6 Terms of Reference for TRANSSC VI Working Group 3 - Reviewing and Advising Plenary on the January 2001 Draft of TS-G-1.2 (ST-3)
WP 7 Proposed Changes to the Regulatory Revision Process
WP 8 Status and plans for placing country-by-country Transport Safety Regulatory Status on the Transport Safety Web-site
WP 9 Status of and Plans for Developing SafeTRaM as a Replacement for the HyperTrans! Computer Code
WP 10 Cross-mapping of International Regulatory Documents - 2000/2001
WP 11, Rev. 1 Terms of Reference of Working Group 1
WP 12 TRANSSC Action on DPP for Activity Concentration Levels
WP 13 TRANSSC Action on DS 43, “Preparedness and Response for a Nuclear or Radiological Emergency”
WP 14 Report of Working Group 1
WP 15 Report of Working Group 2
WP 16 Report of Working Group 3
WP 18 Follow-up to TRANSSC VI Decisions Concerning Changes to the Transport Regulations
Final List of Information Papers

IP 1  Terms of Reference

IP 2  Status of the publication of the *Advisory Material for Safe Transport of Radioactive Material* to support the application of the 1996 Edition of the Transport Regulations

IP 2, Add. 1 Status of the publication of the *Advisory Material for Safe Transport of Radioactive Material* to support the application of the 1996 Edition of the Transport Regulations - Results of recent reviews and Actions by the Publications Committee

IP 3  Status of the publication of the draft of the document *Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material* to support the Application of the 1996 Edition of the Transport Regulations

IP 4  Revision Panel, September 2000 - Chairman’s Report

IP 5  Revision Actions since 4-8 September 2000 Revision Panel Meeting

IP 6  Report of September 2000 Revision Panel (TC-405.9) Working Group No. 5 on Recommendations regarding Proposed Changes to the Transport Regulatory Advisory Material [TS-G-1.1 (ST-2)] - including relevant Proposed Changes from member States and International Organizations

IP 7  Assessment of priorities for Identified Problems - results of the September 2000 Revision Panel - input to Working Group 2

IP 8  General Conference Resolution, and Resulting and Planned Actions by the Secretariat

IP 9  Severity of Accidents during Maritime Transport of Radioactive Material

IP 10  Status of Co-ordinated Research Project on the assessment of the behaviour of large Uranium Hexafluoride packages in fires

IP 11  Not issued

IP 12  Request for TRANSSC VI comments on DPP (Document Preparation Profile) for a Safety Guide titled “Activity Concentration Levels for Use in International Trade in Commodities Containing Radionuclides”

IP 13  Document Preparation Profile for Safety Guide on Activity Concentration Levels for Use in International Trade in Commodities Containing Radionuclides

IP 14  Request for Comments on Preparedness and Response for a Nuclear or Radiological Emergency Safety Standards Series No. GS-R-2, DS-43, and Summary of major changes in most recent draft

IP 15  Draft Version 10 of *Preparedness and Response for a Nuclear or Radiological Emergency*. Safety Standards Series No. GS-R-2, DS-43

IP 16, Rev. 1 Status of Plans for IAEA Transport Safety Databases

IP 17  Status of and Examples of Data/Information placed on the Transport Safety Web Site, plans for the Future
# TRANSSAC VI - REPORT OF THE MEETING

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<td>IP 19</td>
<td>Summary of and Plans for Revising the Transport Safety Video and Brochure</td>
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<td>IP 20, Rev. 1</td>
<td>Results of the Interagency Meeting</td>
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<td>IP 21</td>
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<td>IP 22, Rev. 1</td>
<td>Status of Potential Co-ordinated Research Project on Contamination</td>
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<td>IP 23</td>
<td>The current plans for the Agency’s 2001 Transport Safety Programme</td>
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<td>Status of actions on Recommendations made by TRANSSAC V</td>
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<td>IP 25</td>
<td>Chairman’s Report - TC-1156.2, November 2000</td>
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<td>IP 26</td>
<td>Draft TECDOC on Radiation Protection Programmes for Transport of Radioactive Material</td>
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<td>IP 27</td>
<td>Report from TC-1156.2 on Transitional Arrangements for the New 2 Year Revision Cycle</td>
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<td>IP 28</td>
<td>Status of TECDOC on Transition from 1985 to 1996 Edition of the Transport Safety Regulations</td>
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<td>IP 29</td>
<td>Draft of the Report of the Tenth Meeting of the Waste Safety Standards Committee</td>
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<td>Report of the Eighth Meeting of the Commission on Safety Standards</td>
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<td>IP 31</td>
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<td>Inputs from WNTI on Radiation Protection Program</td>
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<td>Status of Co-ordinated Research Project on ‘Development of Relevant Accident Data for Quantifying Risks Associated with the Transport of Radioactive Material’</td>
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<td>IP 35</td>
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<tr>
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<td>Reports from TC-405.9, Working Group 1 related to ST-1 Sections 0, I, II, III, VIII and Schedules</td>
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<td>Additional supportive information related to Sweden/00/01</td>
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<td>Extracts from NAERG 2000</td>
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<td>RASSC - Programme and Activities</td>
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<td>53</td>
<td>Activity Concentration Levels for use in International Trade in Commodities containing radionuclides</td>
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<tr>
<td>54</td>
<td>Overall Structure of Safety Standards</td>
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<tr>
<td>55</td>
<td>Preparedness and Response for a Nuclear or Radiological Emergency Requirements, Safety Standards Series No. GS-R-2 DS-43</td>
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<td>ICAO Report to TRANSSC VI on Accident Severity by Air Transport CRP</td>
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<td>Comments by J. Lopez Vietri on Draft TECDOC on “Radiation Protection Programmes for Transport of Radioactive Material”</td>
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<tr>
<td>58, Add 1</td>
<td>Comments by France on Draft TECDOC on “Radiation Protection Programmes for Transport of Radioactive Material”</td>
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<tr>
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<td>Comments by Germany on Draft TECDOC on “Radiation Protection Programmes for Transport of Radioactive Material”</td>
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<tr>
<td>58, Add 3</td>
<td>Transport of Radioactive Materials Check List - Radioprotection Service</td>
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<td>59</td>
<td>WNTI presentation to TRANSSC VI</td>
</tr>
<tr>
<td>60</td>
<td>Comments were provided by France at the end of the meeting on the proposed DPP on Activity Concentration Levels for us in International Trade in Commodities Containing Radionuclides</td>
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</tbody>
</table>
INTERNATIONAL ATOMIC ENERGY AGENCY
DIVISION OF RADIATION AND WASTE SAFETY

6th Meeting of
The Transport Safety Standards Committee
(TRANSSC VI)

IAEA Headquarters, Vienna
5-9 February 2001

Report of Working Group 1
Report of Working Group No. 1

Working Group Members:

Mr. R. Boyle (U.S.A.)
Mr. R. Christ (WNTI)
Mr. P. Hinrichsen (South Africa)
Mr. T. Ito (Japan)
Mr. P. Mkhabela (South Africa)
Mr. F. Nitsche (Germany)
Mr. A. Orsini (Italy)
Mr. H. Sannen (Belgium)
Mr. G. Sert (France)
Mr. J. Stewart (U.K.) part time

Terms of Reference: Working Group 1 was requested to review the eight proposed major changes submitted to TRANSSC by the Revision Panel and the Secretariat and make a recommendation regarding their suitability for endorsement by the plenary. In completing their review, the working group made extensive use of the original change proposals and comment forms from the revision panel, the Chairman’s and Working Group reports from the revision panel and, for 00/MAJ/07 and 00/MAJ/08, other documentation provided by the Secretariat. Upon completion of this primary task, the Working Group was requested to review the Changes of Detail accepted by the Revision Panel to ensure each had been properly reviewed and classified.

Working Group Recommendations:

Proposed Major Changes:

00/MAJ/01: Recommend that TRANSSC endorse the proposal and the guidance information as presented by the Revision Panel.

00/MAJ/02: Recommend that TRANSSC endorse the proposal as presented by the Revision Panel. Working Group also recommends that guidance material be developed.

00/MAJ/03: Recommend that TRANSSC endorse the proposal as presented by the Revision Panel. Working group notes that no guidance information was developed and concurs that the current guidance material on this subject is sufficient.

00/MAJ/04: Recommend that TRANSSC endorse the revision of the $A_1$ and $A_2$ values for Cf-252. Working group does not support changing the $A_1$ and $A_2$ values for Cf-254 or Cm-248 as proposed in IP 38 as these additions are outside the scope of the original proposal. Working group also recommends that guidance material be developed.

00/MAJ/05: Recommend that TRANSSC endorse the proposal as presented by the Revision Panel. Working group believes the current guidance material needs to be revised for consistency with the proposal and offers the attached chart as additional guidance material.
00/MAJ/06: Recommend that TRANSSC endorse the proposal as presented by the Revision Panel. Working group notes that no guidance information was developed and concurs that the current guidance material on this subject is sufficient.

00/MAJ/07: Recommend that TRANSSC endorse the proposal as amended below. Working group notes that no guidance information was developed and concurs that the current guidance material on this subject is sufficient.

619. Packages containing radioactive material transported by air shall be capable of withstanding without leakage an internal pressure which produces a pressure differential of not less than 95 kPa plus maximum normal operating pressure.

00/MAJ/08: Recommend that TRANSSC endorse the proposal and guidance material subject to incorporation of the modifications listed below. The Working Group recommends that the regulatory text, the guidance text and the explanatory text be forwarded as part of a 120 day review package.

(a) Effective date addition to paragraph 101 should be deleted.
(b) The list of packages/packagings which open paragraphs 815 and 815bis should be deleted

**Changes of Detail:**

00/CoD/01: Recommend that TRANSSC accept change as proposed.

00/CoD/02: Recommend that TRANSSC accept change as proposed.

00/CoD/03: Recommend that TRANSSC accept change as proposed.

00/CoD/04: Recommend that TRANSSC accept change as proposed.

00/CoD/05: Recommend that TRANSSC accept change as proposed.

00/CoD/06: Recommend that TRANSSC accept change as proposed.

00/CoD/07: Recommend that TRANSSC accept change as proposed.

00/CoD/08: Recommend that TRANSSC accept change as proposed.

00/CoD/09: Recommend that TRANSSC reclassify change as a major change. The working group believes restricting the use of overpacks, freight containers, tanks, IBCs, or conveyances to unpackaged LSA-I and SCO-I is viewed as a conceptual change to many rather than a clarification of previous intent as the revision panel believed. Consistent with the recommendation of the Revision Panel working group report, the working group also believes the word “overpack” should be removed from the list.
ANNEX V

00/CoD/10: Recommend that TRANSSC accept change as it relates to 526 and 526(a) but that 526(b) and 526(c) should remain unchanged from ST-1. The working group believed the intent of the proposal was to add the word tank to the list in 526 and then replace the list used throughout the remainder of 526. This change introduces conceptual changes is done in 526(b) and 526(c).

00/CoD/11: Recommend that TRANSSC accept the change and recommends the 2nd paragraph proposed be used.

00/CoD/12: Recommend that TRANSSC reclassify change as a major change. This will correct an classification error made in the Chairman’s Report for the Revision Panel (the report lists this item as a CoD when the Working Group that dealt with the issue recommended a major change).

00/CoD/13: Recommend that TRANSSC accept change as proposed.

00/CoD/14: Recommend that TRANSSC accept change as proposed.

00/CoD/15: Recommend that TRANSSC accept change as proposed.

00/CoD/16: Recommend that TRANSSC accept change as proposed.

00/CoD/17: Recommend that TRANSSC accept change as proposed.

00/CoD/18: Recommend that TRANSSC accept change as proposed.

00/CoD/19: Recommend that TRANSSC accept change as proposed.

00/CoD/20: Recommend that TRANSSC accept change as proposed.

00/CoD/21: Recommend that TRANSSC accept change as proposed.

00/CoD/22: Recommend that TRANSSC accept change as proposed.

00/CoD/23: Recommend that TRANSSC reclassify change as a major change. The working group believes the beryllium and deuterium content limits are concept changes.
Major Change 05

Interpretation of Table XI

- Flat surfaces transported horizontally:
  - upward facing surface: 800 W/m²
  - downward facing surface: 0 W/m²
- Surfaces transported vertically: 200 W/m²
- Other surfaces: 400 W/m²
- Other downward facing surfaces: 200 W/m²
INTERNATIONAL ATOMIC ENERGY AGENCY
DIVISION OF RADIATION AND WASTE SAFETY

6th Meeting of the
Transport Safety Standards Committee
(TRANSSC VI)

IAEA Headquarters, Vienna
5-9 February 2001

Report of TRANSSC VI Working Group No. 2
The working group convened from 1600h on Monday February 5, 2001 to 1030h on Wednesday February 7, 2001.

The working group considered the following papers from TC-983.6.

WP 5  Terms of Reference...
IP 7  Assessment of Priorities for IP...
IP 24  Status of Actions on recommendations Made by TRANSSAC V
IP 6
IP 2
IP2 add.1
IP 49
IP 50
Annex VI of WP 2

There were three major tasks assigned to the working group.

Task 1 - Changes to the advisory material for incorporation into the published version of TS-G-1.1

Task 2 - Recommend endorsement of changes to the advisory material resulting from the September 2000 Revision Panel.

Task 3 - Ranking of Identified problems as collected with an indication of priority and recommended actions.
Task 1 - Changes to advisory material for publication

Changes for publication: Review

The following are the recommendations of WG2 with respect to the issues listed in IP2 add.1

There is a need to publish TS-G-1.1 as soon as possible. The working group looked at changes and agreed to most.

1. No action required.
2.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>214.1</td>
<td>agree</td>
</tr>
<tr>
<td>240.1</td>
<td>Although not editorial, the WG recommends the change be accepted by TRANSSC. Typos to be fixed “of the” and the first (extra) “also” in last sentence should be deleted.</td>
</tr>
<tr>
<td>305.3</td>
<td>agree; Secretariat should work with Technical editor on this issue.</td>
</tr>
<tr>
<td>513.1</td>
<td>“from” to “by” considered editorial; therefore should be accepted</td>
</tr>
<tr>
<td>606.1</td>
<td>agree; not editorial but latter half of sentence should be left off as in Dec 2000 version.</td>
</tr>
<tr>
<td>619.2</td>
<td>change “commercial” to “civil aviation”</td>
</tr>
<tr>
<td>636.1</td>
<td>Modify “cannot impair” to “shall not impair” as quote from regulations.</td>
</tr>
<tr>
<td>650.1</td>
<td>Agree; correct.</td>
</tr>
<tr>
<td>737.9</td>
<td>Agree; Dec 2000 text ok, with modification. Change “expected” to “likely to occur” and add to end “because the package should fail gracefully”.</td>
</tr>
<tr>
<td>AI.2</td>
<td>‘maximum permissible ALI’ need advice if this is acceptable. Working group could not conclude on this item. [Note by Secretariat: Plenary agreed that the text ‘maximum permissible” should be deleted.]</td>
</tr>
</tbody>
</table>

3. Ok

4. Ok

5. Ok. B. Droste to check if ref 61 still draft etc.
6. “Routing” vs. “Routeing”  Leave as is, until change made to TS-R-1.1

| “IAEA SAFETY RELATED PUBLICATIONS” | Ok |
| foreword | Ok |
| preface | Ok |
| contents list | Ok to be handled by Secretariat |
| 233.1 | Ok |
| 238.1 | Ok |
| 301.3 | Ok |
| 302.1 | Ok |
| 312.4 | Ok |
| 405.3 | Ok |
| 502.7 | Ok |
| 549.8 | Ok |
| 605.3 | Ok |
| AI.1 First 3 paragraphs | Ok, check formatting of subscripts (December 2000 version has subscript “2” on top of “A” whereas it should be to the right of the A) |
| AI.3 (c) | Ok |
| AI.4.2 | Ok |
| AII Table AII.2 | Agree, $h_{\text{skin}}$ header in table AII.2 should have a “dot” on top. However, to facilitate direct use of the table values, suggest the formula for $Q_D$ on page 164 should be changed to allow use of values directly rather than converting. To this end, the formula should use $2.8 \times 10^{-2} \cdot h_{\text{skin}}$, $h_{\text{skin}}$ should be units $\text{Sv} \cdot \text{s}^{-1} \cdot \text{TBq}^{-1} \cdot \text{m}^2$ and the constant C should be 1. |

7. See table above.
8. TRANSSC should support retention of references to TECDOCs etc. for this publication.
Task 2 - Recommendation with respect to TRANSSC VI endorsement of the proposed changes for continuation in the revision process (ie. 120 day comment period and November 2001 Revision Panel)

The working group considered Information Paper No. 6 “Report of September 2000 Revision Panel (TC-405.9) Working Group No. 5 on Recommendations Regarding Proposed Changes to the Transport Regulatory Advisory Material [TS-G-1.1 (ST-2)] - Including Relevant Proposed Changes From Member States and International Organizations.”

<table>
<thead>
<tr>
<th>Country/Year</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada/00/12</td>
<td>Endorse</td>
</tr>
<tr>
<td>France/00/08 (para 526.5)</td>
<td>Endorse</td>
</tr>
<tr>
<td>France/00/08 (para 533.4)</td>
<td>Endorse</td>
</tr>
<tr>
<td>France/00/19</td>
<td>Endorse, but perhaps “secondary drop” should be “secondary impact”. Revision panel should look at wording.</td>
</tr>
<tr>
<td>France/00/23</td>
<td>Endorse</td>
</tr>
<tr>
<td>France/00/38</td>
<td>Endorse</td>
</tr>
<tr>
<td>France/00/41</td>
<td>Endorse</td>
</tr>
<tr>
<td>Germany/00/03</td>
<td>Endorse</td>
</tr>
<tr>
<td>Japan/00/01</td>
<td>Endorse</td>
</tr>
<tr>
<td>Japan/00/03</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/03</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/04</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/07</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/08</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/09</td>
<td>Endorse; Note: The reference is now to para 672.6 in the December 2000 version.</td>
</tr>
<tr>
<td>UK/00/10</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/11</td>
<td>Endorse; Note: The reference is now to para. 716.9 in the December 2000 version.</td>
</tr>
<tr>
<td>UK/00/12</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/18</td>
<td>Endorse; General recommendation to update references in new publication to the most current, if applicable</td>
</tr>
<tr>
<td>UK/00/19</td>
<td>Endorse</td>
</tr>
</tbody>
</table>
### ANNEX VI

<table>
<thead>
<tr>
<th>Item</th>
<th>Endorsement</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK/00/21</td>
<td>Endorse; TRANSSC may need to review or recommend further review of the text with respect to ensuring that there is not an implied correlation of test conditions with actual transport situations.</td>
</tr>
<tr>
<td>UK/00/22</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/26</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/27</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/28</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/29</td>
<td>Endorse</td>
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<tr>
<td>UK/00/30</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/31</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/32</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/33</td>
<td>Endorse</td>
</tr>
<tr>
<td>UK/00/43</td>
<td>Endorse; Fate tied to TS-R-1.1 proposal for this paragraph.</td>
</tr>
<tr>
<td>USA/00/01</td>
<td>Endorse</td>
</tr>
</tbody>
</table>

Items not considered at Revision Panel (TC 405.9) passed to TRANSSC VI in Information Paper No. 50

<table>
<thead>
<tr>
<th>Item</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>France/00/03*</td>
<td>Reject as change. Classify as identified problem to ensure consistent interpretation of the footnotes. Applicant also invited to provide additional information and discuss with Q system analysts.</td>
</tr>
<tr>
<td>France/00/05*</td>
<td>Reject as change. Classify as identified problem. Also, return to proposer for further information and clarification. Related to above France/00/03</td>
</tr>
</tbody>
</table>

*The working group felt they had neither sufficient time nor the expertise to fully discuss the merits of these items or to modify the proposals as they might have been considered and revised if they had not been missed at the September 2000 Revision Panel. The items are included in the list of identified problems.
Task 3 - Identified problems and priorities

There is apparently no record of Working Group 4 (WG4) of TC 405.9 (RP) deliberations on the ranking of identified problems. The IAEA secretariat indicated WG4 of RP had only run through very quickly the list. Apart from the WG4 report (IP7) from the RP there is little record to explain their ranking. A member of WG4 at the RP explained that they had handled the ranking by vote followed by discussion. If an identified problem was related to safety, then WG4 of the RP indicated that the identified problem should be No. 1. If there was a significant difference between the opinions of the WG4 members, then there was some compromise and the problem was in most cases given a rank of 2.

The working group decided to focus on items that could be identified as No. 1. It was noted that some are old problems (exemption, Q system, LSA/SCO); The working group decided to group related problems and give some emphasis (CSM etc.) for those that were felt to require a priority solution. The items in the list were combined with Annex VI of WP2 and outstanding issues as indicated in WP 5 and IP 24. The working group reviewed this list, grouped and confirmed priority.

It was noted that items such as contamination may require an updating of the basis models.

The working group would like to emphasize that problems were encountered since the record of WG4 of the RP and comments on proposals were not readily available.

It was noted that some work on the identified problems can be done outside of the IAEA. For example, France, UK, Switzerland and Germany have worked on contamination; however, the EU work on contamination was more focussed on practical issues such as procedures for decontamination etc. If members of the working group were aware of work it was mentioned in the following list.

The working group felt that simplification and harmonization are still important. Actions are recommended to deal with issues relating to use of the UN format. There was some uncertainty as to whether the reformat had been completed and if the outstanding work was an evaluation. It was noted that there may be changes to UN format (i.e. moving target).

It was noted that a number of countries including Japan, the UK, USA and France have proposals for fissile materials. Their actions should be coordinated to address this subject and the related Swedish issue.

It was felt that significant issues need coordination of various interested MS actions and agreement if a change is likely to succeed. It was felt that actions related to the Q system and contamination need IAEA action since these are the basis of the regulations and transcend an individual MS.
<table>
<thead>
<tr>
<th>Level</th>
<th>No.</th>
<th>Subject</th>
<th>Papers</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1*</td>
<td>1</td>
<td>Exemption of Regulations</td>
<td>AUS/00/01</td>
<td>Transport of some materials may be problematic due to the letter interpretation of regulations. This is viewed as an urgent problem by many MS. Interested countries could meet to resolve on priority basis if TRANSSC VI would permit the Nov. RP to consider their proposal for the current revision cycle providing the proposal can be formulated by May 31, 2001. Proposal should consider also consumer products.</td>
</tr>
<tr>
<td>1*</td>
<td>2</td>
<td>Transitional arrangements, grand fathering</td>
<td>UK/00/45 FR/00/21 WNTI/00/08</td>
<td>Included only for reference. Handled by CSM and November 2000 TCM and by TRANSSC VI - WG 1</td>
</tr>
<tr>
<td>1*</td>
<td>3</td>
<td>Q system</td>
<td>FR/00/03 FR/00/05 FR/00/32 FR/00/33</td>
<td>TRANSSC VI should recommend a CSM to resolve issues surrounding the Q system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q system (level 2)</td>
<td>CAN/00/09 CUBA/00/14</td>
<td>(see above)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q system (level 3)</td>
<td>CAN/00/10</td>
<td>(see above)</td>
</tr>
<tr>
<td>1*</td>
<td>4</td>
<td>Harmonization of definitions</td>
<td>GER/00/04 CAN/00/07</td>
<td>Related to TRANSSAC V actions below from (IP24)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Simplification/Harmonization UN format</td>
<td>Action 18 Action 19</td>
<td>Endorse actions 18 and 19, except now for before TRANSSC VII. Some actions may have been done; however, it is not clear what remains to be done. For existing users, current format may be acceptable; however, new users may find another format more useful/comprehensible. Translation of ST-1 to other formats requires significant effort and risks change in requirements due to reformatting. If ST-1 were in the format of the other regulations, the effort would be reduced with lower probability in requirements being changed due to transcription. However, the format of other international organizations’ regulations may change and may diverge. TRANSSC VI should endorse a common format for all international regulations and communicate this at Interagency meetings; ie. Use the UN model regulations. The secretariat should work to prepare a common format ST-1 to be in line with this recommendation (CSM).</td>
</tr>
<tr>
<td>Harmonization of responsibilities</td>
<td>SP/00/07</td>
<td>Might be solved by harmonization.</td>
<td></td>
<td></td>
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<tr>
<td>-----------------------------------</td>
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<td>----------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harmonization of marking (level 3)</td>
<td>UK/00/15</td>
<td>(see harmonization above)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simplification of regulations</td>
<td>PAK/00/01/08</td>
<td>(see harmonization/simplification above)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simplification of regulations (level 2)</td>
<td>CUBA/00/04/06</td>
<td>(see harmonization/simplification above)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simplification of regulations (level 3)</td>
<td>CUBA/00/20</td>
<td>(see harmonization/simplification above)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1  5  Radiation levels of packages | CAN/0015/FR/00/31/UK/00/14/WNTI/00/05 | TRANSSC VI should recommend a CSM. |

1  6  Criticality (fissile definition material, exception criteria) | FR/00/43/UK/00/44/USA/00/12/SWE/00/01/SWE/00/02/SWE/00/03 | TRANSSC VI should recommend the formation of a group of interested countries who contact each other and work on a solution. Possible interested parties could be from USA, FRA, SWE, GER, JAP, UK and RUS. Countries should indicate at TRANSSC VI their interest and communicate to the IAEA the liaison contact for the group. TRANSSC should recommend that the IAEA provide an observer to meetings of the group. |

<table>
<thead>
<tr>
<th>Criticality burn-up credit LDM (level 2)</th>
<th>JAP/00/08/RUS/00/04</th>
<th>TRANSSC should ask the group if this can be handled with above.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidance for Fissile material by air</td>
<td>Annex VI No. 14</td>
<td>TRANSSC should ask the group if this can be handled with above.</td>
</tr>
<tr>
<td>Guidance on Burn-up credit for SNF shipping Flasks</td>
<td>Annex VI No. 17</td>
<td>TRANSSC should ask the group if this can be handled with above.</td>
</tr>
</tbody>
</table>

1  7  Contamination | JAP/00/06/JAP/00/07/WNTI/00/06/WNTI/00/07 | CRP on contamination may address this problem. TRANSSC should endorse these issues as part of terms of reference for this CRP. |

1  8  RPP | US/00/09 | The working group believe this was handled by a CSM and the TCM held in November 2000. |

-  Language versions | Action 15 | Actions should be completed |

2  Criteria for assessing and reviewing changes | Action 20 & Annex VI No. 6 | TRANSSC should endorse these actions |

2  List of relevant ISO standards | Action 25 | *** |
### ANNEX VI

<table>
<thead>
<tr>
<th></th>
<th>List of ISO standards relevant to Contamination</th>
<th>Annex VI No. 13</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Revise SS 112</td>
<td>Annex VI No. 9</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Alternative requirements for Industrial packages</td>
<td>CAN/00/13 STM/00/01 SWIT/00/01</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Test procedure</td>
<td>FR/00/18</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mechanical test</td>
<td>US/00/07 FR/00/37</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>LSA/SCO</td>
<td>CAN/00/09 UK/00/25</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Clarification of regulations</td>
<td>UK/00/34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clarification of regulations (level 3)</td>
<td>WNTI/00/12</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Revise SS 113</td>
<td>Annex VI No. 10</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Standardized packaging review and certification methodology</td>
<td>Annex VI No. 11</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Class 7 input to IMO EmS guide</td>
<td>Annex VI No. 12</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Guidance on subsidiary risk</td>
<td>Annex VI No. 15</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Testing and implementing EVTRAM</td>
<td>Annex VI No. 16</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Inconsistency between ST-1 and ST-2</td>
<td>UK/00/05</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Containment</td>
<td>UK/00/06</td>
<td></td>
</tr>
</tbody>
</table>
INTERNATIONAL ATOMIC ENERGY AGENCY
DIVISION OF RADIATION AND WASTE SAFETY

6th Meeting of
The Transport Safety Standards Committee
(TRANSSC VI)

IAEA Headquarters, Vienna
5-9 February 2001

Report of Working Group 3
Report of Working Group No. 3

Working Group Members:

Ms. K. Plourde (Canada)
Mr. L. Blalock (USA)
Mr. B. Pettersson (Sweden)
Mr. H. Akiyama (Japan)

Written comments were provided by:
Mr. A. N. Nandakumar (India)
Mr. C. Young (UK)

Terms of Reference:

- Review the changes that have been made to the draft TECDOC as represented by the January 2001 draft and the tabulation of changes noted in IP 03
- Recommend back to TRANSSC VI Plenary during Agenda Item Number 30 on adequacy of the draft and any changes recommended

Working Group Recommendations:

When the Secretariat takes a decision to develop a transport related safety series document, the IAEA document development guidance in place at that time should be followed through to completion of the document. Adapting an “in-development” document to each and every change in IAEA document development guidance that occurs delays the safety series document and causes needless expenditure of resources.

The Working Group recommends to TRANSSC that TS-G-1.2 (ST-3) should be further changed to incorporate the comments provided by this Working Group (see Annex 1) and then submitted into the formal IAEA document approval and publication process.

Additionally, the Secretariat requested the Working Group to consider Information Paper No. 2, Add 1, page 4, item 8. This item concerns “whether the reference to IAEA-TECDOCs was appropriate since Agency publishing policy discourages their citation in Safety Series publications.” While these comments were offered by the IAEA Publications Committee relative to TS-G-1.2 (ST-2), they are appropriate for consideration for TS-G-1.2 (ST-3). The Working Group recommends the continuation of reference to IAEA-TECDOCs in Safety Series documents. Such references allow for smaller documents and conveys an informal requirement for the Agency to assure relevant TECDOCs are maintained in a current state.

Although not a specific part of the Working Group Terms of Reference, the Working Group recommends TS-G-1.2 (ST-3) and other transport related Safety Series documents and TECDOCs be made available on the Internet. This availability would enhance Member State regulatory bodies, consignors, carriers and carrier organizations, consignees and emergency response organizations and personnel greater access to IAEA transport documents.
TRANSSAC VI - REPORT OF THE MEETING

ANNEX VII

Working Group General Comments:

The Working Group reviewed the January 2001 draft of TS-G-1.2 (ST-3) *Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material* and the tabulation of changes noted in Information Paper No. 3. Note was also taken of relevant comments contained in Information Paper Nos. 31 and 33.

The Working Group basically found the current draft of TS-G-1.2 (ST-3) to be well organized, easy to follow, clear and functional. It appears to generally meet the originally stated criteria for audience applicability and subject matter coverage.

Rather than list the numerous editorial and other suggested changes to TS-G-1.2 (ST-3) in this report, the Working Group agreed with the Secretariat to provide a copy of the draft with comments and suggestions noted in hand-written form. This has been done.
ANNEX VIII

CORRECTED FLOW CHART ILLUSTRATING THE 2003 REVIEW/REVISION PROCESS
TRANSSAC VI - REPORT OF THE MEETING

ANNEX IX

SUMMARY OF MEMBER STATE AND RTSG REPORT

Agenda Item 35: Reports from representatives on their regulatory activities and issues

- Member States

**Germany:** Mr Ridder reported that international transport to/from Germany and domestic transport would be in accordance with TS-R-1 for rail/road/air transport via the RID/ADR/ICAO instruments respectively from 1 July 2001. The new IMDG Code (Amrdt. 30) would be introduced during 2001, although there was a problem of translation into German. The ADNR Agreement was expected to be completed by March 2001 and to enter into force on 1 Jan. 2003. The delay in introduction of ADNR relative to other modes was not expected to pose problems as there was little transport of Class 7 by the Rhine waterway.

**Hungary:** Mr Sáfár said that RID/ADR/ICAO would be effective from 1 July 2001 and would be followed by the introduction of the new IMDG Code for sea transport.

**India:** Mr Nandakumar said that regulations in India were based upon the 1986 Edition of SS6. Revising to ST-1 would take place during 2001. For air transport the ICAO Technical Instructions/IATA Dangerous Goods Regulations would apply from their operative date of 1/7/2001. There were some problems updating from SS6 for rail transport – the intention was to split the new requirements into two documents, a “Code” and a “Standard”.

**Israel:** Mr Tshuva reported that Israel would introduce TS-R-1 in the English version from 1 July 2001 with a six month transition. The relevant Minister should have signed the order to this effect. Training courses had been held with ICAO in preparation for the new air mode regulations.

**Italy:** Mr Trivelloni noted that, as an EC State, Italy was obliged to follow RID/ADR by Directive. Air and Sea transport would follow the new ICAO TI’s/IMDG Code respectively. TS-R-1 (ST-1) had been translated into Italian, but there would be some delay before RID/ADR would be available in Italian. There was also an obligation to report accidents in Italy.

**Russia:** Mr Ershov said that preparations had been made for the introduction of new domestic regulations last year and the Government and others were to agree to apply TS-R-1 (ST-1) this year for both domestic and international transport. A variation would apply to require all packages, except for excepted and IP-1 packages to be approved. Air and Sea Transport would be in accordance with the ICAO TI’s and the IMDG Code respectively. He said that consideration was being given to applying TS-R-1 directly and sought information on any experience of directly applying IAEA Regulations from other TRANSSC Members. Mr Ershov also reported that a Conference had been held last year in St Petersburg which had been reported in the International Journal of Radioactive Material Transport.

**UK:** Mr Stewart said that new domestic road regulations (aligned with the ADR for International Road transport) would be introduced from 1 July 2001 with a 6 months transition. For Air, the new ICAO TI’s would apply from 1 July 2001 with no transition. For Sea transport the IMO’s IMDG Code applies and International Rail transport would apply RID from 1 July with a 6 month transition. Domestic rail transport would be regulated by direct reference to RID. He noted the operator requirement for a Dangerous Goods Safety Adviser and remarked that those transport related parts of the EC Directive on BSS, which were required to be implemented by May last year, would not in fact be implemented until the corresponding transport regulations are implemented (viz. 1 July 2001). He expressed the hope that future EC Directives might avoid similarly conflicting operative dates.
SUMMARY OF MEMBER STATE AND RTSG REPORT

Turkey: Mr. Koksal said that the Turkish National Regulations were based on the 1985 (as amended 1990) IAEA Regulations, which were applied by the Turkish Atomic Energy Authority. There had been no transport accidents involving radioactive material during last year. He also noted Turkey’s application for a TranSAS mission last year. In response to a question on international road transport, Mr Koksal said that ADR would be applied in future.

Switzerland: Mr. Knecht said that the new RID/ADR would apply as from 1 July 2001. For Air mode, the new ICAO TI’s/IATA DGR’s would apply and the new IMDG Code (Amdt. 30) for Switzerland’s 23 flag ships. Efforts had been made in Switzerland to provide training for consignors and carriers to prepare them for the new regulations.

Sweden: Mr. Pettersson reported that the new ICAO TI’s would apply to domestic and international air transport from 1 July 2001. For international transport by rail/road/sea the new RID/ADR/IMDG Code would apply respectively from their planned introduction dates. Domestic regulation was more complex because of the need to translate the latter documents. For the IMDG Code, Autumn 2001 was the expected date for a translated version; for rail/road the target date for translation was 1 July 2001.

Spain: Mr. Zamora reported that all the relevant new modal instruments would be applied domestically. However, there was a need for Spanish translations of these. The new IMDG Code translation was needed by March 2001 and he noted that that the new ICAO TI’s in Spanish should be available in March according to advice from Ms. Rooney. RID/ADR in Spanish were not expected to be available till the end of the year. However there were few international road movements expected and Spain would make use of marginal 2007 of ADR and advice based on TECDOC 1194 to be provided by the Nuclear Safety Council (CSN) in March to ease the transition to new regulations.

South Africa: Mr. Hinrichsen said that regulation to TS-R-1 would apply from 1 July 2001 for surface modes and talks were in progress with the air and maritime authorities with a view to a similar introduction date for air and sea transport. There were no translation problems – English versions of documents would be used.

Netherlands: Mr. VanHalem said that for Air and Sea Transport the ICAO TI’s and IMDG Code would apply by direct reference. The references were also “dynamic” i.e. to the latest versions of the instruments concerned so the law did not require updating at every new issue of the ICAO/IMDG Code. For Rail and Road transport the Dutch versions of the new RID & ADR would be used. Though not yet finished, these translations were expected to be ready in time for the new requirements to enter into effect for 1 July 2001. Like the air and sea mode, the references to these regulatory documents are from 1-1-2000 also.

Japan: Mr. Tamura said that Japan was working towards the introduction of 1996 IAEA based regulations by 1 July 2001 with no transition for any mode. He added that new certification would be required from 1 January 2003. Mr. Tamura also noted the change in responsibility for approvals in Japan from the Science and Technology Agency (STA) to the Ministry of Trade and Economy.

US: Mr. Boyle noted that currently the 1985 (as amended 1990) IAEA Regulations provided the basis for US Regulation. Efforts were in hand to recognize the new IAEA/ICAO/IMDG Code via 2 rulemakings which will be completed by mid-summer. A rule to adopt TS-R-1 in our domestic regulations will be proposed in early summer for comments, with a view to a final rulemaking in early 2003. For fissile materials by air the DOT, NRC and DOE are working on a “generic review” subject to budget constraints. He noted that the 1 July 2001 date was at risk in respect of foreign
SUMMARY OF MEMBER STATE AND RTSG REPORT

Shipments of fissile material by air. A new NUREG report on spent nuclear fuel transport was available from the NRC – contact Mr Lewis for details or see the US NRC website at http://www.nrc.gov/NRC/NUREGS/CR6672/index.html. Mr. Boyle also noted his readiness to accept applications for approval of UF₆ cylinders as Type H(M).

Argentina: Mr. Lopez-Vietri said that current legislation in Argentina was based upon the 1985 (as amended 1990) IAEA Regulations. The target was to introduce the 1996 Edition for all modes by 1 July 2001 with a six month transition period. An advisory document had been written and distributed to users. Problems had been encountered in developing and implementing Radiation Protection Programmes and there was an urgent need for the IAEA’s TECDOC on RPPs. Marking of Industrial and Type A fissile packages had also presented problems. There was a need to amend the ST-1, Spanish version, for consistency with ST-1 in English. This document would be published as a national standard.

Australia: Mr. Mountford-Smith noted that there were two Competent Modal Authorities for air and sea mode in Australia which would automatically follow the new ICAO TI’s/IATA DGs, IMDG Code. For road and rail, however, there were nine Competent Authorities - one Federal, six State and two Territory CA’s. There will be a new edition of the Australian Code of Practice for Transport or Radioactive Material incorporating TS-R-1, which is non mandatory except in the federal sphere. Difficulties were expected in ensuring implementation of the TS-R-1 requirements across all states/territories. Mr. Mountford-Smith also reported the shipment of 360 HEU FE’s in 5 Type B(U)F packages which left Australia 22 January bound for La Hague, France. This shipment attracted considerable anti-nuclear demonstration. He also noted the value of the two-week training course in Sydney, which included a three-day workshop on legal/liability issues attended by 8 participants and three observers.

Belgium: Mr. Cottens said that direct reference was made in Belgium to all the relevant international modal conventions/agreements/annexes, so the new regulatory provisions would be introduced automatically on the agreed dates. Guidance being prepared to assist transport operators during the transition period of 2001.

Brazil: Mr. Bruno said that there had been an overlapping responsibility in Brazil between the environmental and safety authorities which had now been resolved by means of a memorandum of understanding. He noted the benefit that had been gained from the preliminary visit that the Agency had carried out with a view to sending a TranSAS mission to Brazil [now postponed]. A wide range of radioactive materials needed transport in Brazil from uranium mining operations, for food irradiation plants to waste repositories. A training course was foreseen for 2003/4. Transport regulations were under review in Brazil and use was being made of TECDOC 1194 on the Agency website. The Department of Aviation was taking action to accommodate the changes to the air transport regulations.

Canada: Mr. Aly said that the transition to the new Nuclear Safety and Control Act and new regulations on May 31, 2000 had kept the Canadian Authorities busy, with new training for all staff undertaken. Canada currently based its regulations on the 1985 (as amended 1990) IAEA Regulations and plans to amend the regulations this year to reflect the TS-R-1 Transport Regulations. Transport Canada was also working on new “clear language” regulations but neither CNSC nor Transport Canada are likely to complete this work by 1 July 2001. He therefore expected that direct reference to the new IAEA Regulations would be the most likely short-term solution. He also noted that the transport of some MOX fuel of United States and Russian origin had taken place which had attracted much attention from environmental and anti-nuclear protesters.
SUMMARY OF MEMBER STATE AND RTSG REPORT

China: Mr. Pu said China had until now used the 1985 Edition of SS6 as the basis for its regulation for all transport modes. Work to introduce the 1996 Edition had started last year and a series of regulatory documents were now being put in place.

Egypt: Mr. El-Shinawy said that proposals for the introduction of the 1996 Regulations had been put to the Atomic Energy Board for approval. Several local training courses had been held in English and Arabic.

France: Mr. Pertuis said that the new IMDG Code had been made effective by a Ministerial Order of January 2001. A Ministerial Order was expected by the end of April to make the new RID/ADR effective in France. Further Ministerial Orders would follow for air transport and for postal movements (domestic only). A reform of nuclear safety responsibilities in France had led to the expansion of the scope of DSIN to include radiation protection as well as nuclear safety which now meant DSIN reported to three (formerly two) separate ministers.

- Radioactive Transport Study Group (RTSG)
  Mr. Young, Chairman of the RTSG, explained that no meeting of RTSG had taken place since the last, fifth, TRANSSC (then TRANSSAC) Meeting. A report had been presented at TRANSSAC V of the RTSG meeting held in Antwerp, Belgium in Oct/Nov. 1999. The Terms of Reference of the RTSG state that one meeting would normally be held in any two calendar years – therefore a further meeting is due by end 2001. However, since RTSG usually meets at a venue rotating amongst its Membership countries, or in Vienna, and no venue was foreseen for the next meeting, there were no plans for when/where the next meeting would take place. This would depend on Members having sufficient agenda items to justify calling a meeting of, typically, 3 days duration. RTSG Members are requested to send proposals for Agenda items to the Chairman. If sufficient items are received to justify a meeting, one may be arranged adjacent to a suitably placed IAEA TC Meeting.
1. Background

The International Atomic Energy Agency (IAEA) started the process for revision of its 1996 Edition of its Regulations for the Safe Transport of Radioactive Material (the IAEA Transport Regulations) also known as ST-1, at the beginning of the year 2000. Member States and International organizations were requested to submit proposals for change. These proposals for change were reviewed at the 4-8 September 2000 Technical Committee Meeting (TCM 405.9) in Vienna. This meeting, also known as the Revision Panel meeting, was attended by 79 individuals representing 21 Member States and 9 International Organizations.

The Revision Panel accepted 42 of the proposed changes and classified them as minor change, change of detail or major change. These changes are defined as follows:

- **Minor changes** are essentially limited to editorial corrections of typing errors, spelling mistakes, and translation corrections. Minor changes must not require a change in the numbering of the regulations. Minor changes result in corrected regulations.

- **Changes of detail** are limited to changes in the text but only in so far as to make a previously agreed meaning or intention of a provision more clear or more readily interpretable, or to correct minor technical errors. Changes of detail must not require a change in the numbering of the regulations. Changes of detail result in amended regulations.

- **Major changes** include all changes that do not qualify as either minor change or change of detail. Major changes result in revised regulations.

The classification of the changes is very important because of the different approval procedures.

The changes accepted by the Revision Panel were submitted to the Transport Safety Standards Committee (TRANSSC) for review at their 5-9 February 2001 meeting (TRANSSC VI).

TRANSSC VI was informed about the 2 minor changes approved by the Revision Panel.

TRANSSC VI reviewed the 23 changes of detail accepted by the Revision Panel and reclassified 3 of these as major changes.

TRANSSC VI endorsed the 6 major changes accepted by the Revision Panel and in addition endorsed 6 other changes as major changes.

The changes accepted by the Revision Panel included 11 translation errors. The related changes are not part of the revision of the regulations and will be dealt with separately. They are therefore not included in this report.

This report summarizes the status as of 25 April 2001 with regard to all the changes (minor changes, changes of detail and major changes) which have been approved or are still under consideration in the current revision cycle. It also identifies ongoing follow-up actions and the next stage in the revision process for these changes.
2. Update with regard to Minor Changes

In accordance with the revision procedure the Revision Panel can approve minor changes. The 2 minor changes accepted by the 4-8 September 2000 Revision Panel meeting, identified as 00/min/01 and 00/min/02, are therefore approved. No further approvals are needed and errata sheets may be issued. Approved minor changes will be incorporated in the next edition of the regulations.

TRANSSC VI was informed about these minor changes. Similarly, for information, these changes will be included in the status reports on changes in this revision cycle until the final approval on all changes (minor changes, changes of detail and major changes) is obtained.

The following 2 minor changes (the change from ST-1 is marked in bolded text, the paragraph number or location in ST-1 is identified with each change) approved by the 4-8 September 2000 Revision Panel meeting will be incorporated in the next edition of the IAEA Transport Regulations.

2.1 Summary of Approved Minor Changes

00/min/01:
Change TABLE VIII, note “a” to the following:

The “PROPER SHIPPING NAME” is found in the column “PROPER SHIPPING NAME and description” and is restricted to that part shown in CAPITAL LETTERS. In the case of UN 2909, UN 2911, UN 2913, and UN3326 where alternative PROPER SHIPPING NAMES are separated by the word “or”, only the relevant “PROPER SHIPPING NAME” shall be used.

00/min/02:
Change the header prior to para 703 to the following:

LEACHING TEST FOR LSA-III MATERIAL AND LOW DISPERSIBLE RADIOACTIVE MATERIAL

3. Update with regard to Changes of Detail

The 4-8 September 2000 Revision Panel accepted 23 changes as “changes of detail” (CoD). These changes were identified as 00/CoD/01 through 00/CoD/23. Once accepted by the Revision Panel, the changes of detail are subject to a 90 day review by the Member States. All changes of detail for which no significant objections are raised by any of the Member States are considered approved following the 90 day review and will be included in the next edition of the IAEA Transport Regulations.

All accepted changes of detail were placed on the IAEA Transport Safety website at the beginning of December 2000. All Revision Panel participants and TRANSSC members were informed about this and in addition a note verbale was sent to all Member States informing them of the opportunity to provide comments until 15 March 2001.

The changes of detail accepted by the Revision Panel were also reviewed at the TRANSSC VI meeting. TRANSSC reclassified 3 of these changes as major changes.

With regard to the original 23 changes of detail

- 8 changes did not receive any further comment from TRANSSC or the Member States during the 90 day review. These 8 changes are therefore now approved for publication and inclusion in the next edition of the IAEA Transport Regulations
- 3 changes were reclassified by TRANSSC as major changes and will now be processed as major changes.
12 changes received comments during the 90 day review. The next Revision Panel meeting (12-16 November 2001) will consider the comments and prepare a recommendation concerning each of these changes of detail.

Summaries of the approved changes of detail, the reclassified changes and the changes of detail which received comments are provided in the following (the change from ST-1 is marked in bold text, the current paragraph number or location in ST-1 is identified with each change):

### 3.1 Summary of Approved Changes of Detail (as of April 2001)

**00/CoD/03:**

532. The maximum radiation level at any point on any external surface of a package or overpack under exclusive use shall not exceed 10 mSv/h.

Schedules: COMMON PROVISIONS FOR SCHEDULES 5-14

B.3.(a)(iii) 10 mSv on any external surface of a package or overpack transported under exclusive use.

**00/CoD/07:**

535. For each package, other …letters “UN”, and the proper shipping name (see Table VIII) shall be legibly ….. shall apply.

**00/CoD/08:**

TABLE VI: MULTIPLICATION FACTORS FOR TANKS, FREIGHT CONTAINERS, AND UNPACKAGED LSA-I AND SCO-I

**00/CoD/15:**

Instead of always referring to, for example, Industrial Packages Type 2 and 3 (Type IP 2 and Type IP 3), just refer to Type IP 2 and Type IP 3. The complete wording could be used only in the definition of these package types. This would make the regulations more consistent as they would refer to Type A, Type B, Type C, and Type IP packages.

The affected paragraphs/locations in ST-1 are the following:

Paragraphs: 230, 521, 537, 621/628, 815, 828 and 829

Locations: Title prior to paragraphs 411, 521 and 621/624

**00/CoD/18:**

671(b)(i): of para. 634 for packages containing fissile material;

**00/CoD/19:**

NOTE: This Change of Detail is not a change to the English edition of ST-1. It concerns a translation error in the title before para. 624 of the French version of ST-1. The correction to the translation of this title should take into account the approval of 00/CoD/15.
00/CoD/21:

727(b) The word “edges” shall be replaced with “edge”

735(a) The specimen, representing….diameter at the top with its edge rounded off to a radius of not more than 6 mm. The target…para.717.

00/CoD/22:

680. For packages to be transported by air:

a) the package shall be subcritical under conditions consistent with the Type C package tests specified in para. 734 assuming reflection by at least 20 cm of water but no water inleakage, and

b) in the assessment of para. 679 allowance shall not be made for the special features of para. 677 unless, following the Type C package tests specified in para. 734 and, subsequently, the water inleakage test of para. 733, leakage of water into or out of void spaces is prevented.

3.2 Summary of Changes of Detail Reclassified as Major Change

The following changes of detail were reclassified by TRANSSC VI as a major change.

- 00/CoD/09 reclassified as 00/MAJ/09
- 00/CoD/12 reclassified as 00/MAJ/10
- 00/CoD/23 reclassified as 00/MAJ/11

These changes will now be processed as major changes. Therefore they are included, under the above indicated numbers, in the list of major changes to be placed on the web site for the 120 day comment by Member States and International Organizations. Comments already received concerning these changes, while posted on the web site as change of detail, will be taken into account. For further details on these changes see the corresponding major change in the summary of endorsed major changes in this report.

3.3 Summary of Changes of Detail which Received Comments (to be considered by the 12-16 November 2001 Revision Panel together with comments received).

00/CoD/01:

This change of detail, regarding the correction of the placarding provisions outlined in Part 9 of Schedules 5, 6, 7, and 9 in the case of uranium hexafluoride involves the following changes to Part 9 of Schedules 5, 6, 7 and 9 in ST-1:

Schedule 5, Part 9(b) bis For unpackaged LSA-1.....shown in the Fig. 7. However, if the packages contain non-fissile or fissile-excepted uranium hexafluoride, "2978" shall be displayed. For the placards shown in Fig. 6, the numbers shall be preceded by the letters "UN".

Schedule 6, Part 9(b) bis. Where an exclusive use ....."3324" shall be displayed on the placards. However, if the packages contain non-fissile or fissile-excepted uranium hexafluoride, "2978" shall be displayed. If the packages contain uranium hexafluoride that is fissile material, "2977" shall be displayed. For the placards shown in Fig. 6, the numbers shall be preceded by the letters "UN".

Schedule 7, Part 9(b) bis. Where an exclusive use ....."3325" shall be displayed on the placards. However, if the packages contain non-fissile or fissile-excepted uranium hexafluoride, "2978" shall be displayed. If the packages contain uranium hexafluoride that is fissile material, "2977" shall be displayed. For the placards shown in Fig. 6, the numbers shall be preceded by the letters "UN".
Schedule 9, Part 9(c) bis. Where an exclusive use ...."3327" shall be displayed on the placards. **However, if the Type A packages contain non-fissile or fissile-exceptioned uranium hexafluoride,"2978" shall be displayed. If the Type A packages contain uranium hexafluoride that is fissile material,"2977" shall be displayed.** For the placards shown in Fig. 6, the numbers shall be preceded by the letters "UN".

**00/CoD/02:**

This change of detail, concerning deletion of the words “special form” in the second line of paragraph 502 (f) would result in the following:

502 (f) For each special form radioactive material, it shall be ensured that all the requirements specified in the approval certificate and the relevant provisions of these Regulations have been satisfied.

**00/CoD/04:**

This change of detail, excluding objects with a very low level of contamination from application of the regulations, would result in the following text for para. 236:

236. Radioactive material shall mean any material containing radionuclides where both the activity concentration and the total activity in the consignment exceed the values specified in paras 401–406. Non-radioactive solid objects with levels of surface contamination lower than those mentioned in par 214 are excluded from this definition.

**00/CoD/05:**

This change of detail, regarding the use of the English terms and acronyms throughout the French version of ST-1 for the following:

Use the English terms and acronyms “radioactive”, “IP”, “LSA”, and “SCO” throughout the French version of ST-1.

**00/CoD/06:**

This change of detail, concerning radiation levels for conveyances under exclusive use would result in the following text for para 566 (c):

566 (c) The radiation level under routine conditions of transport shall not exceed 2 mSv/h at any point on, and 0.1 mSv/h at 2 m from, the external surface of the conveyance. **For a consignment transported under exclusive use, the radiation level limits around the vehicle are set forth in para 572(b) and (c).**

**00/CoD/10:**

This change of detail, concerning the inclusion of tanks and some editorial simplification, would result in the following text for para 526:

526. The **transport index (TI)** for a package, overpack, tank, freight container, or for unpackaged LSA-I or SCO-I shall be the number derived in accordance with the following procedure:

(a) **Determine the maximum radiation level in units of millisieverts per hour (mSv/h) at a distance of 1 m from the external surface.** The value determined shall be multiplied by 100 and the resulting number is the transport index. For uranium..., (no change to remaining text)

(b) The value determine in step (a) above shall be multiplied by the appropriate factor from Table VI.
(c) No change to previous text.

00/CoD/11:

This change of detail, concerning the calculation of criticality safety index for overpacks, freight containers or conveyances, would result in the following change to para 529 (TRANSSC selected the following preferred text of the alternative texts accepted by the Revision Panel):

529. The criticality safety index for each overpack, freight container, consignment, or conveyance shall be determined as the sum of the CSIs of all the packages contained.

00/CoD/13:

This change of detail, concerning the proper segregation distance for packages containing fissile material would result in the following modified text for para 568:

568. The number of packages, overpacks, and freight containers containing fissile material stored in transit in any one storage area shall be so limited that the total sum of the criticality safety indexes in any such group does not exceed 50. The groups shall be stored so as to maintain a spacing of at least 6 m from other such groups.

00/CoD/14:

This change of detail, concerning the proper contamination level for conveyances and agreed to the following change to ST-1:

509. Except as provided in para. 514, the non-fixed contamination on the external and internal surfaces of overpacks, freight containers, tanks, and intermediate bulk containers, and conveyances shall not exceed the levels specified in para. 508.

00/CoD/16:

This change of detail, concerning wording in para 675, would result in the following changed text:

675. The package, after being subjected to the tests specified in paras 719-724, must prevent the entry of a 10cm cube.

00/CoD/17:

This change of detail, concerning uranium hexafluoride issues, would involve the following changes to ST-1:

629. Packages designed to contain uranium hexafluoride shall meet the requirements prescribed elsewhere in these Regulations which pertain to the radioactive and fissile properties of the material. Except as allowed in para. 632, uranium hexafluoride in quantities of 0.1 kg or more shall also be packaged and transported in accordance with the provisions of the International Organization for Standardization document ISO 7195: A Packaging of Uranium Hexafluoride (UF₆) for Transport[@10], and the requirements of paras 630-631.

630. Each package designed to contain 0.1 kg or more of uranium hexafluoride shall be designed so that it would meet the following requirements:

(a) withstand without leakage and without unacceptable stress, as specified in the International Organization for Standardization document ISO 7195 [10], the structural test as specified in para. 718;

(b) withstand without loss or dispersal of the uranium hexafluoride the free drop test specified in para.
722; and

(c) withstand without rupture of the containment system the thermal test specified in para. 728.

631 (No Change) Packages designed to contain 0.1 kg or more of uranium hexafluoride shall not be provided with pressure relief devices.

632. Subject to the approval of the competent authority, packages designed to contain 0.1 kg or more of uranium hexafluoride may be transported if:

(a) the packages are designed to international or national standards other than ISO 7195 provided an equivalent level of safety is maintained;

(b) the packages are designed to withstand without leakage and without unacceptable stress a test pressure of less than 2.8 MPa as specified in para. 718; or

(c) for packages designed to contain 9000 kg or more of uranium hexafluoride, the packages do not meet the requirement of para 630(c).

In all other respects the requirements specified in paras 629-631 shall be satisfied.

00/CoD/20:

This change of detail, concerning impact test for Type C packages, would result in the following changes to ST-1:

717. Delete reference to para. 737

737. Impact test: The specimen shall be subject to an impact on a target at a velocity of not less than 90 m/s, at such an orientation as to suffer maximum damage. The target shall be as defined in para. 717, except that the target surface may be at any orientation as long as the surface is normal to the specimen path.

4. Update with regard to major changes (as of 25 April 2001)

The 4-8 September 2000 Revision Panel accepted 6 changes as “major changes”. These changes were identified as 00/MAJ/01 through 00/MAJ/06 and submitted to the 5-9 February 2001 TRANSSC meeting for their review. TRANSSC endorsed these major changes.

In addition TRANSSC endorsed 00/MAJ/07 concerning a change which the Revision Panel had accepted conditionally.

The Revision Panel accepted some proposals as identified problems with the highest priority, requiring further supportive information before they could be accepted as a change. As a result of further work by a Consultant Services Meeting and a Technical Committee Meeting another proposal for a major change was submitted to TRANSSC and endorsed by TRANSSC as 00/MAJ/08.

TRANSSC reclassified and endorsed as major changes 3 changes which had been accepted by the Revision Panel as changes of detail. These changes are now presented as 00/MAJ/09 through 00/MAJ/11.

The other change which had been accepted by the Revision Panel as an identified problem with the highest priority was based on proposal Australia/00/01. Following plenary discussion at the 5-9 February 2001 TRANSSC decided to endorse the related change as a major change provided that the necessary supportive information would be available by 30 April 2001. It would then be included as 00/MAJ/12.

The following 12 major changes (the change from ST-1 is marked in bolded text, the paragraph number or
4.1 Summary of Major Changes Endorsed by TRANSSC VI

00/MAJ/01:

Add the following to Section III of ST-1:

NON-COMPLIANCE

312 bis. In the event of a non-compliance of any limit applicable to radiation level or contamination, as specified in paragraphs 508, 530-532 and 566, the consignor shall be informed by

(a) the carrier if the non-compliance is identified during transport; or
(b) the consignee if the non-compliance is identified at receipt.

312 bis+1. The carrier, consignor or consignee, as appropriate, shall:

(a) take immediate steps to mitigate the consequences of the non-compliance;
(b) investigate the non-compliance and its causes, circumstances and consequences;
(c) take appropriate action to remedy the causes and circumstances that led to the non-compliance and to prevent a recurrence of similar circumstances that led to the non-compliance; and
(d) communicate to the relevant competent authority(ies) on the causes of the non-compliance and on the corrective or preventive actions taken or to be taken.

312 bis+2. The communication of a non-compliance to the consignor and relevant competent authority(ies), respectively, shall be made as soon as practicable and it shall be immediate whenever an emergency exposure situation has developed or is developing.

00/MAJ/02:

Add the following to Section III of ST-1:

TRAINING

3xx. Persons engaged in the transport of radioactive material shall receive training in the contents of these safety requirements commensurate with their responsibilities.

3xx+1. Individuals such as those who classify radioactive material; pack radioactive material; mark and label radioactive material; prepare transport documents for radioactive material; offer or accept radioactive material for transport; carry or handle radioactive material in transport; mark or placard or load or unload packages of radioactive material into or from transport vehicles, bulk packagings or freight containers; or are otherwise directly involved in the transport of radioactive material as determined by the competent authority; shall receive the following training:

(a) General awareness/familiarization training:
   i. Each person shall receive training designed to provide familiarity with the general provisions of these safety requirements;
   ii. Such training shall include a description of the categories of radioactive material; labeling,
marking, placarding and packaging and separation requirements; a description of the purpose and content of the radioactive material transport document; and a description of available emergency response documents;

(b) Function-specific training: Each person shall receive detailed training concerning specific radioactive material transport requirements which are applicable to the function that person performs;

(c) Safety training: Commensurate with the risk of exposure in the event of a release and the functions performed, each person shall receive training on:
   i. Methods and procedures for accident avoidance, such as proper use of package-handling equipment and appropriate methods of stowage of radioactive material;
   ii. Available emergency response information and how to use it;
   iii. General dangers presented by the various categories of radioactive material and how to prevent exposure to those hazards, including if appropriate the use of personal protective clothing and equipment; and
   iv. Immediate procedures to be followed in the event of an unintentional release of radioactive material, including any emergency response procedures for which the person is responsible and personal protection procedures to be followed.

3xx+2. The training required by 3xx+1 shall be provided or verified upon employment in a position involving radioactive material transport and shall be periodically supplemented with retraining as deemed appropriate by the competent authority.

00/MAJ/03:
Change sub-para. 517(b) to the following:

517(b) Each instrument or article (except a consumer product which has received regulatory approval according to para 107(d) and with an activity that does not exceed the activity limit for an exempt consignment in Table I (column 5)) bears the marking “RADIOACTIVE”; and

00/MAJ/04:
Change the $A_1$ value for Cf-252 in Table I to the following:

$1 \times 10^1$ TBq
00/MAJ/05:

Change TABLE XI to the following:

<table>
<thead>
<tr>
<th>Form and location of surface</th>
<th>Insolation for 12 hours per day (W/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat surfaces transported horizontally:</td>
<td></td>
</tr>
<tr>
<td>- downward facing surfaces</td>
<td>none</td>
</tr>
<tr>
<td>- upward facing surfaces</td>
<td>800</td>
</tr>
<tr>
<td>Surfaces transported vertically and other downward facing surfaces</td>
<td>200⁹</td>
</tr>
<tr>
<td>Other surfaces</td>
<td>400⁹</td>
</tr>
</tbody>
</table>

⁹ Alternatively, a sine function may be used, with an absorption coefficient adopted and the effects of possible reflection from neighbouring objects neglected.

00/MAJ/06:

Change sub-para. 648(a) to the following:

648(a) Be adequate to meet the conditions specified in para. 646(a) above if the package is subjected to the tests specified in para. 725; and

00/MAJ/07:

619. Packages containing radioactive material, to be transported by air, shall be capable of withstanding without leakage an internal pressure which produces a pressure differential of not less than maximum normal operating pressure + 95 kPa.

00/MAJ/08:

This Major Change consists of the following 11 related changes to ST-1:

1. Change para 101 as follows:

101 [add to end of paragraph] These regulations are effective for transport operations commencing after 31st December 2008.

2. Change header above para 815 to:

**Packages not requiring competent authority approval of design**

3. Change para 815 as follows:
815. Excepted packages, Industrial packages Types IP-1, IP-2 and IP-3 and Type A packages which do not require approval of design by the competent authority and which meet the requirements of the regulations specified in column 1 of table XIV may continue to be used or manufactured until the corresponding date specified in column 3 of table XIV. Use or manufacture shall be subject to the mandatory programme of quality assurance in accordance with the requirements of para. 310 and the activity limits and material restrictions of section IV. Packages prepared for transport not later than the date specified in column 3 of table XIV for the corresponding Edition of the regulations specified in column 1, may continue in transport.

815bis. Excepted packagings, Industrial packagings Types IP-1, IP-2 and IP-3 and Type A packagings which do not require approval of design by the competent authority may be designed or modified until the date specified in column 2 of table XIV in accordance with the requirements of the corresponding edition of the regulations specified in column 1 of table XIV.

Table XIV: NON-COMPETENT APPROVED

<table>
<thead>
<tr>
<th>Year</th>
<th>Safety Significant Design Changes</th>
<th>Manufacture &amp; Use</th>
</tr>
</thead>
</table>

4. Change header above para 816 to:

Packages approved under a previous Edition of these Regulations

5. Change para 816 as follows:

816. Packagings manufactured to a package design approved by the competent authority as meeting the requirements of the regulations specified in column 1 of table XV may continue to be used until the date specified in column 5 of table XV corresponding with the edition of the regulations specified in column 1 of table XV and package category specified in column 2 of table XV. Use shall be subject to the mandatory programme of quality assurance in accordance with the requirements of para. 310, the activity limits and material restrictions of section IV and for packages containing fissile material and transported by air, the requirement of para. 680. After this date use may continue until the corresponding date specified in column 6 of table XV subject, additionally, to multilateral approval of package design. Packages prepared for transport after the date in column 5 of table XV for the selected Edition of the regulation specified in column 1, shall meet a subsequent Edition of the Regulation in full.

816bis. All packagings which require competent authority approval may be manufactured until the date specified in column 4 of table XV corresponding to the edition of the regulations in column 1 of table XV to which they are approved. After this date no new manufacture shall commence. These packagings may be manufactured subject to the mandatory programme of quality assurance in accordance with the requirements of para. 310, the activity limits and material restrictions of section IV and for packages containing fissile material and transported by air, the requirement of para. 680.

816bis+1. All packagings which require competent authority approval may be designed or changes in the design or in the nature or quantity of the authorized radioactive contents which, as determined by the competent authority, would significantly affect safety, may be made until the date specified in column 3 of table XV, in accordance with the requirements of the corresponding edition of the regulations specified in...
column 1 of table XV. Design or modification shall be subject to the mandatory programme of quality assurance in accordance with the requirements of para. 310, the activity limits and material restrictions of section IV.

Table XV

<table>
<thead>
<tr>
<th>Year</th>
<th>Type</th>
<th>Design</th>
<th>Build</th>
<th>Unilateral approval</th>
<th>End of use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Special Form</td>
<td>Dec. 31, 2001</td>
<td>Dec. 31, 2003</td>
<td>-</td>
<td>Dec. 31, 2018</td>
</tr>
<tr>
<td></td>
<td>Special Form</td>
<td>Dec. 31, 2012</td>
<td>Dec. 31, 2017</td>
<td>-</td>
<td>Dec. 31, 2029</td>
</tr>
<tr>
<td></td>
<td>Special Form</td>
<td>Dec. 31, 2019</td>
<td>Dec. 31, 2024</td>
<td>-</td>
<td>Dec. 31, 2036</td>
</tr>
<tr>
<td></td>
<td>Low Dispersible</td>
<td>Dec. 31, 2019</td>
<td>Dec. 31, 2024</td>
<td>-</td>
<td>Dec. 31, 2036</td>
</tr>
</tbody>
</table>

6. Delete paragraph 817

7. Change header above para 818 to:

Special form radioactive material approved under a previous Edition of these Regulations

8. Change para 818 as follows:

818. Special form radioactive material manufactured to a design which had received unilateral approval by the competent authority under the Edition of the Regulations specified in column 1 of table XV may continue to be used when in compliance with the mandatory programme of quality assurance in accordance with the applicable requirements of para. 310 until the corresponding date specified in column 6 of Table XV.

818bis. Special form radioactive material may be designed or modified until the date specified in column 3 of table XV in accordance with the requirements of the corresponding edition of the regulations specified in column 1 of table XV.

818bis+1. All special form radioactive material may be manufactured until the date specified in column 4 of table XV corresponding to the edition of the regulations in column 1 of table XV to which it is approved. After this date no new manufacture shall commence. These special form radioactive material may be manufactured subject to the mandatory programme of quality assurance in accordance with the requirements of para. 310.

Low dispersible radioactive material approved under a previous Edition of these Regulations

818bis+2. Low dispersible radioactive material manufactured to a design which had received multilateral approval by the competent authority under the Edition of the Regulations specified in column 1 of table XV may continue to be used when in compliance with the mandatory programme of quality assurance in accordance with the applicable requirements of para. 310.

818bis+3. Low dispersible radioactive material may be designed or modified until the date specified in column 3 of table XV in accordance with the requirements of the corresponding edition of the regulations specified in column 1 of table XV.
818bis+4. All low dispersible radioactive material may be manufactured until the date specified in column 4 of table XV corresponding to the edition of the regulations in column 1 of table XV to which it is approved. After this date no new manufacture shall commence. This low dispersible radioactive material may be manufactured subject to the mandatory programme of quality assurance in accordance with the requirements of para. 310.

9. Amend para 819 as follows:

reference to 816-817 becomes reference to 816bis+1

10. Change para 828(d) as follows:

828(d) For package design and special form radioactive material approval certificates, other than those issued under the provisions of paras 816-818, and for low dispersible radioactive material approval certificates, the symbols “-03” shall be added to the type code.

11. Amend para 829 as follows:

REPLACE ALL OCCURRENCES OF “96” BY “03”.

00/MAJ/09:

Change para. 514 to the following:

514. A freight container, tank, intermediate bulk container or conveyance dedicated to the transport of unpackaged low specific activity material (LSA-I) or surface contaminated objects (SCO-I) under exclusive use shall be excepted from the requirements of paras 509 and 513 solely with regard to its internal surfaces and only for as long as it remains under that specific exclusive use.

00/MAJ/10:

Change sub-para. 549(k) to the following:

549(k) For consignments of more than one package or conveyance, the information contained in para 549(a) to (j) shall be given for each package. For packages in an overpack, freight container, or conveyance, a detailed statement of the contents of each package within the overpack, freight container, or conveyance and, where appropriate, of each overpack, freight container, or conveyance shall be included. If packages are to be removed from the overpack, freight container, or conveyance at a point of intermediate unloading, appropriate transport documents shall be made available.

00/MAJ/11:

Change the last sentence of sub-para. 672(a) to the following:

672(a) (last sentence) Neither beryllium nor deuterium shall be present in quantities exceeding 1% of the consignment mass limits provided in Table XII.

00/MAJ/12:

Proposed change based on proposal Australia/00/01 if details are provided by April 30, 2001.