TM-42739

7th International Steering Committee on the Denial of Shipment of Radioactive Material

IAEA Headquarters, Vienna

13 – 15 February 2012

Meeting Report

Rev. 1
1. Opening of the Meeting

Mr Denis Flory, Deputy Director General, Nuclear Safety and Security, opened the seventh International Steering Committee on Denial of Shipment meeting.

In his address, he noted the breadth of technical experts enabled the Steering Committee to address the sometimes vital issue of Denial of Shipment of Radioactive Material. Some of the achievements to date were acknowledged, however instances of denials were still occurring and action was required.

Mr Bill Brach, the Chair of the Transport Safety Standards Committee was welcomed to the meeting as a means to feed regulatory issues back to TRANSSC. It was noted that regulations were intended to allow companies to transport radioactive material in a safe, secure and effective manner, noting the subtitle of the October Transport Conference was: “Creating a safe, secure and sustainable network”. The conference was important as it identified the need for harmonisation between UN bodies, member states, between safety and security, and of course, industry.

The development of National and Regional Networks was singled out as a means to maintain a high degree of communication, allowing a bottom-up solution of individual problems with committed support by National Focal Points, Regional Coordinators, Industry and UN Organisations. In addition, a top-down approach brought benefits in terms of a communication strategy and suitable training material such as the brochure made available for the Transport Conference. The creation of several Technical Cooperation and extra-budgetary projects involving training and sharing information was also noted.

Mr Flory said it was time to deliver change with the 2013 General Conference a target for eliminating denial to an issue no longer worthy of reporting. The eighth Steering Committee meeting should be the last one and the ISC was encouraged to deliver substantial change in the following year.

A copy of the full opening remarks is included as Annex 1.

2. Administrative Arrangements

Ms Nancy Capadona from the IAEA Transport Safety Unit, presented detailed information on the duties of the meeting participants, the facilities of the Vienna International Center, guidance in the event of an emergency, distribution of documents on-line only and other arrangements. The meeting files can be accessed at http://www-ns.iaea.org/committees/scdos/default.asp?fd=1136&dt=0

3. Chairman’s Welcome

Mr Ulric Schwela from the Tantalum-Niobium International Study Center (T.I.C.), the outgoing Chair, welcomed participants to the meeting and thanked them for their support and work during his tenure. He highlighted a number of activities of particular importance:

1. The Regional Workshop on DOS held in Panama in July, attended by fourteen Caribbean and South American countries, was an example of the training that needs to be carried out regularly worldwide;
2. The IAEA’s Transport Safety & Security conference in October, which confirmed the importance of addressing Denial of Shipment, also identified the mutual causality between DOS and Transport Security;
3. The rapid response in December to the draft Nuclear Security document on prevention of trafficking in declared radioactive material shipments, resulted in a re-draft last week in a Consultants Services Meeting also attended by Customs and Industry.
Regarding the last point, it was stressed that the document on prevention of trafficking was intended as a Technical Guidance document, that is to say the lowest level in the Security document hierarchy. In response to Industry comments, the IAEA convened a Consultants Services Meeting which was also opened up to several Industry representatives, covering a broad spectrum of radioactive materials. The meeting addressed 308 comments and all the main points made by Industry, most notably:

1. How realistic was the trafficking potential;
2. The confidence provided by trade security programmes;
3. The reliability of physical confirmation techniques;
4. The application to all packages;
5. The burden of the proposed controls;
6. The possible restriction of border crossings.

Following a week of excellent cooperation, a revised document was produced which was workable. He noted the action-packed agenda for this 7th ISC meeting and was sure we would have a busy and productive few days.

A copy of the full opening remarks is included as Annex 2.

3.1. Chair Rotation

The Chair explained that he would step down and be replaced by Mr Mallaupoma, Regional Coordinator for the Americas, and that Ms Tammy de Wright from the Department of Resources, Energy and Tourism of Australia, would then become first Deputy Chair. The outgoing Chair then proposed that Mr Serge Gorlin from the World Nuclear Association become second Deputy Chair and the floor endorsed the motion.

Mr Mario Mallaupoma then took over as Chair of the meeting and welcomed the delegates.

The Agenda was adopted and is included as Annex 3.

A correction was applied to the Terms of Reference, these were then adopted and they are included as Annex 4.

4. Introduction of Participants

All of the participants introduced themselves, many adding how long they had served the ISC and summarising their key activities to resolve denial of shipment.

5. The Action Plan and Key Actions Completed in 2011

Mr Jim Stewart, Head, IAEA Transport Safety Unit, presented a summary of key actions completed in 2011, including the:

1. Unit’s presence at the IAEA General Conference;
2. completion of the brochure on Denial of Shipment;
3. setting up of a SharePoint site with the possibility of regional and national pages;
4. acceptance of a poster presentation on Denial of Shipment at IRPA 13;
5. completion of a transport safety film in 30-minute and 5-minute versions;
6. preparation of the Unit’s three-year work plan that was put forward to TRANSSC, with a wish list arranged according to priority and budgetary allowances, including all the work on denial.

Mr Stewart wished to see a list of priorities agreed between ISC and TRANSSC. The brochure printed in 2011 had been exhausted and now required a review prior to republication. The transport safety film
was likely to be translated into multiple languages. The SharePoint site is fully in line with IAEA Information Technology policy so will be supported in the long term.

A copy of the presentation text is included as Annex 6.

6. Denials Database Update

Ms Nancy Capadona presented a highlight of the information held in the database of delays and denials of shipment, both for sea and for air transport, together with recommendations for future action. In the discussion it was noted that the data gave the appearance of instances of delay and denial being reduced, and that this may be due to industry not re-submitting regular delays after they had first been reported, thus giving a false negative. Over 400 instances of denial in air transport had been provided for examination but would not be formally submitted to the database. In any event the underlying issues causing delay and denial were unlikely to change and focus should be placed on a new Notification System to encourage reporting.

A copy of the presentation text is included as Annex 7.

7. Communication Strategy

Mr Serge Gorlin, Director for Trade and Transport at the World Nuclear Association (WNA), told the committee that he was honoured to be the new Deputy Chair, that the WNA’s Transport Working Group had always given its full support to the committee and that he would give his full energy to this work.

Mr Gorlin explained he had chaired a sub-group on communication since 2010 which had been developing this area of the ISC’s Action Plan. He defined strategic communication as: “A systematic series of sustained and coherent activities, conducted across strategic, tactical and operational levels, for it enables the understanding of target audiences, identifies effective conduits and develops and promotes ideas and opinions through those conduits to promote and sustain particular types of behaviour.” The main achievements in the field of communications over the past five-six years included:

- Annual outreach at the General Conference;
- Fact sheets published soon after the ISC was created;
- Study in communication commissioned by the WNA in 2008;
- Regional workshops held 2007-2009;
- Communication Strategy CSM and DOS Brochure CSM held in 2011.

The Communication Strategy identified target audiences, conduits, messages and evaluation. Regarding evaluation, feedback was now sought from the committee on how to improve the DOS Brochure, which had been completed in time for the 2011 Transport Safety and Security Conference and aimed at carrier stakeholders. It was intended as another tool for discussions about the need to reduce delays and denials. Following the presentation it was clarified that the initial intention was to produce separate brochures for air and sea modes, as well as separate ones for carriers and authorities, however it became clear that there were sufficient common elements to justify creating a single brochure targeting all modes.

Mr Gorlin further asked the committee to consider which of the Communication Strategy conduits should be prioritisied and it was suggested that articles in journals should be one such priority. It was agreed that a follow-up conference call would be organised to discuss the Communication Strategy in greater depth.

A copy of the presentation text is included as Annex 8.
8. RC Updates: Action Plan activities

Mr Mamdouh Osman, Regional Coordinator for Africa, was the first to present. He noted the number of NFPs had risen from 11 to 15 with the addition of Kenya, Mauritania, Uganda and Zimbabwe. An enquiry regarding the status of denials, including experience of technical difficulties, had been sent to all NFPs and only Nigeria, Tanzania and Uganda responded, all stating that there were no denials. The NFPs were encouraged to develop National Plans in line with the Regional Plan. An attempt had been made to organise a Regional Workshop however it was not possible to arrange funding. It was felt that the Regional Action Plan could only be advanced with the aid of coordinating meetings and it was understood that there may be help coming from the IAEA in the near future.

Mr Mario Mallapomma then reported as Regional Coordinator for the Americas. Five Bulletins had been prepared over time and were being continued, the website had been redesigned and it allowed individual countries to upload any information they felt relevant to aid the transport of radioactive material in the region. Training courses had taken place: one in Panama organised by the IAEA, including the presentation of training manuals, of which instructed on completing and submitting denial of shipment report. Two training courses had taken place in Nicaragua, organised nationally. The network had translated IAEA training course material into Spanish and Portuguese. Brazil and Cuba were noted as an example of an effective National Network, including all stakeholders. In Brazil the transport of medical radioisotopes was explicitly facilitated. This kind of National Network was seen as a central element to any Communication Strategy. Particularly problematic ports had been identified in Colombia (Puerto de Cartagena), Venezuela and Dominican Republic (Puerto Cabello). Difficulties were being experienced in communication and having NFPs nominated, as some Competent Authorities considered it strictly Industry’s problem to solve. Approximately half of the countries had appointed an NFP, with notable exceptions being Dominican Republic and Venezuela. It was noted that while the region had a lot of drive and energy, it did need help from the IAEA to fund this work. In the subsequent discussion the Region was lauded for its achievements and in response to a query, it was confirmed that the Regional Network also promoted the diffusion and application of the transport regulations.

Mr Dinakaran Meenamkunnu, Regional Coordinator for Asia, reported that in China the limited number of ports accepting Class 7 was a problem, the port of Shanghai was accepting Class 7 and the port of Ningbo was ready to do so but had not received any yet. The Chinese Competent Authority had been conducting training in the IMDG Code and was developing material for the inland waterways. Inland transport of radiopharmaceuticals by air was not problematic. In India efforts had been made to raise awareness among staff at ports and airports; airlines were refusing to return sources of radioactive material which they had brought in. Australia was addressing the issue of harmonisation and had prepared a Best Practice Guide to transport of radioactive material.

Mr Bernard Monot, Regional Coordinator for the Mediterranean and speaking also on behalf of Mr Joel Binet, Regional Coordinator for Europe, advised that the Arab revolts had created difficulties as it was no longer clear who to contact and that Greece’s economic problems had caused staff to be laid off, again making communication problematic. The aftermath of Fukushima had caused four power plants in Germany to be immediately shut down, with questions being raised in Belgium and elsewhere, generally causing a political issue. In some countries there was contradictory information e.g. in Italy where some ports were variously reported as open or closed to Class 7 according to who you spoke to. Spain had withdrawn its nominated NFP and the port of Bremerhaven (Germany) announced it no longer permitted Class 7. Initiatives taking place in Europe included the Commission’s plan to set up a unified licencing system, provided this harmonised requirements and did not simply add another regulatory layer. There were some very negative views on Class 7 transport in some areas regarding the perceived risk and regulatory burden and this required more work on awareness and communication. This need suggested the setting up of training workshops with the assistance of the IAEA and which industry would gladly lend its support to. Harmonisation was being misunderstood by Competent Authorities as an attempt to simplify regulations or even create additional regulations. Finally an interesting anecdote was related about the difficulties experienced in transporting Class 7
due to political considerations arising from official visits by statesmen and the exaggerated perception of risk posed by the Class 7 material.

A copy of the presentation text for the Asian report is included as Annex 9. The report for the Americas is available separately as a pdf.

9. IMO Update on Action Plan activities

Mr Alfredo Parroquin-Ohlson from the International Maritime Organization (IMO) advised the committee that he was representing Mr Hiroyuki Yamada who had been appointed as the new Technical Officer of the Cargoes Section as of 1st January 2012, but who could regrettably not attend this meeting due to previous commitments. Mr Parroquin-Ohlson recalled the efforts made by the IMO since 2004, including the issuing of a circular advising about Co-60 transport, the adoption of a resolution to facilitate carriage of Class 7 materials, and the establishment of a mechanism to resolve difficulties, supported by the creation of the database on delays and denials for the joint use by the IAEA, ICAO and IMO.

The IMO is currently evaluating whether to end the trial of the delays and denials database or whether to make it permanent, with a report due to be presented to the 38th Facilitation Committee (FAL) meeting in 2013.

In the subsequent discussion the question of listing port and state variations was raised, one delegate clarified that the IMDG was fairly evenly applied throughout the world, with some exceptions e.g. in the USA and it was pointed out that the IMO’s jurisdiction did not extend to ports themselves. Two delegates added it was not so much an issue with variations from the IMDG Code, instead it was different port regulations, licences and insurance requirements that were causing difficulty. A list of port regulations would be useful to industry and it was believed that various parts of industry would already have parts of this information. Industry would be well placed to compile information on ports as they interface with ports on a day-to-day basis and can provide a more realistic appraisal of the.

Mr Parroquin-Ohlson indicated a module could be added to GISIS for this purpose, but that it would require a formal proposal to FAL from an IMO Member State; it was pointed out that the IAEA could also make such a proposal. In any event IMO Member States are free to submit such information voluntarily. A delegate noted that the International Association of Ports and Harbours was a member of FAL and could usefully contribute to this data collection.

A copy of the presentation text is included as Annex 10.

10. Maritime Industry perspective

Mr Norman Riebesell from Hapag Lloyd presented the views of a maritime carrier. One example of a port causing difficulties was Puerto Caucedo in the Dominican Republic, as this did not allow the transit of Class 7 shipments. The company has a licence for Class 7 carriage in Italy that they have been unable to make use of, furthermore the port of Genoa was given as an example of a location with particular requirements which are unacceptable, including the departure of all port staff from near the docked ship leaving only the crane operator to work, and the requirement that the loaded vessel depart promptly before it has even closed its hatches. A commercial company can not be expected to call at a port simply to load/unload one container of Class 7 and not transfer any other cargo.

Another example of why Class 7 was a problem for the company, was that it normally carries out bunkering in the port of Fos which however does not allow Class 7; using alternative ports for bunkering while carrying Class 7 would cost $150’000 more, which could not be justified if the ship was only carrying 1-2 containers.
Another example is five containers of natural uranium to be shipped from Australia to Shanghai, requiring licencing and permits through Singapore, Malaysia and Hong Kong. It is unlikely that three months of work will suffice to obtain all the necessary permits. While the company is making every effort to provide the transport, it is expected to make a financial loss on the operation. The Australian consignor can not believe or can not afford to pay the real shipping cost, while the line manager is not going to accept a loss-making operation.

In the discussion it was noted that the experience of Hapag Lloyd demonstrated just how a carrier had genuine reasons to deny shipment of radioactive materials, due to the regulatory burden placed by and multiplied by each country along a transport route. It was hoped that these kinds of experiences would be recorded in the mooted list of port regulations.

Finally, the Chair Mr Mallaupoma presented Mr Riebesell with a commemorative plate as an award to Hapag Lloyd for its efforts to mitigate Denial of Shipment of Radioactive Materials.

A copy of the presentation text is included as Annex 11.

11. Industry Updates on Action Plan activities

Industry representatives provided the following updates on their activities.

Mr Paul Gray from the International Source Suppliers and Producers Association (ISSPA) and former Chair of the ISC, advised that his organisation had carried out the following actions related to Denial and Delay since the 6th ISC meeting:
1. Multiple opportunities had been taken in updating industry associations regarding the D & D issue. Industry associations include: ISSPA, IIA, GIPA, and CORAR directly and solely and also jointly with WNA and AIPES. Opportunities used included industry association AGMs; industry conferences incl. PATRAM, IMRP, etc.; industry meetings; and through association newsletters.
2. Integrated CORAR and AIPES with respect to D & D and led related activities for both of these organizations.
3. ISSPA questionnaire was prepared and issued to association members regarding their experiences with D & D. Awaiting feedback and will be subsequently analyzed.
4. Meetings were held with specific country Ports and Authorities and Regulators regarding transport processes and working together to define and implement win : win transport options for movement of Co-60 in those countries.
5. Published articles on Co-60 transportation in trade and related member magazines (e.g. CVSA in N. Am.)
6. Multiple industry associations were involved with the controversial IAEA Security document on illicit transport of RAM within declared RAM shipments.

Mr Ulric Schwela from the Tantalum-Niobium International Study Center (T.I.C.) advised the following actions had been taken:
1. Meeting with members of the Cargo Incident Notification Scheme (CINS) to discuss the possibility of exchanging information on denial of shipment of radioactive material.
2. Participate in meetings of the World Nuclear Association’s Transport Working Group, and the IAEA General Conference where there was a “Meet the experts” session.
3. Working together with several other industry associations from January to October 2011, a nine month gestation period, to produce an IAEA brochure on denial of shipment with the title “Transport for Life”, just in time for the IAEA Conference on Transport.
4. Providing updates on the ISC’s work to the IAEA TRANSSC meetings in June and October 2011, in particular stressing to Member States the need to identify and harmonise regulatory variations.
5. Providing an update on denial of shipment to the T.I.C. annual general meeting held in Almaty, Kazakhstan, in October 2011, which was hosted by Kazatomprom and its subsidiary Ulba
Metallurgical Group. Unfortunately the printing of the denial of shipment brochure was just one day too late for copies to be made available at this meeting.

6. Giving presentations on Denial of Shipment on radioactive materials at a workshop on NORM in Hasselt (Belgium) in November 2011 and, soon, a medical radioisotope Symposium in Brussels in April 2012, a radioactive materials transport conference in London in May 2012 and a workshop on NORM in Tallinn in June 2012.

7. The next annual general meeting of the T.I.C. will take place in Cape Town in October, where there will be a number of papers on transport including invited speakers.

Mr Serge Gorlin from the World Nuclear Association (WNA) advised the following actions had been taken:

1. In June 2011 a meeting had been held with the National Nuclear Regulator (NNR) in South Africa regarding obtaining a nuclear vessel licence, where it was learnt that maritime shipments of radioactive material had to be gazetted in order to permit opposition to the transport to be made, subsequent to this the NNR could grant a licence at one of its four-yearly board meetings. The NNR is divided into three departments: one for South African companies; one for fissile materials; and one for fuel cycle NORM – this latter department appearing to be the one with the most delays. Air transport was much simpler. Namibia was highlighted as a nation affected by South African regulations, as the fifth largest uranium producer with China an important destination.

2. Also in June a focus group had been tasked with reviewing the IAEA Transport Safety film.

3. In October 2011 they had organised a RAM transport Symposium with an attendant visit to Shanghai, which is the main gateway for import and export of Class 7 in China. It was noted that China’s nuclear program is expanding rapidly (with over 25 reactors under construction) and there is a need to increase shipping options. WNA/CNEA China organised the International Nuclear Symposium in Hong Kong (20-22 October with coordination from Mr Zhengchao CHEN – Ministry of Transport, and Mr Guigen FAN – Shanghai Port Authority. It was an opportunity to exchange leading practice in the industry.

   a. Shanghai visit AM
      i. Visit to unboxing area at Zhanghuabang Terminal
      ii. Visit to Waigaoqiao Phase 1 Terminal

   b. Shanghai visit PM
      i. Symposium on RAM Transport
      ii. RAM Transport in China - Zhengcai Chen (MOT)
      iii. RAM Operations at Shanghai Port – Guigen Fan (Port Authority)
      iv. Best practices in transport of $U_3O_8$ – Armin Orichel (RSB Logistic)
      v. Co-60 shipment into and within China – Paul Gray (Nordion Inc.)
      vi. Overview of UF_6 Packaging – Wendin Smith (Westerman)


   d. Chinese attendance came from the Ministry Of Transport, Ministry of Environmental Protection, Shanghai Maritime Safety Authority (MSA), Shenzhen MSA, Tianjin MSA, Shanghai Port Authority, Tianjin Port Authority, Qingdao Port Authority, Ningbo Port Authority, Shenzhen Port Authority, Lianyungang Port Group, plus various Chinese industry representatives. It was a very good turnout of Chinese authorities, whose attendance had been encouraged by the efforts of Mr Zhengchao Chen.

4. At the Transport Working Group’s meeting in January 2012 the carrier Maersk had been invited to speak and Mr John Leach had represented the company, which was welcomed as an opportunity
Maersk recognised it is not a safety issue, that it is a very safe cargo. Citing the reasons of regulatory and paperwork burden, Mr Leach explained how the economics could not justify the risk to the carrier of being denied port entry at the sudden decision of a port authority and the consequent six-figure losses that could result from having to reroute cargo to accommodate one or two containers of Class 7; it was ultimately a commercial and operational decision by the “string managers” and not one based on the material’s hazardous properties. Mr Gorlin offered Maersk assistance from industry in dealing with the regulatory burden and it was hoped that the situation may change.

In the subsequent discussion Mr Whittingham of the UK noted he had received information supporting what Maersk had presented at the WNA meeting, that the carriers were willing to transport Class 7 if the port authorities were willing to allow it. Mr Gorlin replied that it had been suggested to Maersk that as the world’s largest carrier it would have considerable leverage with the port authorities. Mr Schwela of the T.I.C. added that it had been pointed out to Mr Leach that Maersk had access to a wealth of information on port authority variations that could be contributed to a central listing; further that Working Group 4 could consider as part of their work how to collate such information on port regulations.

Mr Jack Edlow from Edlow International advised the following actions had been taken:
1. A meeting had been held at the port of Long Beach with the Coastguard and Emergency Services. The port is a hub for Hamburg Süd. Only one person at the meeting objected to Class 7, upholding a ban in place since 1983 due to Los Angeles being next door, despite the port of Los Angeles accepting Class 7, with the same provision of Coastguard and Emergency Services. However Los Angeles is not covered by many carriers.

Mr Schwela read out a report on behalf of Mr Mark Lambert from the World Nuclear Transport Institute (WNTI) who was not able to attend the meeting. WNTI advised the following actions had been taken:
1. Discussions were held with maritime organisations regarding several issues of denial of shipment, including developing relationships through the International Harbour Masters’ Association, the International Association of Ports and Harbours, shipping companies, forwarding agents and Class 7 training institutions.
2. A cross-Channel (between the UK and France) transport company had advised a WNTI member that they had reviewed their policy on Class 7 and had decided that in future they were going to stop accepting Class 7 cargo, due to concerns over public perception. The WNTI discussed this with the carrier concerned and advised them of the consequences that would result to industry and as a result, the carrier agreed to retract the planned change in policy. As this was considered a success story and not a denial, it was not reported to the IAEA/IMO database.
3. WNTI continues to collaborate with the World Maritime University in providing lectures on the transport of radioactive materials, including regulatory controls, packaging requirements and the consequences of denial and delay of cargoes.
4. WNTI task forces held meetings in London and Madrid in June and December 2011, on the occasion of the institute’s biannual general meetings. Guest speakers included the IAEA DDG Mr Denis Flory, a speaker from the OECD on the supply of Mo-99/Tc-99. As a result of the successful workshop in Namibia that took place in September 2011, WNTI is developing a relationship with parties in southern Africa with a view to opening up ports on the eastern coast to Class 7.
5. Publications: the 2012 WNTI Annual Review is being finalised and should be published in March. A new best practice guide for securing drums of uranium in 20' ISO containers was issued in 2011.
6. Following the Fukushima accident, WNTI was contacted by a number of parties concerned about the impact on their activities; as a result of this WNTI published an information paper.
12. A Network Model: The European Association of Competent Authorities

Mr Steve Whittingham from the United Kingdom gave a presentation with the title: “Regional coordination and cooperation – the future Regulatory model”. It showed how the seemingly simple relationship between ‘Societal needs’ and ‘Delivery of societal benefits’ in fact included a number of considerations:
1. An overview of transport of radioactive material
2. Regulations – transport safety and security
3. Regulatory infrastructures of Member States
4. Industry compliance with regulatory requirements
5. National regulator oversight / intervention
6. Future trends and challenges
7. International coordination
8. Worker and public confidence

Mr Whittingham pointed out that to some people radioactive material was much more important than just an issue of denial of shipment, it was a question of life and death to those awaiting treatment of diseases, including those awaiting radiotherapy. Following this there was the important issue of recovering orphaned sources after their use in equipment. He also noted that Dangerous Goods Classes other than Class 7 are commonly known just by their number, the same should be the case with Class 7 instead of specifically calling it radioactive material. An example of a positive achievement of the IAEA was in establishing a solid safety culture, in that the transport of Class 7 was safe and that regulators knew what it meant to be safe.

Finally, not all can afford to attend meetings in Vienna, it tends to be the same people attending each meeting, therefore the Committee should not assume that it was fully representative; some stakeholders are isolated in their regions and this increases the importance of communication and coordination, such as in the European Association of Competent Authorities. The manner with which the denial of shipment in Port Everglades (Florida, USA) was resolved was an example of effective coordination, involving the regulator and industry communities.

In the discussion Mr Whittingham added that there was room for additional and more imaginative ideas of how to communicate with the public, e.g. downloadable smartphone apps with the radiation trefoil which explained the positive and beneficial uses of radioactive materials.

A copy of the presentation text is included as Annex 12.

13. Technical Cooperation Update; Thematic Safety Area 7 – Transport Safety

Mr Jim Stewart explained that a Thematic Safety Area (TSA) was an area of work defined by the Department for Technical Cooperation (TC) and that TSA7 was to focus on transport. It would involve a series of TC funded training workshops which would be based on the existing safety standards, include self-assessment test (SAT) modules and a wide range of tools of which some would be suited to dealing with delay and denial, ready to be initiated by TC in 2012. The process flow would include a first phase of regional meetings where countries would be placed into groups of three or four, each country performing a SAT and having it validated by other members of the group. This would lead to a regional list of strengths and weaknesses that would assign priorities for a second phase, in which an action plan would be rolled out and changes monitored.

There was an existing regional project for Latin America which was being extended for two years. A new project for Africa had received full funding, including a first regional meeting. A new project for
Asia was also started and a two-week regional meeting was due to take place. There was a project for Europe however it had not obtained funding and donors were being sought for this; the IAEA was hoping the European Commission might step in and an official request had been made. Most funding had gone towards Africa, following by Latin America and Asia and finally Europe, which was thought to match the priority in where help was needed. Those countries which wished to participate should contact their National Liaison Officers.

In the subsequent discussion it was emphasised that one of the purposes of TSA7 was to stimulate the development of much more interlinked regions which depended on each other and learnt from each other, instead of experts being flown in from outside for just a week.

A copy of the presentation text detailing the areas of interest and tools is included as Annex 13.

14. Upcoming IAEA meetings with relevance to DOS

Mr Jim Stewart informed the committee that following the ISC7 meeting, on Thursday and Friday 16-17th February there would be an inter-agency meeting which would discuss i.a. the progress of work post-Fukushima and the proposal put forward by ICAO of formalising the inter-agency group into a committee with a remit that could include denial of shipment. Other meetings included:

- 12-16 March – Transport Conference outcomes
- 13-24 May – Jordan, training workshop under TC TSA7 for western Asia
- July – Africa, proposed training workshop under TC TSA7
- 16-20 July – TRANSSC 24
- Q3/Q4 – Caribbean, training workshop under TC TSA7 in coordination with the Pan American Health Organization (PAHO)
- Q3/Q4 – Expert missions – Africa
- 29 Oct-2 Nov – TRANSSC 25

Information on participation in the TSA7 workshops would come from the Technical Cooperation department and provided to the National Liaison Officers.

15. Air Industry perspective

Mr Trevor Howard from Air Canada presented an informative account of the company’s experience in carrying Class 7 and how they dealt with problems via communication. Training above and beyond requirements is carried out in the belief that it will pay off in the long run. Radioactive materials for medical treatment were of a higher loading priority than fare-paying passengers. Where denials were encountered these were taken as lessons to learn from for future improvement in performance. It was also noted that many Class 7 packages travelled back as empty packaging which weighed substantially the same, thus generating profitable two-way cargo. While the company believed in supporting this transport, it was acknowledged that it could be a difficult and lengthy process, e.g. requiring nine months to obtain a certificate for Japan.

Finally, the Chair Mr Mallaupoma presented Mr Howard with a commemorative plate as an award to Air Canada for its efforts to mitigate Denial of Shipment of Radioactive Materials.

A copy of the presentation is included as Annex 14.

16. IATA Update on Action Plan activities

As Mr Brennan was unable to attend the meeting, he provided a text by e-mail which is included as Annex 15-A.
17. ICAO Update on Action Plan activities

Ms Katherine Rooney of the International Civil Aviation Organisation (ICAO) presented an update of the ICAO’s activities related to denial of shipment.

1. Fukushima.
   In the immediate aftermath of the accident ICAO received questions from air crew regarding the safety of flying out of Japan in general, or cargo which could become contaminated. These types of questions resulted in a lot of coordination with other agencies including the IAEA and led to the Joint Emergency Action Plan (J-Plan), which specifically did not include a transport element. As a consequence an ad hoc committee was set up to deal with transport which revealed the difficulties in creating a coordinated response, even simply due to time differences. Nevertheless a number of joint activities were achieved including joint press releases.

2. ICAO Regions.
   Ms Rooney advised the breakdown of ICAO Regions did not match up with the four regions of the ISC, e.g. with there being two ICAO regional offices in Africa in Dakar and Nairobi. This was of particular relevance to ISC Regional Coordinators in order that they would know who to deal with for instances of delay and denial by air.

   ICAO held a regional training course in Mauritius for eastern Africa in 2011, while the Mexico office will hold one in May 2012.

3. Overflight.
   This could become a future problem for denial of shipment. In TS-R-1 the requirements for special arrangements include multi-lateral approval, with overflight states being specifically excepted. This reference to air space sovereignty overlaps ICAO's remit according to Article 1 of the Chicago Convention. In ICAO’s Annex 18 of the Technical Instructions there is an equivalent reference to special arrangements which is simply called an exemption, and this simply allows for a national authority to provide relief from the provisions of the Technical Instructions. For this to happen there are three criteria: for extreme urgency; when other means of transport are inappropriate; or if it is deemed to be contrary to public interest.

   Not all states have the resources to assess the arrangements made by countries responsible for the overflight and so provide the necessary relief, consequently one option examined has been to deem an assessment as approved if the countries arranging the overflight are deemed to have at least an equivalent level of safety. This option is due to be issued for a period for comment. It would appear that some states will seek an exception to this proposal, namely for Class 1 and for Class 7. The IAEA is encouraged to provide its comments, potentially suggesting that a criterion of high consequence Class 7 goods apply before overflight states are required to assess special arrangements.

In the subsequent discussion Ms Rooney reinforced that comment on the overflight issue was first and foremost sought from the IAEA, although it was anticipated that the proposal for amendment to Annex 18 might be issued in the summer of 2012 for a comment period. ISC members were encouraged to talk to their civil aviation regulators to ensure they were aware of this potential issue, although all ICAO member states would be notified in due course.

A copy of the presentation text is included as Annex 15-B.
18. Presentation of the Working Groups and their terms of reference

Mr Jim Stewart next presented the terms of reference for the following Working Groups:

WG1: Future of DOS after 2013: how should delay and denial be taken care of after the ISC?

We now have regional networks in place to provide a bottom up approach, as well as a top down approach with e.g. training material and the DOS brochure. SharePoint can be an additional communication tool – how should this be linked together and structured, what information should be there, what templates should there be? As a result of Fukushima there is an increased need for UN agency cooperation and if the proposed Inter-Agency Committee on Transport takes off, this can take over some of the denial of shipment. Working Group 1 would review all these options.

WG2: African American Asian European Regional and ISC Action Plan review – key activities for 2012: revise the existing action plan.

This group was to review the regional action plans and the technical cooperation projects and look for synergies.

WG3: SAT question set for denial of shipment.

There is currently no SAT covering transport, however such a module could be developed. The structure should be based on twelve primary questions, backed up by sub-questions. Working Group 3 was to develop a module with supporting information.


The IMO GISIS database on denial continues to be a valuable tool, although confidentiality concerns are still preventing further reporting. This Working Group should develop a simplified matrix of type of denial by rows and regions by columns, ideally still separately by air and sea, which would be collected in aggregate form on a six-monthly basis. “Other” types of denials should continue to be reported to the IMO database in order to continue to capture this information.

WG5: International Radiation Protection Association (IRPA) paper and potential side meetings: for IRPA 13 in Glasgow in May 2012.

An abstract has been submitted by the IAEA on behalf of the ISC to IRPA, it has been accepted and now a paper needs to be completed. Additional ideas for covering denial of shipment at IRPA are encouraged given that it is a major event. Working Group 5 should expand on the abstract, ideally completing a draft paper and provide ideas for additional activities.

The working groups convened in side rooms on Tuesday 14th February according to the meeting agenda and reported their work back to plenary on Wednesday 15th February.
19. Reports of Working Groups 1 to 5

The Chair of each Working Group presented their findings to plenary as follows:

19.1. WG1: Future of DOS after 2013

Mr Saúl Pérez Pijuán from Cuba was the Chairman of the Working Group and he presented a summary of the findings, which included a detailed list of recommendations with a timetable, general actions, transitional activities, a new structure to maintain oversight of denial of shipment, and a wish list for the SharePoint tool of the IAEA. Mr Ulric Schwela of the T.I.C. then elaborated on the upcoming actions, followed by Ms Katherine Rooney of the ICAO on the transitional activities, and finally Mr Paul Gray of ISSPA on the SharePoint wish list.

Ms Rooney clarified that the UN inter-agency group is primarily a forum for those agencies which was brought to the fore to help tackle the response to questions following the events at Fukushima in a coordinated manner, including joint press releases. Recognising the utility of this group, ICAO sought to strengthen its mandate. At the ministerial meeting on Fukushima in June 2011, ICAO proposed: “This committee would consider means by which to increase crisis management preparedness and response in the transport sector during an emergency or international disaster, including a pandemic disease, industrial or nuclear accident. Improving the sector’s ability to deal with emergencies would facilitate the work of agencies providing humanitarian aid and of governments struggling with the reduced travel and trade. It would address the direct and immediate effect on the transport sector itself, resulting in reduced demand for services during emergency situations. It could also help to reduce the number of denials of transportation of life-saving radiopharmaceuticals. So we see the creation of this inter-agency committee as being the forum for primarily for UN agencies to discuss issues related to transport in a broader sense, of which one area would be transport of dangerous goods, of which a further sub-area would be the issue of delay and denial of radioactive material shipments.” The timing of this proposal was mentioned as a potential issue, in any case ICAO was still waiting on the IAEA for endorsement of the proposal. A meeting of this inter-agency group was due to be held on Thursday and Friday 16th-17th February.

In his presentation Mr Gray added that where separate SharePoint pages would be created for regions and states, updates should be applied uniformly across all pages so that the format would remain the same. These pages should also clearly identify the regulatory structure with cross-links so that all the stakeholders could clearly see who they should talk to resolve any particular issue. It was also important to ensure the SharePoint pages were universally accessible in areas with low bandwidth connections.

During the following discussion Mr Gorlin sought clarification regarding support for multiple languages and Mr Stewart confirmed that this already existed in SharePoint.

Ms Rooney pointed out that while the existing inter-agency group has a joint plan (“J-plan”), this does not include any intent to formalise the group. Mr Stewart clarified that there appeared to be little support to formalise IACT within the J-plan, whereas it may be more successful outside of the J-plan. A back-up plan should be prepared should IACT not go ahead. Mr William Brach representing TRANSSC noted that TRANSSC supported closer integration with ICAO.

Mr Stewart added that at the March meeting to follow up on the Transport Conference Action Plan, there would be discussion on how the IAEA should regulate transport in future, with a broad canvas that gave room for even dramatic proposals, for example whether the IAEA should simply co-sponsor the UN orange book instead of publishing separate transport regulations. Those intending to attend the March meeting were asked to come prepared for the broadest and fullest possible discussion on the future direction.
There was a desire for a clear formal process for transferring actions of the ISC to IACT, the first step being the ISC’s approval of the WG1 report, then IACT’s approval of the proposal, and subsequently ratification. Mr Whittingham asked for further clarification and it was explained that the WG1 report represented a proposal for future work, which would require further acceptance and ratification by other bodies. The outcome of the sequelae to the WG1 report would then be presented back to the ISC at its 8th meeting in June 2013. Also, the ISC Management Team would maintain a close watch on further developments through its monthly conference calls.

The ISC was asked to endorse the report of WG1 and this was confirmed and seconded.

Mr Pijuán clarified that this was an operation of transition and not dismantling, that the regional and national networks were a good experience and should be maintained.

A copy of the Working Group 1 terms of reference and report are included as Annex 16.

19.2. WG2: African American Asian European Regional and ISC Action Plan review – key activities for 2012

Mr Dinakaran Meenamkunnu from India was the Chairman of the Working Group and he presented the findings, including a revised 12-point action plan with key activities for 2012 based on the accumulated experience of the Regional Action Plans of the last 4 years. He noted that these Action Plans had until now followed the ISC model of six thematic areas (awareness, communication, economic, harmonisation, lobbying and training) and been given a free hand to adapt their plans to suit their region, giving the regional stakeholders a real sense of ownership. Each year the action plans were reviewed and it was found that they could not be given an end date as there is an element of continuing work required.

Given the ISC target end date of 2013 a refined action of twelve points was compiled as follows:

1. Prioritize the most crucial stakeholders, based on the exhaustive list of 48 stakeholder groups involved in the movement of RAM prepared by Mr Whittingham. Tackling them as one group would be difficult, however each region could select those of greatest importance to them.

2. A fresh look should be taken at the IAEA training material available and its deployment.

3. ISC should encourage member countries, who have not yet addressed the problem of denials, to replicate the Brazilian experience to carry out distance education and on-site training. It is believed that a switch from a voluntary effort to a system of project management together with deadlines will provide for better results.

4. Member states should periodically report back to IAEA on the action taken.

5. Create a strategy for Public-Private Participation in member states to organize regular training programs similar to the experience gained in Japan, where the industry can collaborate with the regulator in developing and implementing training among all stakeholders.

6. Given the complete lack of awareness among the general public about the daily movement and use of radioisotopes, Mr Zhengchai Chen from China had suggested that publicity could be gained by declaring the birthday of Marie Curie, November 7 as the World Radioisotope Day and use the occasion to create saturation publicity and awareness programs on the transportation of RAM, with leadership from the IAEA, so even lay people would learn about the beneficial transport of RAM.
7. Create a new mechanism for enabling free-flow of information between regulators, carrier associations, inter-governmental organizations and consignors of RAM; this could be enabled by the use of SharePoint as presented earlier.

8. Update the details of competent authorities which ensure cross border transport of RAM and accord wide publicity to this among stakeholders, work which is already being done to some extent.

9. Develop a web-based access to transport regulations related to Class 7 cargo movement of all member states for facilitating flow of RAM between multiple countries.

10. Regarding Regional Projects, there is an existing Technical Cooperation project called “Strengthening effective compliance assurance for the transport of radioactive material”. Points 1 to 9 are believed to already be in alignment with this TC project.

11. The existing structure of and relationships of the ISC, Management Team, Regional Coordinators, National Focal Points etc. needs to be redefined in the light of the closure of ISC in year 2013.

12. Harmonization of regulations needs to continue, leading to uniformity in rules regulating transportation of RAM globally.

A copy of the Working Group 2 terms of reference and report are included as Annex 17.

19.3. **WG3: SAT question set for denial**

Miss Tammy de Wright from Australia was the Chairman of the Working Group and she presented the output, consisting of a twelve-point questionnaire of increasing level of detail. The SAT was based on TS-G-1.5 and TS-R-1, with a first set designed for regulators, to be followed by a second set for operators. This questionnaire was intended as a thirteenth module on Denial Of Shipment, to be added to an existing set of twelve modules on transport regulations. The tool was intended as a pre-mission aid for e.g. IRRS missions or for a review of regulations.

The questionnaire was designed to assess the level of awareness of DOS and what is understood about the issue, the mechanisms to resolve any instances of DOS and the resources available, and compile information on airports and harbours for the IAEA. It was assumed that issues of harmonisation would have been dealt with in the other twelve modules.

In the discussion it was noted that questionnaires should be issued in good time prior to training workshops in order that there be time to carry out the ‘homework’. As the questionnaire would fit into modular training courses, the context and other introductory material would necessarily vary. Mr Stewart added that the set of SAT questions were going to be used in an upcoming African regional meeting, following which the responses by individual countries would be reviewed, thirdly this would be followed by expert missions to provide appropriate training, and finally feed back the results to the region.

Mr Pérez Pijuán questioned whether all the questions in the proposed DOS module belonged together, and whether they should instead be separated according to those of an essential nature seeking to identify DOS and those that served to evaluate the effectiveness of measures implemented to tackle DOS. In other words, states should first be asked about the existence and understanding of DOS; subsequently they should be asked about the measures taken to address DOS. States such as Brazil could be asked to review such second-tier questions in how appropriate they were in evaluating the effectiveness of a national or regional network.

Mrs Kasturi Varley from the IAEA pointed out that workshop participants would require a prior introduction to delay and denial in order to better answer the questions.
The ISC was asked to endorse the report of WG3 and this was confirmed and seconded.

A copy of the Working Group 3 terms of reference and report are included as Annex 18.

19.4. WG4: A new method of recording denial

Mr Steve Whittingham from the United Kingdom was the Chairman of the Working Group and he summarised the findings in three points:

- Two spreadsheets had been produced, one for air transport and one for sea transport, with reasons for delay and denial reported to the UK, which were not already included in the database, e.g. documentation rejected in error (there was nothing wrong with the documentation, yet it was rejected), live animals, hatching eggs, or the documents and package had a small difference in dimensions. These additional reasons should be reviewed by the ISC to ensure they are being addressed.
- An information sheet about the safe transport by air of radioactive materials in conjunction with live animals or hatching eggs, should be drafted by ICAO and IATA.
- Consignors should be asked to submit simplified summaries of delays and denials over six-month periods, that could encourage reporting from those parties which had hitherto held back due to concerns over confidentiality.

He further added that the 31st January reporting date on the form was simply a suggested annual date for reviewing the data.

In the discussion, Mr Gray provided additional examples of repeated reasons for denial in the air mode, including human remains or animal semen. Care should be taken with recording denials simply as “carrier denial”, as we had seen that there was always another reason behind this of a regulatory nature, it may be unfair to record a lot of denials against a carrier who may have taken great efforts to effect a shipment.

Ms de Wright noted that some shipments may be denied due to multiple factors and the form should be able to take this into account; also “member state requirements” was perhaps not a helpful reason as this could be due to regulatory disharmony or a political decision. Mr Stewart suggested there should be a covering letter explaining what was intended by each reason for denial and when it should be applied; it is the main reason for denial that should be recorded.

Mr Gorlin proposed that instead of origin or destination, it would be possible to enter the route instead. Mr Schwela added that the covering letter could clarify that this information was voluntary, and that the submitter could enter the port, destination or route as appropriate. Mr Stewart noted that the IAEA would not necessarily find the destination useful information, instead information should be consolidated by region and the form should require recording of the region where the denial occurred.

Mr Pérez Pijuán noted the form should record the end use category being impacted by the denial, i.e. radiopharmaceuticals, nuclear energy et c. Thus a periodic evaluation could be made of the impact of denial by industry sector.

A copy of the Working Group 4 terms of reference and report are included as Annex 19.

19.5. WG5: IRPA paper and potential side meetings

Mr Serge Gorlin from the World Nuclear Association (WNA) was the Chairman of the Working Group and he presented additional material to be included in the IAEA paper to be presented as a poster at the 13th International Radiation Protection Association conference, the world’s main radiation protection event. Some of the ideas developed for this paper could also be used subsequently for awareness raising material at other events. He covered the main elements which were going to be included in the paper, which was intended to raise the profile of DOS at the conference:
• Applications;
• Number of packages shipped worldwide, nuclear and non-nuclear;
• An expanding and developing area in nuclear energy, medicine and decommissioning;
• Regulatory framework and hierarchy;
• Given the radiation protection audience, a brief overview of RP aspects;
• The excellent safety record;
• The main principle of transport;
• Defining Denial Of Shipment, mainly international and not domestic, mainly air and sea not land;
• Examples of reasons for DOS;
• Inconsistencies between and within member states, with some specific examples;
• Consequences of denial, both for safety and security e.g. repatriation of orphan sources or states citing DOS as a justification for implementing the full nuclear fuel cycle and so increasing proliferation;
• The brochure for DOS;
• The structure of the ISC and the six action areas, e.g. DOS becoming a component of IAEA safe transport training courses, and the target date of 2013.

As previously suggested by Mr Schwela this could also form the basis for a journal article after the conference. Mr Gorlin added that flyers and leaflets could also be produced to support the poster. As the DOS brochure requires re-printing and a new title other than “Transport for Life”, the group had also discussed a few ideas and any further suggestions were welcomed from the committee.

In the discussion Mr Schwela suggested re-ordering three issues into an order reflecting cause and effect, i.e. economic consequences, due to regulatory disharmony, in turn due to perception; that the fact sheets should be noted as a useful resource; and that transport should be emphasised as being essential, that without transport there would be no beneficial provision of radioactive materials. Mr Stewart noted that the paper would be rewritten by several people before being made final, therefore the committee should focus on advising the main content of the paper and not the detailed wording. Mr Whittingham suggested that the paper should use the word “confidence”, that the ISC was trying to build confidence in the transport of RAM, that there was a lack of confidence despite the safety record. Mr Ahmad Al Khatibeh of the IAEA noted the paper should conclude with a call to the target audience explaining what they could do to mitigate the issue of DOS.

A copy of the Working Group 5 terms of reference and IRPA abstract are included as Annex 20.

20. Action Plan amendment to include Working Group recommendations

There was general review and discussion of the Action Plan prepared by Working Group 2. Inter alia it was clarified that:
• under Awareness a new database reporting mechanism would be prepared in light of the report of Working Group 4;
• under Training there should be further work with the IAEA and its Technical Cooperation programmes to support regional training courses, including translation of material as necessary;
• the IMO free e-learning course was once again recommended for everyone to use and it should be included in a compendium of all training material available;
• that Class 7 should be fully integrated into general Dangerous Goods training so as not to stand out as ‘special’;
• that the IAEA should write to providers of Dangerous Goods training organisations in order to raise awareness of DOS among their students, in other words DOS training is also an issue under the Awareness section;
that the reporting by member states to the IAEA under item 4 was also of relevance to item 11
given the upcoming post-ISC transitional period;

ask the major carriers to report their three main port or route issues and tackle these as a priority in
this last period before ISC8;

that the IMO could look at translating the e-learning package into e.g. Spanish and French, if such
a recommendation were to be made by the ISC to the IMO;

The reviewed Action Plan was considered adopted by the Committee.

21. Next Steps

The Chair of the ISC, Mr Mario Mallapuma, outlined the next steps to be taken on the road to resolve
delay and denial of shipment:

2012-March The ISC’s Future Plan endorsed by the Committee would be presented to the
meeting on the Conclusions of Transport Safety & Security Conference to identify
actions which are in common between the ISC’s plan and the Transport
Conference.

2012-June Presentation of the Future Plan to the IAEA Board of Governors.

The actions in the ISC’s plan which relate to the IAEA need to be approved by the
Board of Governors.

2012-September IAEA 56th General Conference: booth, presentations, prepare revised brochure,
publicity material et c.

The ISC Management Team will discuss and organise activities during the General
Conference to maintain and broaden awareness of Denial of Shipment.

A copy of the full text together with the conclusions below, are included as Annex 21.

22. Conclusions of the ISC7 meeting and dates for the next
meeting ISC8 (17-20 June 2013)

The Chair of the ISC, Mr Mario Mallapuma, gave a number of conclusions based on the objectives of
the seventh meeting of the ISC, including the identification of a series of strengths and weaknesses
that should be considered in the update of the action plan. Communication should be improved, with
the experience of Brazil in creating a National Committee on denial and delay of shipments being of
value in identifying bottlenecks and solutions. The action plan has been reviewed with a focus on a
few specific main actions. The implementation of national and regional networks should be prioritised
as part of the implementation of a communication strategy.

A copy of the full text together with the next steps above, are included as Annex 21.

23. Closure of the Meeting

The meeting was closed by Mr Pil-Soo Hahn, Director of Nuclear Safety of the IAEA, who first
presented an award for the very outstanding work as a National Focal Point by Mr Natanael Bruno of
Brazil, which was accepted by Ms Adelia Sahyun of Brazil on Mr Bruno’s behalf.
Mr Hahn went on to recognise the work the Committee had accomplished in just three days, in working towards the goal of 2013 for a long-term sustainable management plan. He summarised some of the actions needed in 2012, including use of the Self-Assessment Tool, the revised method for recording denials, and finally a revised plan for communication. The work was noted as being invaluable in providing guidance. The Committee was reminded that this is the year of action on denial and that we all needed to commit to hard work.

A copy of the full text is included as Annex 22-A.

24. Chairman’s Closing Words

The ISC was advised that its work could be considered to be ethical in nature, as the objectives were not only technical but also moral in light of two quotes:

“The most beautiful work of man is to be useful to others” (Sophocles)
“Help to those who need it is not only part of duty but also of happiness” (José Martí)

The task of facilitating transport of radioactive materials with broad applications and benefits to humanity, gives us the opportunity to help our neighbours.

The Chair believed that the seventh ISC meeting had served to reinforce the commitment and responsibilities as members of the ISC. The meeting was then closed.

A copy of the full text is included as Annex 22-B.
Annex 1 - Opening Remarks

Presented by Mr. Denis Flory, Deputy Director General, Department of Nuclear Safety and Security.

...this mix of technical experts enables the Steering Committee to address the very important, sometimes vital, issue of Denial of Shipment of Radioactive Material, and I would like to acknowledge the efforts to date and the achievements which will be reported at this meeting. Since 2006, when the first Steering Committee was held, many proactive steps have been taken that have helped to address the issues of denials. This is now the seventh meeting and instances of denials are still occurring: we need to discuss our future actions.

You will review several aspects of denial during the week, and I am particularly pleased to welcome Mr. Bill Brach, the Chair of the Transport Safety Standards Committee to this meeting, he will be able to feed back to TRANSSC any issues regarding regulatory barriers to shipments. Safety regulations and also security regulations, since you will also touch on security documents at this meeting, are not intended to stop companies from transporting radioactive material, but to allow them to do so in a safe, secure and effective manner. The subtitle of our conference in October last year, was: “Creating a safe, secure and sustainable network”. If there was no radioactive material to transport, then it would be both safe and secure, but it would fail to meet that important third strand of sustainability. The conference was important to your work, in that it identified the need for harmonisation between UN bodies, member states, between safety and security, and of course, industry, in order to deliver the sustainable framework.

We have come a long way together and I would like to focus on two major achievements over the past few years. First, it is the development of National and Regional Networks through which members of industry and regulatory bodies maintain a high degree of communication. These networks are a valuable resource allowing a bottom-up solution of individual problems encountered when shipping radioactive material. Issues can only be resolved by active and committed participation and support by National Focal Points, Regional Coordinators, Industry and UN Organisations. In addition, a top-down approach also brings benefits in terms of establishing a communication strategy, and suitable training material. A good example was the brochure made available for the Transport Conference late last year. I'm pleased also to inform you that several Technical Cooperation and extra-budgetary projects that will involve training and sharing information on denials of transport, came into being this year.

The framework is in place for your work and resources are available. It is now time to deliver change. It is our intention to aim at the time of the 2013 General Conference as a target, when through our collective efforts we can hopefully eliminate denial to the extent that it is no longer an issue worthy of reporting. The eighth Steering Committee, the next one, should be the last one. I encourage you to set your mind to delivering substantial change in the following year, to stiffen the sinews for one last year of hard work and if you are hunters, you will understand that a suitable image would be that of the time to go for the catch and I would like to yell: “Tailleau! Tailleau!”

I wish you well over the next three days, you will be busy, however the work has an end in sight and I have no doubt that as a result of this meeting, the Steering Committee will be well placed to achieve our goals. I would now like to hand over to the current Chair, Mr Ulric Schwela from the Tantalum-Niobium International Study Center, and thank you for your support.
Annex 2 - Chairman’s Welcome

Seventh (7th) Meeting of the ISC

Welcoming words by the Chairman

It is a pleasure to welcome you all, both the familiar and the unfamiliar faces, to this wonderful Winter weather we are enjoying in Vienna. For those that had some time to sightsee around Vienna this weekend you may have noticed the Danube was frozen over and there were hundreds if not thousands of people frolicking on the ice. I hope you do not find it too cold, if you do you may take consolation from the fact that you will be stuck indoors the next couple of days.

The thought of all the river transport brought to a standstill reminded me of our work in the ISC, it is our task to identify where transport gets stuck and free it of the constraints that deny shipment.

Since the sixth ISC meeting in April there have been a number of activities of which we will hear more of today. I would nevertheless like to point out a few that I think are particularly important:

1. The Regional Workshop on DOS held in Panama in July, attended by fourteen Caribbean and South American countries, an example of the training that needs to be carried out regularly worldwide;
2. The IAEA’s Transport Safety & Security conference in October, which confirmed the importance of addressing Denial of Shipment and further, identified the mutual causality between DOS and Transport Security;
3. The rapid response in December to the draft Nuclear Security document on prevention of trafficking in declared RAM shipments, which resulted in a re-draft last week by a Customs and Industry cooperation.

Regarding the last point, although we will be given a presentation later, I would like to stress that the document on prevention of trafficking is intended as a Technical Guidance document, that is to say it is the lowest level in the Security document hierarchy and it is only guidance. Despite this the draft that was reviewed by a Technical Meeting in December gave Industry serious concerns over the implied application to all packages. In response to subsequent Industry comments, the IAEA convened a Consultants Services meeting last week which was also opened up to several Industry representatives, covering a broad spectrum of Radioactive Materials. The meeting addressed 308 comments and all the points made by Industry, most notably:

- How realistic was the trafficking potential;
- The confidence provided by trade security programmes;
- The reliability of physical confirmation techniques;
- The application to all packages;
- The burden of the proposed controls;
- The possible restriction of border crossings.

Following a week of good cooperation, a revised document was produced which is workable and we can all look forward to the presentation on this later today.

With our action-packed agenda I’m sure we are going to have a busy and productive few days, so without further ado I wish you “god arbejdslyst”, or ‘good working zeal’ as they say in Denmark.
Annex 3 - Agenda

TM-42739
Seventh (7th) Meeting of the
International Steering Committee on
Denials of Shipment of Radioactive Material

IAEA Headquarters, Vienna
13-15 February 2012

Working Paper No.01
Agenda
### Seventh (7th) Meeting of the International Steering Committee on Denials of Shipment of Radioactive Material

**Plenary Meeting Room - VIC M Building, M3**

**Monday, 13 February 2012**

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<td>Administrative arrangements</td>
<td>Nancy CAPADONA, IAEA</td>
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<td>09:50–10:00</td>
<td>- Welcome</td>
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<td>Communication Strategy</td>
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<td>11:35–12:15</td>
<td>RC Updates: Action Plan activities (10’ each)</td>
<td>Mamdouh OSMAN, AFRICA</td>
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<td>Alfredo PARROQUIN-OHLSON, IMO</td>
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<td>Maritime Industry perspective</td>
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<td>13:15–14:15</td>
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<td>Industry Updates on Action Plan activities (10’ each)</td>
<td>Jack EDLOW, EDLOW INTERNATIONAL</td>
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<td>Paul GRAY, ISSPA</td>
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<td>Ulric SCHWELA, TIC</td>
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<td>Serge GORLIN, WNA</td>
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<td>Mark LAMBERT, WNTI</td>
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<tr>
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<td>Session</td>
<td>Presenter(s)</td>
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<td>--------------</td>
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<tr>
<td>15:05–15:20</td>
<td>A Network Model: The European Association of Competent Authorities</td>
<td>Steve WHITTINGHAM, ONR-RMT</td>
</tr>
<tr>
<td>15:20–15:35</td>
<td>TC Update; Thematic Safety Area 7 – Transport Safety</td>
<td>Jim STEWART, IAEA</td>
</tr>
<tr>
<td>15:35–15:55</td>
<td><strong>COFFEE BREAK</strong></td>
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<tr>
<td>15:55–16:10</td>
<td>Upcoming IAEA meetings with relevance to DOS</td>
<td>Jim STEWART, IAEA</td>
</tr>
<tr>
<td>16:10–16:25</td>
<td>Air Industry perspective</td>
<td>Trevor HOWARD, AIR CANADA</td>
</tr>
<tr>
<td>16:25–16:40</td>
<td>IATA Update on Action Plan activities</td>
<td>Jim Stewart on behalf of David BRENNAN, IATA</td>
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<tr>
<td>16:40–16:55</td>
<td>ICAO Update on Action Plan activities</td>
<td>Katherine ROONEY, ICAO</td>
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Presentation of the Working Groups and their terms of reference:

- **WG1:** Future of DOS after 2013;
- **WG2:** African American Asian European Regional and ISC Action Plan review – key activities for 2012
- **WG3:** SAT question set for denial
- **WG4:** A new method of recording denial
- **WG5:** IRPA paper and potential side meetings

**Tuesday, 14 February 2012**

**WORKING GROUPS**

**WG1: M3 ~~~ WG2: M0E67 ~~~ WG3: M0E68 ~~~ WG4: M0E69 ~~~ WG5: M0E70**

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<td>09:00–17:30</td>
<td>Working Groups, including Report Preparation (WG1 to WG5)</td>
<td>All participants</td>
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<td>(or as required by each WG)</td>
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**Wednesday, 15 February 2012**

**PLENARY**

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<td>09:00–10:15</td>
<td>Reports of WG1 to WG5 (15’ each presentation)</td>
<td>WG Chairs</td>
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<td>10:15–10:35</td>
<td><strong>COFFEE BREAK</strong></td>
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<tr>
<td>10:35–12:05</td>
<td>Action Plan amendment to include WG recommendations</td>
<td>Chair</td>
</tr>
<tr>
<td>12:05–12:15</td>
<td>Next Steps</td>
<td>Chair</td>
</tr>
<tr>
<td>12:15–12:25</td>
<td>Conclusions of the ISC7 meeting and dates for the next meeting ISC8 (17–20 June 2013)</td>
<td>Chair</td>
</tr>
<tr>
<td>12:25–12:35</td>
<td>Closure of meeting</td>
<td>Pil Soo HAHN, IAEA</td>
</tr>
</tbody>
</table>

Note: the ISC Management Team will be required to remain available the afternoon after the closure of the meeting to identify the key actions to take forward.
Annex 4 - Terms of Reference

TM-42739
Seventh (7th) Meeting of the
International Steering Committee on
Denials of Shipment of Radioactive Material

Terms of Reference
Terms of Reference 7th ISC

Background

Radioactive materials are transported for use in medicine, industry, research and for production of power. Transport of such materials is governed by national and international regulations which are based on the IAEA Regulations for the Safe Transport of Radioactive Material. In the recent years there were many reported instances of denial of radioactive shipment despite compliance with national and international regulatory requirements and good transportation practices. These denials and concerns continue to this day, even with the emphasis being placed on this issue.

In 2006, to increase transparency, seek effective solutions and permit participation of interested parties, the IAEA Director General created a senior level International Steering Committee on Denials of Shipments of Radioactive Material, which includes representatives from IAEA Member States, International Governmental and nongovernmental organizations and industry. The Committee’s mandate is to coordinate international efforts at determining solution of issues related to the denial of shipments and facilitate the coordination of a comprehensive international work plan of activities.

The IAEA General Conference (GC) has passed Resolutions on transport safety - welcomed the formation of the International Steering Committee; urged the Secretariat to actively facilitate the Steering Committee’s work including the further development of the action plan and a database on incidents of denials and encouraged Member States to cooperate with the Steering Committee and its work.

Sixth Meeting of the International Steering Committee

Based on Steering Committee on Denial of Shipments experience since the first meeting in November 2006, during this meeting, the Steering Committee will:

1. Review the milestones in the implementation of the Action Plan and the status of implementation of actions by members of the Steering Committee,
2. Review and revise, if necessary, the Action Plan on Denial of Shipments of Radioactive Material,
3. Discuss specific actions for 2012,
4. Advise on the continuation of regional work, including whether there is a need for updating the Regional Networks
5. Discuss ways to engage more people to get more done by emphasizing those actions that are working better and targeting other areas for success,
6. Improve data gathering, and
7. Provide additional recommendations for Agency consideration.

Product of the Meeting

The Steering Committee may form working groups to deliberate on the various aspects of the issue. As the output the Chair of the Steering Committee will provide a report to the Deputy Director General, NS, IAEA at the conclusion of the meeting.
Annex 5 - List of Attendees

7th International Steering Committee Meeting (ISC) on Denials of Shipment of Radioactive Material

Meeting of Regional Coordinators Consultants & Guests

13 to 15 February 2012
Vienna International Centre

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Mr P. Hahn, Director, Division of Radiation, Transport & Waste Safety
Mr A. Al Khatibeh, Head, Regulatory Infrastructure and Transport Safety Section
Mr Jim Stewart, Head, Transport Safety Unit, Scientific Secretary (Jim.Stewart@iaea.org)
Ms Nancy Capadona, Transport Safety Unit, Scientific Secretary (N.Capadona@iaea.org)
Ms Lynn Gewessler, Transport Safety Unit, Administrative Secretary (L.A.Gewessler@iaea.org)
Ms Elizabeth Rehrl, Conference Clerk,
Annex 6

Key Actions 2011

Jim Stewart
Key Actions
Conference
Brochure
SharePoint
EB funding
IRPA
Film
Revised Database
TRANSSC 3 year plan

3 year plan
Sets out major activities of the Transport unit over the next 3 years
Includes “wish list” unfunded items
Identifies priorities
For WG1

Brochure
Brochure focusing on denial produced
Initial print run exhausted
Requires review
For WG4 and WG5

Film
Initial film completed in English
“5 minute” version produced
Considering potential for language versions
For WG5

Conference
Discussed denial
Distributed brochure
Distributed film
Follow up TM in Match
For WG1

**SharePoint**

Started tests
Used for conference
Can develop regional and national pages
Hosted by IAEA
Fully in line with IAEA IT policy
For WG1

**EB funding**

Funding for denial will be fully used by mid 2012
Additional funding for specific training courses
For WG1 and WG2

**IRPA**

Paper accepted
For WG5

**Revised Database**

Lessons learned from ISCDOS6
Ideas developed further
Revised methodology discussed with industry
For WG4
Annex 7

Denials Database Update

Nancy Capadona
**DOS Database – Synopsis of reports**

**Sources**

- Denials and delays reported relating to the carriage of radioactive materials by sea, July 2011, Frank Wall.

- Review of the IAEA/IMO/ICAO Database Radioactive Material shipment denials in the Air Mode, April 2011, Capt. Andrew Tisdall.

**Maritime Report**

Total of reports: 182

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Denials: 168 (92%)

Delays: 14 (8%)

**Maritime Report – Reasons for D&D**

**Maritime Report – Date of reports**

**Maritime Report - Conclusions**

**Recommendation 1 (Paragraph 8.2)**

That at a senior level the Secretariats of the IAEA and IMO should approach senior managers of a number of the major container companies/groups to invite them to discuss the issues involved with denials and delays to encourage their involvement in seeking solutions to the identified problems. Initially these approaches could, perhaps, focus on the carriage of radioactive materials used in medicine.

**Maritime Report - Conclusions**

**Recommendation 2 (Paragraph 8.2)**

That consideration should be given to expanding the membership of the International Steering Committee to specifically include representatives of the international shipping and port industries.

**Maritime Report - Conclusions**

**Recommendation 3 (Paragraph 8.3)**

Those submitting reports to the Database should do so as close to the actual incident and reports should not be “grouped” as in the past. Advice and training should be provided on completing reports to facilitate any subsequent investigation. A procedure should be established to access the completeness of reports before they are entered on the Database, including referring reports back for revision.
Air Report

Total of reports: 51

| UN 2915 | 41 (80%) | Type A, nsf, nf |
| UN 2916 | 4 (8%)   | Type B(U), nf   |
| UN 3332 | 2 (4%)   | Type A, sf, nf  |
| UN 3333 | 2 (4%)   | Type A, sf, f   |
| UN 2910 | 2 (4%)   | Excepted, lq    |

Denials 4 (8%)

Delays 47 (92%)

Air Report – Reasons for D&D

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<tr>
<td>Others</td>
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Actual # of reports 41

Air Report – Conclusions

Multilingual explanatory leaflets would help combat denials at a local level.

The Agency’s efforts to train the trainers must continue as one of its highest priority tasks.

Approach airlines with variations and ask them to allow shipment of RAM.

More data should be urgently sought.

Information received after analysis

- 31 reports received from REVISS, included in DB analysis
- 1 air transport delay reported in 2012.
- Information from air transport not reported to DB, showing more than 400 delays from one consignor.

Next steps
A new Notification System must be promoted to encourage the reporting of cases of denials and delays of shipment, in order to have more accurate information related to the numbers of D&D occurring in the world.

This new system should avoid requiring specific information which commits companies.
Annex 8

Communications Strategy for ISC-DOS

Serge Gorlin
Communications
One of 6 areas of the ISC Action Plan

Definition of Strategic Communications:

A systematic series of sustained and coherent activities, conducted across strategic, tactical and operational levels, that enables understanding of target audiences, identifies effective conduits, and develops and promotes ideas and opinions through those conduits to promote and sustain particular types of behaviour.

Communications – ISC-DOS milestones

Annual outreach at GC
Set of fact sheets published in 2007
Study commissioned by WNA in 2008
Regional workshops
Jan 2011 – CS03 (Comms Strategy)
Jan 2011 – CS10 (ISC Brochure)
Oct 2011 – Pub. of Brochure

Strategy Document

Objectives
Target Audiences
Messages
Vehicles (Conduits)
Evaluation

Objectives

To improve the sustainability of the safe and secure transport of RAM

- Make target audience regard RAM not as “dangerous waste” but as vital material that must be delivered in a timely manner
- Inspire greater trust and confidence in the authorities and industries that are responsible for RAM shipment

Target audiences
People involved in the RAM transport chain

- Transport professionals
  - Ship’s captain, pilots, stevedores, freight forwarders etc.
- People working for relevant public authorities
  - Port and custom authorities, government departments responsible for transport, health and the environment
- Dangerous goods training companies

Messages

Beneficial uses of RAM

Negative effects if it is not delivered

Many transport companies carry RAM as part of a viable business

Excellent safety record

Robust regulatory framework

Brochure

Captured main messages

Highlights the 50th anniversary of first publication of the IAEA’s safe transport regulations

Endorsement by a well-recognised carrier

Vehicles

Letter from IAEA DG / DDG to port / airport authorities and shipping lines / airlines copied to relevant ministries

New IAEA website on sustaining shipments

Brochure

Articles in journals

Stories

Set of PowerPoint slides

FAQs

DVD on transport safety

2011 campaign to coincide with 50th anniversary of Transport Safety regs

Letter
Talking points for letter completed
List of relevant NGOs for maritime / air mode together with contacts compiled
Permissions obtained from Dept. of Nuclear Safety and Security; Division of Public Information (MTPI)

Discussion
Evaluation of brochure
What actions should we prioritise?

Communications
Sticky messages

- Simple
- Unexpected
- Concrete
- Credible
- Emotions
- Stories
Annex 9

Report on the Presentation given by the Regional Coordinator, Asia-Pacific

Dinakaran Meenamkunnu
Report on the Presentation given by the Regional Coordinator, Asia-Pacific

Major initiatives in tackling the denials issue were taken by addressing the deficit which exists in the area of training in different parts of the region. In China, the maritime authority and civil aviation authority carried out regular programs on the code governing transportation of Dangerous Goods (DG), on a routine basis involving thousands of employees. The Bureau of Waterway Transport has also geared up activity in this front by developing suitable content for internal water transport. Experts from China Radiation Institute were involved in the training programs. Delegates from the World Nuclear Association visited the Shanghai port on October 24, 2011 and interacted with representatives from the Department of Transport, Environmental Protection, Port Management, Safety departments of Central, Local governments and ports. A module on Radioactive material (RAM) packaging and cobalt-60 transportation was also included in the training. In Philippines, a National Workshop on Compliance Assurance for the Safe Transport of RAM was conducted between 6-10 June 2011 in which two experts from IAEA attended. Representatives from government, modal agencies, customs, police, coast guard, licensed consignors, regulators and trainees benefited from the training. In India, a training program was carried out for Airport Cargo Handlers, freight Forwarders & Clearing Agents at Delhi during November 2011. In Australia, progress was made in formulating a comprehensive transport strategy of RAM. Steps to increase inter-State harmonization of rules and regulations are also being taken. A Best Practice Guide to enable the safe transport of Uranium was also taken.

Within India and China most RAM transportation was handled by government owned civil aviation companies and hence there were few cases of denials reported. In India, a case of a denial at the Mangalore airport was reported by a consignor of radiography equipment to the National Focal Point (NFP) who sent his staff to investigate the matter. It was found that the denial occurred due to lack of communication: the carrier had over-estimated the requirement for elaborate quarantine facilities and scanning of the consignment. When it was communicated to them that the cargo could be scanned in the same facility where passenger baggages are scanned and that a special place with adequate signage is only needed for storage, the consignment was accepted. In another case, excepted packages of decayed sources from electron capture detectors were denied by the same airline which had originally brought the equipment. The reason given was that the shipper did not have DG training. When it was routed through a DG trained forwarding agent, the consignment was accepted.

In Philippines, one Type A package got delayed as the consignor did not receive the type approval from Regulatory body. The Philippine Nuclear Regulatory Institute (PNRI) advised the consignor to pack as per regulations and on receiving the clearances the consignment was transported. The local airline, licensed consignor, PNRI and NFP coordinated to resolve this issue.
Annex 10

IMO Update on Action Plan activities

Alfredo Parroquin-Ohlson
IMO report

Good Morning to all,

First of all and since this is the first time I am attending this meeting, I want to introduce myself; my name is Alfredo PARROQUIN-OHLSON, Technical Officer in the Cargoes Section, within the Maritime Safety Division at IMO. Also I want to take this opportunity to inform you that effective from 1st January this year, Mr. Hiroyuki YAMADA has been appointed as the new Head of Cargoes Section, who due to other previous commitments could not be present during these sessions. Being fully aware of the relevance of the subject he is looking forward to cooperate and participate with all of you on these issues………

I will be pleased during the break to provide you all with our contact details for any future matters that may come up on this subject and any others related to transport of dangerous goods by see in package form or in bulk.

Going back in time, I want to briefly recall that:

IMO involvement on denial of shipments of class 7 radioactive materials stared in 2004/2005 when the IMO’s Facilitation Committee (31/32) expressed its concerns in this regard. As a result of this, the circular FAL.6/Circ.12 on Difficulties encountered in the shipment class 7 radioactive material and, in particular, Cobalt-60, was approved in order to provide advice on the shipment of such materials.

Later on in 2006 the IMO General Assembly, (24th) was made aware of the difficulties in the carriage of certain class 7 radioactive materials, consequently, the resolution A.984(24) on Facilitation of the carriage of IMDG Code class 7 materials including those in packaged form used in medical or public health applications, was adopted.

Then, in 2007, after consultation with some Member governments and the industry (Canada, UK, IAPH, ICHCA and ICS), this resolution led IMO to the establishment of an ad hoc mechanism that in close cooperation between IMO/IAEA, co-ordinates efforts to speedily resolve difficulties in the carriage of class 7 radioactive materials. Such mechanism has been developed by IMO, IAEA and the industry, and also provides a reporting form of denials or delays by inputting related information in the joint database which was created for use by IAEA, IMO and ICAO. I will extend my intervention regarding this database when the Committee discuss the subject this evening.

Regarding other “parallel” actions taken by IMO to simplify the shipment and transport of class 7 materials, I would like to mention:

1. The FAL Committee (34) in 2007 agreed on insert a new appropriate entry in the Transport Document and/or Dangerous Goods Manifest (FAL Form 7) in order to confirm that the radioactive shipment concerned is to be used in medical or public health applications, having as intention to facilitate the identification of that material as such by the public authorities concerned.

2. In addition, the need of training of personnel engaged in the management of these kinds of cargoes is a priority, therefore, IMO in co-operation with the IAEA, developed and launched in 2010 a class 7 e-learning computer-based training programme (www.class7elearning.com) which is freely available on internet for non-commercial use. So Administrations and entities concerned can take advantage of the package be either training themselves or training the staff concerned. Besides, from 1st January 2012, the IMDG Code, through its amendment 35-10 (to which class 7 is related to), requires that all personnel concerned in the management and/or handling of dangerous goods should be trained accordingly.

Before concluding,
Recalling that in 2007, the ad hoc mechanism (which involves the joint data-base) that co-ordinates efforts to speedily resolve difficulties in the carriage of class 7 radioactive materials was established within IMO on a trial basis.

Last year (2011) the FAL Committee (37) considered whether to finalize the trial status of the mechanism established in 2007 (FAL 34) and to maintain the mechanism on a permanent basis, the Committee decided that it would be prudent to conduct a full examination of and justification for the mechanism, including cost and staffing implications. The Committee instructed IMO Secretariat to continue the trial of the mechanism and to submit a written report on its experience to the next session of FAL Committee (38) in 2013 for a more detailed evaluation of results of the trial.

The Facilitation Committee has been informed of IMO participation on this steering group (ICAO, IAEA and IMO) and other related meetings. To date the IMO Secretariat reports to FAL Committee the number of cases in the database, but not the details of each report. In addition, when a delay or denial is reported, the IMO Secretariat contacted (as mediator only and upon request) the national Authority as well as IAEA. It has been requested on a few occasions only, which not represents time consuming that could be accountable.

Therefore, IMO is looking forward to a successful outcome of this session, and report back to the Organization of any progress made, the action plan for 2013 and of the agreed actions to follow.

Finally, IMO conveys its willingness to continue co-operating with the IAEA and other appropriate bodies in order to further facilitate the shipment of dangerous goods, in particular, those of class 7, that comply with all international regulations but are denied or delayed on grounds of safety.

Thank you.
DATA-BASE matter

IMO Members have been repeatedly informed that the information in the data-base, which contains details of the individual denials of class 7 have to be confidential (for commercial and security reasons), also that the access to the database is restricted to the three agencies (ICAO, IAEA and IMO) who are entitled up to date to input any report on the case.

To date the database counts with 263 entries (reports) in total:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>sea transport</td>
<td>182</td>
</tr>
<tr>
<td>air transport</td>
<td>51</td>
</tr>
<tr>
<td>land mode</td>
<td>3</td>
</tr>
</tbody>
</table>

The database is able to generate a synopsis of dangerous goods denials but in view to benefit on one side to those facing denial and delays when transporting class 7 cargos and on the other side to reassure those Administrations that based on local regulations reject transhipments or reception of those cargoes, the question is:

How could we take advantage of the information contained in the data base and how the information could be used or evaluated?

We don’t have the answer, but maybe the WG1 could discuss the issue.

***
Background and documents support.

General

Cobalt-60 (UN 2916), is used to sterilize about 40% of all disposable medical supplies used worldwide such as syringes, surgeons’ gloves, bandages, and a wide variety of other products.

Cobalt-60 is also relied upon to sterilize a vast array of consumer products and is used to make the food supply safer by eliminating food pathogens and to reduce the incidence of disease carrying insects.

IMDG Code

chapter 2.7 - Dangerous goods of class 7

Recommendations on the safe transport of dangerous cargoes and related activities in port areas (MSC/Circ.1216)

7 General recommendations for regulatory authorities, port authorities, shops, berth operators and cargo interests

7.1 Regulatory authorities and port authorities

Radioactive material, should only be permitted to enter the port area for direct shipment or delivery unless permitted by the regulatory authority and packaged in conformity with the International Energy Agency’s (IAEA) Regulations for the Safe Transport of Radioactive Materials, and the requirements of the IMDG Code or similar national legal requirements.

<table>
<thead>
<tr>
<th>Aug 2004</th>
<th>FAL 31</th>
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</thead>
<tbody>
<tr>
<td>FAL 31/12/1 (Canada) Advised the Committee, as the world's largest producer and distributor of cobalt-60, encounters increasing difficulties in the worldwide shipments of cobalt-60 (an IMDG Code class 7 radioactive material with UN 2916)</td>
<td></td>
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<tr>
<td>FAL 31/20 (Paragraphs 12.7 to 12.28) request DSC to consider the matter and confirm that shipments of consignments of Cobalt-60, when in compliance with the relevant provisions of SOLAS chapter VII and of the IMDG Code, should not be denied on grounds of safety.</td>
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<table>
<thead>
<tr>
<th>Sep 2004</th>
<th>DSC 9</th>
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<tbody>
<tr>
<td>DSC 9/15 (Secretariat) While on the issue of denial and delays of shipments of class 7 radioactive material, the Sub-Committee was of the view that the reasons for such denial and delays included the involvement of numerous competent authorities, the need for carrier radiation protection programmes when carrying such cargoes, the need to travel through areas which have been declared as nuclear free zones, prohibitions on docking for ships carrying class 7 cargoes, high insurance and thus commercial costs, and public apprehensions. In this context, the Sub Committee opined that training and awareness programmes among relevant authorities, carriers and public would help in alleviating some of the apprehensions and requested the Organization to take steps towards conducting relevant activities through its technical co-operation programmes. The Secretariat was instructed to inform the</td>
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</table>
TC Committee accordingly.

DSC Confirmed that all shipments of class 7 radioactive material when in compliance with the relevant provisions of SOLAS chapter VII and that of the IMDG Code should not be denied on grounds of safety.

July 2005

FAL 32

Under agenda item Ship Port Interface, the increase in denying shipments of the IMDG Code class 7 radioactive materials specifically “Cobalt-60/UN 2916” in or through worldwide ports (FAL 32/12, paragraphs 8 to 14 and FAL 32/12/3) was discussed.

The Committee approved FAL.6/Circ.12 (July 2005) on Difficulties encountered in the shipment of IMDG Code class 7 radioactive material and, in particular, Cobalt 60.

February 2006

Assembly 24

Resolution A.984(24) is adopted on 1 December 2005 Facilitation of the carriage of IMDG code class 7 radioactive materials including those in packaged form used in medical or public health applications.

April 2006

Secretariat

Consultations with Canada, UK, IAPH, ICHCA and ICS, ad hoc mechanism (contact point) within the IMO to co-ordinate efforts and resolve difficulties was proposed.

MSC 81 (Item 12 on DSC) was invited to support the initiative of the establishment (by Secretariat) of a contact point at the Secretariat whereby sectors of the industry experiencing difficulties in the shipments of class 7 radioactive materials would provide information as to the causes of such delays and denials and make proposals on the way forward. IMO would monitor the situation in accordance with the reports provided and take appropriate action which might include contacting the relevant national authorities with the view to facilitating the carriage of such materials. The role of IMO should be that of a facilitator.

July 2006

FAL 33

Established a Correspondence Group on a mechanism within IMO for the resolution of difficulties in the carriage of IMDG Code class 7 radioactive materials, under the co-ordination of Canada.

September 2006

IAEA Resolution GC(50) Res/10

Measures to strengthen international cooperation in nuclear, radiation and transport safety and waste management.

July 2007

FAL 34

FAL 34/19…..agreed to introduce a provision for additional information in FAL Form 7 (Dangerous Goods Manifest) in line with the existing provisions of the IMDG Code, amendment 33-06.

Report of the correspondence group on an ad hoc mechanism annex 5…

Possibility of developing a class 7 e learning package which would be developed along the lines of that for the existing IMDG Code

Agreed that it will be prudent to implement the proposed mechanism on a trial and experimental basis with a view to studying any implication before formally establishing such a mechanism. He expressed the view that the activity of the Secretariat in the proposed mechanism would be within the limit of consultation, exchange of information and facilitation and, therefore, within the scope of the IMO Convention.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Summary</th>
</tr>
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<tbody>
<tr>
<td>Apr 2007</td>
<td>(Secretariat) Memorandum: Creation of an IMO Focal Point on the resolution of difficulties in the carriage of IMDG Code dangerous goods including class 7 radioactive materials.</td>
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<tr>
<td>Sep 2008</td>
<td>DSC 13/20. The Sub Committee noted the information regarding the development of the IMDG Code e-learning course for class 7 radioactive materials</td>
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<tr>
<td>March 2009</td>
<td>FAL 35/17 The Secretariat had established a Dangerous Goods Denial Database and to date had 100 reports in the database, which was accessible to IAEA and ICAO. The Organization is developing a computer-based training package on class 7 e-learning. Work on its development had been initiated and it is expected that the training package would be ready in the third quarter of this year and be available free of cost to all non-commercial users. Information provided orally</td>
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<td>Oct 2010</td>
<td>FAL 36/17 The Committee agreed to request the Secretary-General to continue the trials of the mechanism within the IMO Secretariat for the resolution of difficulties in the carriage of IMDG Code class 7 radioactive materials and instructed the Secretariat to report the results of the experience gained to FAL 36 with a view to enabling the Committee to determine the actions to be taken. The Committee further noted the development of the computer-based training package on class 7 e-learning which had been developed and is functional on <a href="http://www.class7elearning.com">www.class7elearning.com</a> and was available free of cost to all non-commercial users.</td>
<td></td>
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<tr>
<td>Sep 2011</td>
<td>FAL 37/17</td>
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<tr>
<td>9 SHIP/PORT INTERFACE</td>
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<tr>
<td>9.1 The Committee noted that under this specific agenda item no written submissions had been received. The Committee invited comments and proposals on this item to the next session, especially in view of the review of the Convention.</td>
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<tr>
<td>Facilitation of shipments of dangerous cargoes</td>
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<td>9.2 The Committee recalled that FAL 34 had noted that operative paragraph 7 of resolution A.984(24) on Facilitation of the carriage of IMDG Code class 7 radioactive materials, including those in packaged form used in medical or public health applications, requested the Secretary-General to explore the possibility of establishing an ad hoc mechanism within the Organization to coordinate efforts to speedily resolve difficulties in the carriage of the IMDG Code class 7 radioactive materials, in close cooperation with the IAEA.</td>
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<tr>
<td>9.3 The Committee recalled further that FAL 36 agreed that, in view of the results of the trials, the issue of denial of shipments had not yet been resolved. As a result, the Committee agreed to request the Secretary-General to continue the trials of the mechanism within the IMO Secretariat for the resolution of difficulties in the carriage of IMDG Code</td>
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</table>
dangerous goods including class 7 radioactive materials and instructed the Secretariat to report the results of the experience gained to FAL 37, where the Committee can determine the actions to be taken.

9.4 The Committee noted oral information from the Secretariat on the latest developments in relation to the shipment of class 7 materials to the effect that since the establishment of the focal point, the Secretariat had taken an active role in assisting to resolve such difficulties. The Secretariat had attended almost all the meetings of the International Steering Committee (integrated by IMO, ICAO and IAEA) on the denial of shipments of radioactive material.

9.5 The Committee also noted that the IAEA had made considerable efforts in addressing the issues surrounding delays and denials of class 7 shipments and had conducted a number of training sessions and regional seminars with the objective of facilitating such shipments. The mechanism had been instrumental in identifying some ambiguities within the IMDG Code with respect to class 7 radioactive materials which had subsequently been addressed in the UN "Orange Book" and the IMDG Code. The Secretariat had set up a Dangerous Goods Denial Database and so far there were 236 reports in the database. The IMO database continued to be accessible to IAEA and ICAO and a synopsis of the database showed that out of the 236 reports, there were 182 relating to sea-mode, 51 to air-mode and 3 to land mode.

9.6 The Committee noted that due to the sensitive nature of the information in the database, and following a decision by the Member States attending the IAEA Steering Committee, details of the information were not made public. However, the Committee expressed appreciation to the IAEA for their ongoing efforts in addressing the issues surrounding delays and denials of class 7 shipments.

9.7 The Committee noted the information that almost 300 stakeholders have used the computer-based training package on class 7 e-learning which had been developed and is functional on www.class7elearning.com. The Committee noted that this programme is available free of cost to all non-commercial users.

9.8 In considering whether to finalize the trial of the mechanism established by FAL 34 and to maintain the mechanism on a permanent basis, the Committee decided that it would be prudent to conduct a full examination of and justification for the mechanism, including cost and staffing implications. The Committee instructed the Secretariat to continue the trial of the mechanism and to submit a written report on its experience to FAL 38 for a more detailed evaluation of results of the trial.
Annex 11

Maritime Industry perspective

Norman Riebesell
Good morning Ladies and Gentlemen.

On invitation of Mr. Ulric Schwela I’m here to bring you HAPAG-LLOYD a bit near and like to explain what is HAPAG-LLOYD’s experience with the shipments of Class 7 / Radioactive cargo.

First let me give you a little introduction of and about HAPAG-LLOYD.
In 2005, Hapag-Lloyd acquired the British-Canadian container line CP Ships, thereby becoming one of the leading liner shipping companies of the world.
Today HALO has approx. 6800 employees worldwide who take care to operate approx 160 vessels. Owned and Charter vessels.

HALO is today organized in 3 Regions:
1. EUROPE, MED-Area and Africa under control of Hamburg (head quarter)
2. USA/CAN, Middle and Southamerica located in Tampa + Piscataway
3. ASIA and Australia/NZ located in Singapore

The Dangerous Good Department was formed in 1969 already in co-operation with NDL after some serious accidents on two conventional vessels.

Today the HAM DG-Dept. has 28 employees, the Tampa DG-Dept. 14 and the ASIA Dept in Sin has 6 employees.
Hamburg made the guidelines and procedure in co-operation with the colleagues in USA/ASIA and in compliance with HALO Q.M.
The acceptance procedure for the approval of all such cargo is well organized and some specific cargo may only be approved by DG-Hamburg by special authorized and trained staff Radioactive cargo / Class 7 is one of this specifics.

And now we are at the point what is our experience with Class 7 cargo.

- WE HAVE VERY GOOD EXPERIENCE with shipping radioactive material!
- WE KNOW HOW TO HANDLE SUCH SHIPMTS
- WE HAVE OUR OWN RPP, max radiation 1 mSv per year
- WE HAVE WELL TRAINED STAFF
- WE TAKE RESPONSIBLE CARE
- WE TAKE CARE OF REGULAR READINGS ON BOARD OUR VESSELS

BUT WE FACE MORE AND MORE PROBLEMS WITH VARIOUS AUTHORITIES OR OTHER THIRD PARTY INVOLVED COMPANIES i.e. CONTAINER TERMINALS.

SOMETIMES THESE ARE POLITICAL BACKGROUNDS – SOMETIMES QUESTIONS OF INSURANCE OR LIABILITY.
We have also problems that we may not take bunker and fuel at ports if we have radioactive cargo on board the vessel - i.e. Fos
Hick ups are also to be faced in ports like:
Charleston, no handling of Class 7 only transit is allowed
Long Beach, no handling nor transit allowed
Caucedo / Dominican Republic, no handling nor transit allowed – DOCAU is a hub port for HALO various services are crossing here, Brasil-USA, EUROPE-Caribbean, EUR-S.America/West
Bremerhaven, is under progress to close the port for all Class 7 cargo used for the production of nuclear fuel for the Atomic Energy industry, i.e. UF6, U3O8
Vancouver, a specific terminal has stopped handling of class 7 - due to liability issues.
In Asia it’s more or less not allowed to trans ship Class 7 in any port, except Singapore
Transit is often difficult, depending sometimes on further rotation of the vessel, i.e. will Taiwan not allow to transit their ports if the cargo is for destination China. Any transit through Hong Kong or the HKG waters are such complicate and special licenses has to be obtained prior they will allow just the transit of U3O8/UF6 – process takes up to 3 month.

Italy and as well South Africa are worth in view of shipping radioactive cargo. The shipping line requires a special license from the government - cost a lot of money to obtain it (in Italy € 10000) but this is just the government license. If you will really ship radioactive cargo the local authorities are coming into the boat and the requirements laid down by them are really unacceptable, i.e. Genoa:

Ship has to be fastened at Terminal with Nose to the sea, Tug-Boats must ordered on standby. All other activities in port has to be stopped, all personal which are not direct handling the class 7 must leave the port, no other operation are allowed in port when class 7 ctr’s shall be loaded. The class 7 Ctr’s must come to the port at exact determined time, just one crane driver is allowed to handle these Ctr’s. The shipping line may only load the class 7 Ctr’s – no further operation allowed.

Not to talk about all the officials which will attend the loading: Police, Security, Port Chemist, fire brigade and and… All of them send you later the bill for the bug of their workload.

It’s similar in South Africa; government licenses are required for the shipping line and each vessel having this o hand procedures at the ports is starting up with various special requirements.

HAPAG-LLOYD AG is a private commercial company and at the end of the day we have to earn money for our work and service. Honestly sometimes hind us radioactive cargo to do our job and handle in view of the aim of our job. This is the time when also HALO has to say – sorry not possible to carry radioactive cargo. Or we might be restricted by official requests of governments i.e. not to route Class 7 cargo through the on-going areas or piracy.

To finalize HAPAG-LLOYD has in general no problem to carry radioactive cargo on routings and to destinations where a smooth and safe transport is granted.

Thank you for your attention

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Annex 12

A Network Model:
The European Association of Competent Authorities

Steve Whittingham
Transport model to deliver societal needs of RAM

Societal needs (A)
Radioactive material (RAM) is used in many applications in our modern societies

Often radioactive material is regarded as nuclear material and associated with the civil nuclear power programmes in many Member States

International transport of RAM is vital for the medical diagnosis and treatment of cancers and other humanitarian needs

For some people the safe and secure delivery of radioactive material for diagnostic and treatment procedures can mean the difference between life or death

Cancer statistics of developing countries
4 million of the 6 million deaths due to cancer in the year 2000 occurred in developing countries lacking radiotherapy machines, in fact some parts of Africa and Asia do not carry out any diagnosis

80% of cervical cancers occur in Africa, Asia and South America with some 225,000 deaths recorded each year according to 2003 reports

1 million new cancers are diagnosed each year in India

~15 African nations and several countries do not have one radiotherapy machine

50 – 60 % of cancer victims would benefit from radiotherapy

Globally, deaths from cancer is expected to rise from 6 million in 2000, to 9 million in 2015, to 12 million in 2030

The number of shipments will need to increase to meet the demands of health programmes involving many more Member States – we will need to deliver the material and remove it at the end of its operational life

An overview of transport of radioactive material (1)
Several millions of shipments of radioactive material occur each year

The safety record of transporting radioactive material is one of which all those involved should be proud

Commercial shipping routes involve loading / unloading of goods in many Member States and the refusal of Class 7 goods by only one port of call en-route results in a denial of shipment

Transport by air is necessary for time limited Radiopharmaceuticals both for international transports between Member States and also for deliveries over long distances or to remote regions within a Member State

Only a small number of international air carriers will accept Class 7 goods

International shipments by sea and air are therefore problematic and the availability of routes/carriers is often fragile

Previous work identified 48 stakeholder groups for the transport of radioactive material
Regulations – transport safety and security  

In 1961 the IAEA created its first set of Transport Regulations for RAM. The 2013 edition of the TS-R-1 Regulations, will signify 50 years of the IAEA successfully managing their continued development.

We should recognise the importance of the IAEA approach to manage its work - it has created a robust transport safety and security culture in many governments, institutions and industries throughout the world.

TS-R-1 transport regulations form the basis of transport regulations for RAM in all IAEA Member States (through the UN Model Regulations).

Some Member States adopt TS-R-1 directly.

Regulatory infrastructures of Member States  

Regulatory infrastructures in Member States can involve government, academia and institutions.

For the purposes of this presentation, Member States have been categorised as follows:

- Member States with civil nuclear power programmes
- Member States with developed medical and industrial sectors that use radioactive material in which,
- Appropriate regulatory resources and infrastructures exist to various levels and complexities
- Many contribute to the IAEA and other international forums
- Nuclear and non-nuclear regulatory infrastructures may be separated
- Member States with limited regulatory resources or infrastructure
- Member States with no regulatory resources or infrastructure
- Where there is little or no regulatory infrastructure a strategy of introducing a targeted and appropriate infrastructure should be adopted
- The adoption regulatory infrastructure models used in other Member States should be:
  - adapted to reflect specific needs,
  - be achievable, and,
  - progressive as necessary over time
- They should as a minimum ensure inventories of RAM are established and maintained and responsibilities for safety and security in the Regulator and industry / users are established, understood and subjected to regulator oversight.

Industry compliance with regulatory requirements  

Compliance with transport regulations is the most important factor that affects levels of safety.

- Industry discipline (behaviours, performance) needs to be encouraged
• At a **Member State** level this requires an appropriate development of a safety culture which is achieved by
  
  o Investing in appropriate levels of training equipment and resources
  
  o Adopting relevant and good practices used elsewhere which are adapted to suit

**National regulator oversight / intervention** (5)

Regulator strategies for oversight and intervention contribute to the creation of safety and security cultures at a national level

• Where there is little or no regulator resources or infrastructure this can be problematic

• The adoption of regulator oversight and intervention models used in other Member States should be adapted to reflect specific needs, be achievable, be adequately resourced and progressive over time

**Future trends and challenges** (6)

**Future trends**

• The number of shipments will increase

• The number of Member States involved will increase

• Health care programmes in developing countries will require the development of regulatory infrastructures and oversight for transport safety and security

• The removal of orphan sources also needs to be pursued in an effective and efficient way

• Several Member States have ambitions to develop civil nuclear power programmes and the development of small size reactors (transportable) is intended to provide a cost effective solutions

**Future challenges**

1. Financial constraints in many Member States will remain or intensify

2. The regulatory infrastructure and resources will be limited in some Member States

3. Security will remain an issue in some regions

4. We need to speed up the development of effective regulatory infrastructures and regulatory oversight in some Member States

   a. For example to reflect the timescales of healthcare programmes and the recovery of orphan sources

5. Remember, not all Member States are able to attend IAEA meetings and benefit from interaction with other national regulators and industry – to a great extent they are isolated

**International coordination** (7)

*Transport delivers societal benefits of RAM*

There are 4 main groups involved in the effective delivery of the societal benefits of RAM
• IAEA – with the help of Member States, to provide transport safety and security Regulations and Requirements

• Member States – provision of effective regulatory infrastructures including national transport safety and security regulators for regulatory oversight and intervention

• Industry – compliance with regulatory requirements for safety and security

• Transport workers and Public – acceptance of transport (1)

(1) Previous work by the UK for the IAEA Denial of Shipment international steering committee identified 48 stakeholder groups for the transport of radioactive material

**Transport is a coordinated process**

• Transport is a coordinated process sometimes involving many Member States particularly for international transport by sea

• For some land locked states, delivery of RAM has to be by air, or to a neighbouring state by sea, and then transported by road
  
  o In some parts of the world this can be problematic

• National regulators review and manage the transport regulations at an international level in a coordinated way under the stewardship of the IAEA

• For the future, it is proposed that national regulators should adopt an international coordinated approach to provide an appropriate level of regulatory oversight in some Member States

Coordination / cooperation between national regulators on a regional or common interest (transport route) basis will be a key enabler

• The example in Europe is the European Association of Competent Authorities
  
  o 23 European States
  
  o Provides a forum to discuss operational issues of regulatory oversight and intervention and the development of common guidance
  
  o Facilitates the sharing of knowledge and relevant and good practice
  
  o Provides a basis for harmonisation and common understanding
  
  o Creates more effective communication and networking between regulators
  
  o It provides an understanding of what each MS does thereby creating a basis to build regulator synergies at an international level

An example of international coordination / cooperation between Regulatory bodies

• A denial of shipment was reported by industry to the UK NFP (DfT - UK Transport Regulator, now ONR) stating Port Everglades in Florida (USA) refuse to accept Class 7 goods

• DfT contacted company reporting denial and obtained further detailed information
  
  o It was the local Fire Authorities who refused to provide emergency response cover to the port for Class 7 goods stating it would require specialist equipment and more financial support
• DfT contacted UK Coastguard Agency (MCA) for contact details of the US Coastguard contact in Port Everglades region

• DfT contacted US Coastguard office and explained situation

• US Coastguard arranged a meeting (the following week) with Port Everglades Fire Authorities to discuss and ‘clarify’ situation

• Following their meeting US Coastguard contacted DfT to confirm Port Everglades will now accept Class 7 goods subject to established protocols

**Worker and public confidence (8)**

Previous work for the IAEA DoS initiative identified 48 stakeholder groups for the transport of radioactive material

Consequently there are many groups of workers involved in the transport operations who can have a direct influence

Some workers and public have genuine concerns and a variety of engagement strategies need to be considered to establish the most appropriate and effective approach

Confidence will be a mix of appreciation and understanding which then encourages acceptance, which at best for many, will result in indifference

**Delivery of societal benefits (B)**

*We have the transport safety and security regulations and requirements.* The IAEA has developed a mature set of transport safety and security requirements which capture relevant and good practice and latest developments throughout their ongoing review process

*We have mature transport safety and security cultures in some Member States.* The development and ongoing management of the IAEA regulations and recommendations has also created robust transport safety and security cultures in many Member States

*Future societal needs will mean more Member States will be involved.* Timescales that reflect the societal needs for radioactive material in developing Member States to meet their healthcare and other humanitarian societal needs must be recognised

*We will need to improve transport safety and security infrastructures in some Member States.* We have mature transport safety and security infrastructures in some Member States and these need to be used in a coordinated way to underpin the development of healthcare programmes in various regions around the world

*Transport is a vital enabler - and we need to develop safe and secure transport regulatory infrastructures in each Member State to meet their developing healthcare programmes which involve radioactive material*

A strategy of coordination and cooperation between national safety and security regulators, on a regional or common interest (transport route) basis, will enable the delivery of appropriate regulatory infrastructures on timescales to meet the needs of vital healthcare programmes that involve radioactive material.
Annex 13

Technical Cooperation Update; Thematic Safety Area 7 – Transport Safety

Jim Stewart
Overview
- Safety Standards based
- Self Assessment modules
- Wide range of “tools”
- Initiated 2012 by TC

Areas of interest
- Regulatory Review and Maintenance of Effective Legal Framework
- Design of Packages and Assessment of Design
- Testing Package Designs and Witnessing Of Testing
- Approvals for Designs and Shipments
- Manufacture of Packagings and Witnessing of Manufacture
- Monitoring of Transport Operations
- Emergency Planning and Exercises
- Maintenance and Servicing Arrangements and Examination of Arrangements
- Audits of Quality Assurance Programmes
- Training and Distribution of Information
- Enforcement Actions and Investigations of Incidents
- Liaison/Co-Operation

Tools - examples
- Assessment
- Exchange of Experience, Mentoring etc
- Investigations of incidents
- Networks of excellence development and operation
- Coordinated Training and Education Support
- Development of Regulations
- Broad Based Awareness and Communication
- International Coordination

Status
- Latin America RLA
  - Included in existing regional project
• Africa RAF/9/046
  o New project – fully funded
• Asia RAS/9/067
  o New project – partly funded
• Europe RER/9/114
  o New project – not funded
Annex 14

Air Industry perspective

Trevor Howard
Introduction
- Manager of Cargo Safety and Dangerous Goods Standards
- Current board member on the IATA Dangerous Goods Board
- Advisor to the Transport Canada and the Canadian delegation at the ICAO Dangerous Goods Panel

What is the AC Philosophy?
- Safety First and Last. 100% all the Time.
- Firmly committed to ensuring the highest level of cargo security.
- The air cargo supply chain is critical to this industry and to the country’s economic well being.
- We operate in an extremely competitive international trade environment.
- Movement of cargo by air is critical to this country’s economy.
- Air Cargo shipments are comprised of time sensitive, high value goods, including life saving medical supplies and perishable commodities.

“The reliable and efficient transport of these critical medical products is Air Canada’s contribution to improving world health.”

Lise-Marie Turpin, Managing Director Air Canada Cargo

The Decision Makers
- Managing Director, Cargo
- Director, Cargo Operational Strategy
- Manager, Cargo Safety & Dangerous Goods

Why This Position?
- The unique position of the Canadian nuclear industry
- A business opportunity in our own backyard
- We became a business partner in the transaction between the supplier and the end customers.
- Underscored by the importance of the commodity
- Only one option for most medical isotopes – Fly It!

Who do we Integrate with to Minimize?
- We sought advice from our regulators, the shippers and the end customers.
- Then we rolled this out company / system wide
  - Cross branch awareness campaigns and training
  - Flight Operations – Pilots
- Corporate Safety & Flight Safety
- Flight Dispatch / Weight & Balance Load Control
- Ground handling personnel
- Cargo warehouse personnel

**What do we Transport?**
Co-60, Mo-99, Tc-99m, I-125, I-131, Y-90, Ir-192, etc..

**And How do we Get it There on Time?**
- It all begins with employee awareness
- Priority of loading on the aircraft
  - Priority #3. After minimum fuel and Spare Aircraft parts
  - Boarded before any passenger and baggage!
  - The flight will not leave without it!

**Are We Perfect?**
- Where we have seen denials:
  - Live animals, either as Cargo or baggage
  - Incorrect NOTOC entries / aircraft configurations
  - Too much TI booked on a certain flight
  - Loading errors/omission, not following load instructions
- And we learn from every denial, and are committed to improving our performance!

**How Do we Make it Happen?**
- Pretty simple…… We talk to everybody!
- We deal with freight forwarders who specialize in the transport logistics of Class 7.
- Deal directly with the manufacturer/shipper and the customers receiving the product.
- Select ground handlers in certain stations that receive additional structured training.
- Internal cross-branch communication.

**How can Other Carriers get Involved?**
1. Internal cross-branch communication.
2. Review of current Standard Operating Procedures
3. Work closely with shippers, freight forwarders, consignors and the Civil Aviation Authorities.
4. Be patient… It takes a lot effort. There are regulations in place for all carriers.

5. It took AC 9 months before we were the first carrier awarded our certification to transport Type B(U) shipments to/from Japan on a passenger aircraft.

Thank You!

Trevor Howard
Manager, Cargo Safety & Dangerous Goods Standards
Air Canada Cargo
Trevor.Howard@aircanada.ca
+1-514-422-2230
Annex 15-A

IATA Update on Action Plan activities

David Brennan
As Mr Brennan was unable to attend the meeting, he provided the following text by e-mail:

- A specific session on denial of shipments of radioactive materials was included on the program for the dangerous goods track at the IATA World Cargo Symposium that was held in Istanbul in March 2011. The session presented by Mr N. Ramamoorthy, Director of Physical and Chemical Sciences of the IAEA reinforced the need to work within the existing regulations to ensure the safe and smooth transport of Class 7 materials;

- IATA continues to work with airlines and regulatory authorities to address areas of uncertainty or confusion in the application of the transport regulations. However, there continues to be action by some regulatory authorities to impose additional requirements and restrictions on the transport of radioactive materials. In 2011, Romania instituted new regulations which impose restrictions to the extent that some operators are unable to ship radioactive materials by air to Romania. IATA through its Member and Government Relations Division has approached the Romanian authorities to reconsider these restrictions. However, as the restrictions are imposed by other than the civil aviation authority there has not been any relief or reconsideration to date.
Annex 15-B

ICAO Update on Action Plan activities

Katherine Rooney
Overview

• Fukushima and ICAO involvement
• ICAO Regions
  o Dangerous Goods Panel members
• Overflight

Fukushima and ICAO involvement

• Denial of shipment
  o Aircraft crew / airport staff
  o Non-dangerous goods (general cargo)
    ▪ Contamination
• Multimodal involvement
  o Ad hoc transport committee
  o Coordinated approach and response

ICAO regions and Dangerous Goods Panel (DGP)
Regional training courses

• East and South Africa
  o Mauritius, November 2011
• North and Central America
  o Mexico City, May 2012

Potential overflight problem

• Special arrangement
  o Multilateral approval
  o Specifically excludes State of Overflight
• Exemption - An authorization issued by an appropriate national authority providing relief from the provisions of these Instructions
  o Extreme urgency
  o When other forms of transport are inappropriate
  o Contrary to public interest
• Equivalent to the level of safety provided by these Instructions

States concerned
• Origin
• Transit
• Destination
• Operator
• Overflight

Contact details
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+1 514 954 8099
krooney@icao.int
Annex 16-A

Working Group 1
Future of DOS after 2013

Terms of Reference
Background

The target for the ISCDOS is to reduce denial to a level that is not of importance to the GC, by the time of GC 2013 (in effect by June 2013 due to the time needed to prepare reports).
To date the ISCDOS has overseen the setting up of a network that can, and does, respond to specific instances of denial. This is a bottom up solution to denial.
In addition the committee has overseen the production of information brochures and training packages which are designed to reduce denial. This is the top down solution to denial.
A key deliverable that requires input is the IAEA SharePoint site for MS. The potential use of this for the ISCDOS and/or TRANSSC should be considered.
As a result of the Fukushima NPP accident the need for closer links between UN bodies with an interest in transport has been suggested. Such a group could take a leading role in overseeing denial issues related to all classes of dangerous goods.

Work to be done

Based on the above the group will review the future options for the ISCDOS, taking into account:
1. The potential to create a single transport network for radioactive material (merging some activities with TRANSSC).
2. Whether the management of the top down and bottom up work can be separated.
3. Which work is best handled at a UN level and which at an IAEA level
4. An idea of how the IAEA SharePoint site should be structured, how it should be linked to the IAEA web pages, and which information should be available on which pages (including templates for national and regional SharePoint pages).

Outputs

- A report detailing proposals for the way forward
Annex 16-B

Working Group 1
Future of DOS after 2013

Report

Saúl Pérez Pijuán
- Attending

Saúl Pérez Pijuán, Chairman, CENTIS.
Ulric Schwela, Secretary, T.I.C.
Alfredo Parroquin-Ohlson, IMO.
Bill Brach, TRANSSC Chair.
Henri-Jacques Neau, WNTI.
Jack Edlow, Edlow International.
Katherine Rooney, ICAO.
Paul Gray, ISSPA.

Ahmad Al Khatibeh, Section Head, IAEA.
Jim Stewart, Head Transport Unit, IAEA.
Mario Mallupoma, Chair of the ISC, Regional Coordinator for the Americas.

1. Background

The target for the ISC is to reduce denial to a level that is not of importance to the General Conference, by the time of the 2013 GC, in effect by June 2013 due to the time needed to prepare reports. This is an ambitious target which requires a greater effort than ever before.

To date the ISC has overseen the setting up of a network that can, and does, respond to specific instances of denial. This is a bottom up solution to denial. In addition the ISC has overseen the production of information brochures and training packages which are designed to reduce denial. This is a top down solution to denial.

A key deliverable that requires input is the IAEA SharePoint site for MS. The potential use of this for the ISCDOS and/or TRANSSC should be considered.

As a result of the Fukushima NPP accident the need for closer links between UN bodies with an interest in transport has been suggested. Such a group could take a leading role in overseeing issues related to transport of all classes of dangerous goods, including Denial of Shipment of Radioactive Materials.

2. Work to be done

Based on the above the group will review the future options for the ISCDOS, taking into account:

1. The potential to create a single transport network for radioactive material (merging some activities with TRANSSC).
2. Whether the management of the top down and bottom up work can be separated.
3. Which work is best handled at a UN level and which at an IAEA level
4. An idea of how the IAEA SharePoint site should be structured, how it should be linked to the IAEA web pages, and which information should be available on which pages (including templates for national and regional SharePoint pages).

This WG was tasked to provide a report detailing proposals for the way forward.

3. Discussion

Discussion revolved around how the ISC would transition from its current structure. Considerations included separation of responsibilities according to task, by handing over particular responsibilities to various other committees.

Ms Rooney described the inter-agency UN group that has not met for some time; one part is the discussion of how to handle denial of shipment. It is proposed that an Inter-Agency Committee for
Transport may be formed. Its primary participants would include ICAO, UNECE, IMO, IAEA (and the former ISC) and WHO, with supporting participation from relevant NGOs and industry associations. This IACT should take up the Action Plan developed by the ISC. The WHO would join for the first time, as a result of being involved after Fukushima where the benefit of a multi-modal transport group was shown; it revealed the inter-dependency of emergency services needing to travel in by air while airlines required advice on how to handle perceived radioactive contamination of aircraft as well as a number of other issues. WHO was also concerned about the timely delivery of medical radioisotopes. The regulations published by the UNECE are used for road transport in Europe (ADR); they are also adopted by other countries e.g. in North Africa.

The IMO has a tradition of preparing joint documents in collaboration with other UN Agencies, this could be a model for creating a single list of contact points and be uploaded to SharePoint.

SharePoint is being used for conferences, for example by creating a page for a country to which the country’s delegate is given access, or a regional page with links to the relevant national pages. On each page you could have calendars, contact details, documents et c. The WG considered what it would like to see on these regional/national pages. It would not be the IAEA’s responsibility to check the accuracy of information on these pages, but those for whom each page was created.

4. Recommendations

4.1. Timetable and actions

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Transport Safety &amp; Security Conference conclusions follow-up</td>
</tr>
<tr>
<td>2012</td>
<td>IAEA Board of Governors</td>
</tr>
<tr>
<td>2012</td>
<td>56th General Conference</td>
</tr>
<tr>
<td>2013</td>
<td>8th ISC – final meeting</td>
</tr>
<tr>
<td>2013</td>
<td>57th General Conference</td>
</tr>
</tbody>
</table>

- General
  - ISC Action Plan review, Communication Strategy and ISC7 meeting report (15-Mar-2012) [ISC]
  - Focused actions with carriers / ports et c. [ISC]
  - Presentation of ISC future process to Transport Safety & Security Conference follow-up meeting [ISC]
  - Presentation of ISC future recommended process to 2012-June BoG meeting [IAEA]
  - As per above, attend 2012 GC with booth & presentation [ISC]
  - Integrate NFP + RC + RN into new structure / process, supported by TC [IAEA]
    - Monitor activities / actions / plans / concerns / issues arising
    - Maintain linkages and work plan process
  - ISC Management Team participation in IACT (w.r.t. D/D) [ISC]
  - Denials database continues to be maintained [IMO]

- Transition
  - UN review / endorsement of IACT [IACT]
  - Backup plan if UN review / endorsement is delayed [ISC continuation with strong industry support until above point is completed]
  - Global contact list to be compiled and distributed by the IAEA to all United Nations Member States (i.e. more than the IAEA Member States), possibly using the SharePoint technology. The list would contain key contacts in each UN Member State, where applicable:
    - ICAO contact [ICAO]
    - National Focal Point [IAEA]
    - IMO contacts (1. FAL, 2. MSC et c.) [IMO]
    - Competent Authority [IAEA]
    - UN Subcommittee of Experts [UNCECE]
    - TRANSSC [IAEA]
4.2. New Structure

The work on Delay and Denial of Shipment would be integrated into the proposed Inter-Agency Committee on Transport (IACT) with the following Core members, for example:

- IAEA
- ICAO
- IMO
- UNECE
- WHO

In addition there would be a number of Supporting industry associations, for example:

1. ACI (airport council international)
2. GEA (global express association)
3. IAPH (international association of ports and harbours)
4. IATA (international air transport association)
5. ICHCA (international cargo handlers and carriers association)
6. ICS (international chamber of shipping)
7. IFALPA (international federation of airline pilot associations)
8. ISC (former international steering committee)

4.3. SharePoint Wish List

5. General requirements
   5.1. SharePoint structure
      5.1.1. Country page
      5.1.2. Regional page
      5.1.3. Port specific page or other
   5.2. Define process for capability to answer questions / comments by shippers, carriers et c.
   5.3. Accessibility by Core committee & Supporting organisations
   5.4. Defined information update process (universal for all pages)

6. Information for each country page
   6.1. Modal specific regulations for RAM transport
   6.2. Difference between country specific regulations and international regulations, for all modes
   6.3. Regulatory structure and process by country (tie into contact names)
   6.4. Dates when national regulations are reviewed / input mechanisms
   6.5. Issues faced by those transporting in/through/from that country w.r.t. Class 7 for all modes, e.g. State variations that are listed in the ICAO Technical Instructions; and those applicable to other modes that are not currently listed
   6.6. Where details can be found (ideally uploaded to SharePoint), e.g. guidance documents
   6.7. Broaden Core & Supporting contact list to include names of port authorities et c.
   6.8. Defined regulatory structure within Member States to show regulatory bodies as well as Member State links to significant players, e.g. port authorities.

7. Issues regarding use of SharePoint
   7.1. Language adopted
   7.2. Maintaining information up to date, mechanism for page ‘owners’
   7.3. Updating capability and features
   7.4. Universal access e.g. for low bandwidth or intermittent connections
   7.5. Resources for IAEA / Member State to set up potentially large number of pages for regions / countries / ports / other
   7.6. Long term commitment to maintain this system
   7.7. Clear definition of responsibilities to be defined and agreed to
7.8. Security considerations regarding the amount of consolidated information on SharePoint; needs to be evaluated
Annex 17-A

Working Group 2
African American Asian European Regional and ISC
Action Plan review – key activities for 2012

Terms of Reference
Background

Action plans have been developed for each region and internationally. With the introduction of TC supported projects in transport it is important to ensure the maximum synergy between the regions.

Work to be done

- Review the regional and international action plans
- Review the regional projects for transport
- Suggest options for synergy
- Identify priority issues for 2012
- Revise the action plans accordingly

Outputs

- A report detailing
  
  o proposals for synergies; and
  
  o revised action plans
Annex 17-B

Working Group 2
African American Asian European Regional and ISC
Action Plan review – key activities for 2012

Report

Dinakaran Meenamkunnu
Action Plan Review – Key Activities for 2012

This is an action plan based on the accumulated experience of the Regional Action Plans of last 4 years.

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Focus Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Prioritize the most crucial stakeholders from the 48 stakeholder groups involved in the movement of RAM</td>
<td>Recipients of training</td>
</tr>
<tr>
<td>2.</td>
<td>Deploy the training material available with IAEA and modal agencies to carry out training among the selected stakeholders</td>
<td>Courseware development at IAEA and Regions</td>
</tr>
<tr>
<td>3.</td>
<td>ISC should encourage member countries, who have not yet addressed the problem of denials, to replicate the Brazilian experience to carry out distance education and on-site training, using the new paradigm of Regional projects.</td>
<td>Project Management</td>
</tr>
<tr>
<td>4.</td>
<td>Member states should periodically report back to IAEA on the action taken.</td>
<td>Reporting Mechanism</td>
</tr>
<tr>
<td>5.</td>
<td>Create a strategy for Public-Private Participation in member states to organize regular training programs.</td>
<td>Initiatives from the Nuclear Industry</td>
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<tr>
<td>6.</td>
<td><strong>Awareness &amp; Publicity</strong></td>
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<tr>
<td></td>
<td>Declare the birthday of Marie Curie, November 7 as the World Radioisotope Day and use the occasion to create publicity and awareness programs on the transportation of RAM. IAEA should plan, along with modal organizations, full day-long programs in all member states.</td>
<td>Branding Class 7 cargo as life-affirming to counter existing biases among users, stakeholders and decision-makers.</td>
</tr>
<tr>
<td>7.</td>
<td>Create a new mechanism for enabling free-flow of information between regulators, carrier associations, inter-governmental organizations and consignors of RAM.</td>
<td>Preparing for the post-ISC era.</td>
</tr>
<tr>
<td>8.</td>
<td>Update the details of competent authorities which ensure cross border transport of RAM and accord wide publicity to this among stakeholders</td>
<td>Database Management and dissemination of information</td>
</tr>
<tr>
<td>9.</td>
<td>Develop a web-based access to transport regulations related to Class 7 cargo movement of all member states for facilitating flow of RAM between multiple countries.</td>
<td>Tackling transport issues between borders</td>
</tr>
<tr>
<td></td>
<td><strong>Review of the Regional Projects</strong></td>
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<tr>
<td></td>
<td>“Strengthening effective compliance assurance for the transport of radioactive material”</td>
<td></td>
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<tr>
<td>10.</td>
<td>Points 1 to 9 are in alignment with the TC project mentioned above</td>
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<tr>
<td><strong>Governance and Facilitation</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Options for Synergy</strong></td>
<td>Permanent (non-voluntary) mechanism to facilitate transport</td>
<td></td>
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<tr>
<td>12.</td>
<td>Work towards the harmonization of regulations leading to uniformity in rules regulating transportation of RAM globally.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TC projects &amp; Network priorities</td>
<td></td>
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</tbody>
</table>
Annex 18-A

Working Group 3
SAT question set for denial

Terms of Reference
Background

The IAEA is developing a Self Assessment Tool (SAT) to assist member states carry out self assessments. Twelve modules have been developed to cover transport. It has been suggested that a further module is developed to cover transport in the area of denial of shipment. While this does not specifically fit into the methodology it is possible that a set of questions could be developed to identify the radioactive material transport infrastructure in the country, which would provide an overview that would be of use in understanding denial and the status of transport safety. An SAT module is based on around 12 binary questions with subsequent questions. Answers need to be supported. As an example it may be good to establish whether ports in a state handle radioactive material, whether there are restrictions in place at any port and whether there is significant traffic at the port.

Work to be done

1. Develop a module based on the SAT concept that can be used to identify and combat denial.

Outputs

- A draft question set that can be used as an overarching module with the transport self assessment.
Annex 18-B

Working Group 3
SAT question set for denial

Report

Tammy de Wright
SAT tool questions

**Module 13 – Delay and Denial of Shipment**

- Are radioactive materials (RAM) transported within the State?
  - (Y) Provide details of the volume and type of RAM transport conducted in the State.

- Are delays or denial of transport of radioactive material considered to be an issue in the State?
  - (Y & N) Describe what the State would consider to be an instance of delay and denial for the transport of RAM.

- Is the State aware that the issue of denial of shipment is an international problem?
  - (Y & N) Is the State aware that there is an IAEA International Steering Committee on Denial of shipment of Radioactive Material?
  - (Y) Does the State have a National Focal Point appointed to the IAEA?
    - (Y) Please provide details.
    - (N) Please nominate somebody from Government or Industry who deals with this topic who could fill this role.

- Is the State aware of the resources available from the IAEA on denial of shipment?
  - (Y) Is the State aware that there is an IAEA/IMO database for reporting delays and denials?
    - (Y) Does the State know how to report an instance of denial?
  - (Y) Is the State aware of any instances being reported to the database that involve in the State?
    - Please provide details.

- Does the State have a Government Agency responsible for dealing with instances of delay and denial in your country?
  - (Y) Please provide details of primary Agency.
  - (Y) Does the State have a system for dealing with individual instances of delay and denial to facilitate shipment?
    - (Y) Please explain what steps would be taken to urgently facilitate shipment once a delay or denial has been notified.
  - (N) Please provide details of a Government Agency that could fulfil this role.
  - (N) Please consider and provide details of what could be done in the case of a delay and denial to facilitate shipment.
- Does the State have a National Network (or other inter-agency network mechanism – formal or informal) which focuses on issues around the transport of radioactive material?
  - (Y & N) Which are the main Government and industry/non-government stakeholders involved in the transport of RAM and who might be involved in a case of delay or denial?
  - (Y) What is the primary goal of this network?
  - (Y) Which Government Agencies are involved in this network?
  - (Y) Which companies/non-government actors are involved in this network?

- Is the State aware of any instances of delay and denial in the past 2 years?
  - (Y & N) Does the State keep a record of instances of delay and denial in the State?
  - (Y) How many instances of delay and denial within the State is the State aware of?
  - (Y) Were these instances of domestic or international denial of transportation of RAM?
  - (Y) Which mode (land/sea/air) of transport is most problematic?
    - (Y) Please provide details of denials including mode of transport/type of material/destination etc?
    - (Y) What were the main reasons for domestic denial?
    - (Y) What were the main reasons for international denial?

- Is the transport of radioactive material by sea carried out in the State?
  - (Y & N) How many ports are in the State? Please provide a list of all ports.
  - (Y) Which of these ports are currently being used to carry RAM? Which shipping companies are carrying RAM?
  - (Y & N) Which ports allow the transit of radioactive materials?
  - (Y & N) Which ports allow the trans-shipment of radioactive material?
  - (Y & N) If there is a port that has restrictions on Class 7 please explain restriction and why.

- Is the transport of any radioactive material carried out in your State?
  - (Y & N) Please provide a list of airlines that allow the shipment by air of RAM.
  - (Y & N) Please provide a list of the main airports.
  - (Y & N) Are you aware of any airlines that do not allow the transport of RAM, or which often give rise to delays or denial of shipment of RAM? Please provide details.

- Does the State's Competent Authority (or other Agency named in question 4) undertake any activities to communicate with industry and stakeholders about the issue of denial of shipment?
  - (Y) Please provide details of activities.
  - (N) Please describe what could be done to communicate about the issue with stakeholders and describe the assistance available nationally and from the IAEA.
- Does the State consider that regulators in your country who may deal with transporting RAM have sufficient knowledge and uniform implementation of regulatory requirements?
  - (Y) Please provide details of what measures have been taken to ensure this.
  - (N) Please suggest improvement your country could take to achieve this.
  - (Y & N) Do you have any combined training courses for the various regulators in transport areas?

- Does the State consider all workers in your country who may deal with transporting RAM have sufficient knowledge on working with RAM?
  - (Y) Are you aware whether training includes any information on denial of shipment.
  - (N) what type of additional training do you consider would be beneficial in your country for transport by sea, air and land.
Annex 19-A

Working Group 4
A new method of recording denial

Terms of Reference
Background

The IMO GISIS database has assisted us in identifying specific cases of denial and the underlying issues. It continues to provide a valuable tool for those wishing to deal with individual cases of denial. However, the confidentiality of some information has precluded the full and open reporting that is needed to identify the “quantity” of denial.

An analysis of the denial database was carried out for air and for sea in 2011. Copies of these reports are available to the working group. In addition further information on air delays has been obtained and analysed – as shown in the figure.

It is proposed that a simple matrix is developed to remove concerns regarding confidentiality of reporting, consisting of rows with the main reasons for denial, and columns for the geographic region. This should provide a quantity overview to the information held in the IMO GISIS database, and would be collected on a 6 month basis from major shippers.

New reasons for delay and denial would be recorded as “other”, and should be recorded in the IMO GISIS database in order to ensure the underlying reasons continue to be identified.

As an example of the way this information would be used: A major issue identified in the figure is the carriage of radioactive material along with animals, eggs etc. Based on this quantity information a response of a co-sponsored information sheet (IAEA, ICAO, IATA, IFALPA and possibly WHO).

Work to be done

After reviewing information on past denials:
1. Identify a short list covering the main underlying issues.
2. Draft a short information sheet dealing with the carriage of radioactive material with animals on aircraft.
3. Review who should be asked to provide data (individual shippers of industry groups)

Outputs

- A list of underlying issues for denial that can be used in the matrix
- A draft information sheet dealing with carriage of radioactive material and animals
- A list of who the requests for data should be addressed to
Annex 19-B

Working Group 4
A new method of recording denial

Report

Steve Whittingham
1. Two separate Excel spreadsheets have been produced; one for AIR and one for SEA.

The reasons for denial/delay listed on each spreadsheet represent the reasons reported by the UK, which are not included on the Denials database, and the denials reported on the database relating to sea transport. The intention of the footnote to remind everyone involved that they need to record each instance of denial/delay and not rely upon a generic reporting.

It is recommended that the reasons listed should be reviewed by the ISC to ensure all known reasons are captured at this point in time. Both spreadsheets will require IAEA Style policing.


It is proposed that an action is placed upon ICAO and IATA to produce a one page information sheet on this subject.

3. Completion of data sheets.

It is recommended that consignors are notified with copies off the data sheets and requested to submit on a 6 month frequency their data. Data should only relate to the 6 month period the report. This is to avoid any confusion that may arise and enable judgements on any trends directly from the data set. It is also recommended that consignors are asked to submit their information by the 31 January and every six months thereafter.

WG4

Pete Lambourne – Reviss Services (UK)
Steve Whittingham – UK NFP
Annex 20-A

Working Group 5
IRPA paper and potential side meetings

Terms of Reference
Background

A paper from the IAEA has been accepted at the upcoming IRPA meeting. This paper should address as much as possible the work of all of the ISCDOS on denial of shipment. In addition it is important to make the maximum use of the event. The potential for side events or information distribution is significant.

Work to be done

- Produce an outline of the paper, in as much detail as possible
- Review the IRPA programme and propose how denial can be raised at the event
- Identify whether a specific information brochure for IRPA could be of value and if so draft the brochure
- Review the communication strategy

Outputs

- A report containing a draft paper and proposals for activities at IRPA
- A draft brochure
- A revised communication strategy
Annex 20-B

Working Group 5
IRPA paper and potential side meetings

Report

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Safe, Secure and Sustainable Transport of Radioactive Material

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ABSTRACT

The transport of radioactive material is an expanding worldwide activity involving the movement of products that are essential and necessary for public health, manufacturing, science, and engineering. Since transport activities are inevitably in close proximity to public, the protection of public, environment and workers from radiation hazards during transport needs careful consideration by regulatory bodies, consignors and carriers.

The objective of this topic is to encourage discussion of the appropriate levels of safety and security during transport by:

- Promoting international discussion on safety and security during transport;
- Identifying and sharing best practices;
- Identifying issues and problems;
- Identifying opportunities, such as providing assistance, to support national adoption of comprehensive transport safety and security frameworks;
- Developing ideas for coordinating and enhancing transport safety and security.

In spite of the long established regulation for the safe and secure transport of radioactive material, recent years have shown that transport operations are increasingly being faced with delays and denials. Consequently, this results in unwarranted actions, rerouted journeys, and increases in financial and human resources creating frustration for all parties concerned.

Although most of the States have national regulations addressing transport of RAM established according to IAEA Regulations, some States are in the process of developing the national regulatory framework essential to facilitate and ensure safe and secure transport.

2013 was set by the IAEA as the target for reducing denial to a level where it was no longer of note. This paper sets out the current status of the work of the IAEA in this area, and the changes taking place as a result.
Annex 21 – ISC Chair Conclusions

Presented by Mr Mario Mallaupoma, ISC Chair and Regional Coordinator for the Americas.

The Chair of the ISC drew up the following conclusions based on the objectives of the seventh meeting of the ISC:

- **Review the milestones in the implementation of the Action Plan and the status of implementation of actions by members of the Steering Committee,**
  Related to the substance of this point, on the first day of the meeting the status and update of the respective action plan was presented to all members of the ISC. It permitted the identification of a series of weaknesses and strengths that should be considered in the update of the action plan.

  A crucial consideration that was mentioned was the need to improve communication. In this respect, the experience developed by Brazil was mentioned with the creation of a National Committee on denial and delay of shipments that considered the participation of various stakeholders. It has permitted to better identify the bottlenecks and to find appropriate solutions. Thanks to the implementation of this strategy it has been possible to significantly decrease instances of denial and delay.

- **Review and revise, if necessary, the Action Plan on Denial of Shipments of Radioactive Material,**
  The action plan on denial of shipments of radioactive material was reviewed and updated. Some advances were identified as well as some actions which have not been implemented.

- **Discuss specific actions for 2012,**
  This activity was developed and considered the need to focus the attention on some specific main actions.

- **Advise on the continuation of regional work, including whether there is a need for updating the Regional Networks**
  It was considered that the implementation of national and regional networks should be prioritised as part of the implementation of a communication strategy. Communication was considered essential among stakeholders.

- **Provide additional recommendations for Agency consideration.**
  The Committee tasked five working groups to address the following areas:
  - The future for the ISC;
  - The ISC Action Plan;
  - Self-Assessment Test questions;
  - A new denials reporting method;
  - Define the content of the IRPA paper.

  As output of the meeting a report is required, with a preliminary report being drafted with the conclusions of the working group, which will be made available to the ISC for comment, with a final report being due to be given to the Deputy Director General by 15th March.

Taking into account all the previously mentioned aspects we can conclude that the seventh ISC meeting was developed successfully and this will permit a better advance in accordance with the IAEA goals considered related to the issue of DOS.
Annex 22-A - Closing Remarks

Before providing his closing remarks, Mr Pil-Soo Hahn, Director of Nuclear Safety of the IAEA, wished to have a small ceremony in recognition of the very outstanding work as a National Focal Point by Mr Natanael Bruno of Brazil. The award was accepted by Ms Adelia Sahyun of Brazil on Mr Bruno’s behalf, with the best wishes of the Committee. Mr Hahn then proceeded to present his comments:

Ladies and Gentlemen, it is my great pleasure to give short closing remarks for this 7th meeting of the International Steering Committee on Denial Of Shipment of radioactive materials, and I realise you have accomplished great progress in just three days. Thank you for your work this week, I heard that on Monday we provided you with information, then on Tuesday you provided us with your views based on your experience and valuable suggestions for how to move forward, presuming you achieve your goal of 2013 for a long-term sustainable management plan. Also the actions needed in 2012 to achieve the goal of 2013, and the means of using the Self-Assessment Tool system to inform us of denial, also a revised method for recording the status of denial, and finally a plan for communication including IRPA as a key example. This work is invaluable and provides us with the guidance that this Committee was set up to give. Let me close now simply by thanking you and also reminding you that this is our year of action on denial and we all need to commit to hard work this year. It will be the year of denial of shipment, not to deny any shipment of radioactive material. Thank you very much.
Annex 22-B - Closing Remarks

Mr Mario Mallaupoma, Chair of the ISC, further added some closing words of his own:

In my opening address, I mentioned that we carry out a kind of ethical work in the ISC. And I say that is because our objectives not only take into account technical aspects but also ethics and moral values. I would like to recall two brief quotes:
“The most beautiful work of man is to be useful to others” (Sophocles)
“Help to those who need it is not only part of duty but also of happiness” (José Martí)

These beautiful expressions have a global dimension, they must be hinges which can articulate an integrated and solidary work in all regions of the world. The fact that we contribute to the tasks that promote the facilitation of transport of radioactive materials, with broad applications and benefits to humanity, gives us the opportunity to help our neighbours.
In addition to this, during his presentation Mr Whittingham showed us some relevant information about Cancer statistics in developing countries:

- 4 million of the 6 million deaths due to cancer in the year 2000 occurred in developing countries lacking radiotherapy machines, in fact some parts of Africa and Asia do not carry out any diagnosis.
- 80% of cervical cancers occur in Africa, Asia and South America with some 225,000 deaths recorded each year according to 2003 reports.
- 1 million new cancers are diagnosed each year in India.
- ~15 African nations and several countries do not have any radiotherapy machine.
- 50 – 60 % of cancer victims would benefit from radiotherapy.
- Globally, deaths from cancer is expected to rise from 6 million in 2000, to 9 million in 2015, to 12 million in 2030.

These are very terrifying figures that surely will sensitise people worldwide. So I reiterate that we are developing ethical work.
I am sure that this seventh ISC meeting has served to reinforce our commitment and attitude faced with our responsibility as members of the ISC.

Lastly, I want to thank you for your hard work during these three days and of course to the IAEA through the persons of Mr Denis Flory and Mr Pil-Soo Hahn, for all their support. I am sure that we will continue to work together.

Finally on behalf of the participants I want to express my gratitude for the contribution and support of Mr Jim Stewart and his staff to the Steering Committee.

The meeting has finished.

Thank you very much.