

## **FOREIGN TRAVEL TRIP REPORT**

### **Subject**

12<sup>th</sup> International Congress of the International Radiation Protection Association (IRPA)

### **Dates of Travel and Countries/Organizations Visited**

October 18 – 25, 2008  
Buenos Aires, Argentina  
IRPA

### **Author, Title, and Agency Affiliation**

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### **Sensitivity**

This report, and its attachments are not sensitive.

### **Background/Purpose**

The purpose of this travel was to participate in the 12<sup>th</sup> IRPA Congress, serving as Rapporteur of Topical Session TS III.5.2, “Industrial, Research Applications and Security Screening”. U. S. Nuclear Regulatory Commission (NRC) participation in this Congress is intended to further communications on a wide variety of radiation protection issues, and gather information on current practices and issues. Traveler represented the United States and the NRC in discussions during the Meeting. Traveler served as Rapporteur of Topical Session TS III.5.2 as invited by the International Congress Organizing Committee.

### **Abstract: Summary of Pertinent Points/Issues**

The 12<sup>th</sup> IRPA Congress was held in Buenos Aires, Argentina, October 19 – 24, 2008. The theme of the Congress was “Strengthening Radiation Protection Worldwide.” The Congress included three main fields of discussion, namely Epistemological Basis of Radiation Protection, Radiation Protection Paradigm, and Radiation Protection and Safety in Practice. The Congress was attended by more than 1600 individuals from more than 90 countries. A total of more than 1500 papers and abstracts were submitted.

The Congress successfully provided a wide variety of issues and discussion on radiation protection issues and practices. These included topical discussions on security and on legal issues, which were addressed by travelers from the NRC. The intended purpose for attendance was accomplished successfully, and additional on the margins discussions served to provide

information on several topics of particular interest to the NRC staff. Attendance at the next Congress, scheduled to be in Glasgow, Scotland, in 2012, is encouraged as an effective mechanism to interact and network with radiation protection professionals from around the world.

## **Discussion**

The 12<sup>th</sup> IRPA Congress was held in Buenos Aires, Argentina, October 19 – 24, 2008. The Congress was attended by more than 1600 individuals from more than 90 countries. A total of more than 1500 papers and abstracts were submitted. The program of the Congress is provided as Attachment 1. The program included more than 250 oral presentations. The Congress was attended by three individuals from the NRC, Cynthia Jones, Steven Burns, and Stephanie Bush-Goddard in addition to myself. Other details may be included in their trip reports for this meeting.

The theme of the Congress was “Strengthening Radiation Protection Worldwide.” The Congress included three main fields of discussion, namely Epistemological Basis of Radiation Protection, Radiation Protection Paradigm, and Radiation Protection and Safety in Practice. For each main field of discussion the Congress included background plenary presentations, topical sessions related to each scientific area within the field, and a concluding summary plenary discussion.

Within the topic of Epistemological Basis of Radiation Protection, two scientific areas were examined. These were: Characterization of Radiation Exposure; and Biological Effects of Radiation Exposure. A total of seven topical sessions were conducted related to this first topic.

The topic of Radiation Protection Paradigm included three major scientific areas. These areas were: Developing the Radiation Protection Framework; Developing Protection Policies, Criteria, Methods and Culture; and Emergency Planning, Preparedness and Response. A total of 11 topical sessions were conducted related to this topic.

The topic of Radiation Protection and Safety in Practice was the largest topic, with five scientific areas examined. These included: Nuclear Installations; Non-Ionizing Radiation; Medicine; Naturally Occurring Radioactive Material in Industry; and Other Applications and Practices. A total of 20 topical sessions were conducted related to this topic. I served as the Rapporteur for Session III.5.2, Radiation Protection in Industrial, Research Applications and Security Screening. My presentation prepared during the meeting summarizing the 30 contributions and posters is provided as Attachment 2. At the request of the program committee, the contributions in this topical session were supplemented by short presentations on the activities in the European Union, the draft language on deliberate non-medical exposure of humans from the draft International Atomic Energy Agency (IAEA) Basic Safety Standards (BSS), and a summary of the recent “Guidance on Security Screening of Humans Utilizing Ionizing Radiation” developed by the U. S. Interagency Steering Committee on Radiation Standards (ISCORS). I presented the material on the ISCORS, and the presentation is provided as Attachment 3.

In addition to the main scientific program, numerous refresher training and special sessions were held. One topic of note was the special technical session on Legal Implications of Radiation Protection, in which Steven Burns from the NRC Office of General Counsel participated. The Congress also included a tribute to the late Dan Beninson of Argentina, and a

special presentation on the 80<sup>th</sup> anniversary of the International Commission on Radiological Protection (ICRP), presented by Professor Roger Clarke, former Chairman of the ICRP.

The presentations, refresher courses, and outcomes from the Congress will be posted to the IRPA 12 web site, so that they are available. The web address is: [www.irpa12.org.ar](http://www.irpa12.org.ar).

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Attendance at the next Congress is encouraged as an effective mechanism to interact and network with radiation protection professionals from around the world. The next Congress, IRPA 13, is scheduled to be in Glasgow, Scotland, in 2012. The theme of that Congress will be: "Living with Radiation, Engaging with Society".

### **Pending Actions/Planned Next Steps for NRC**

There are no pending actions or next steps for the NRC related to the Congress

### **Points for Commission Consideration/Items of Interest**

The Commission has been aware of, and interested in the ongoing development of the BSS, which was addressed in a number of on the margin discussions. There are no issues that require specific Commission consideration at this time. The staff continues to be successful in developing draft text that is consistent with NRC interests and comments.

### **Attachments**

Attachment 1: Scientific Program for IRPA 12

Attachment 2: Presentation on Topic III.5.2 Abstracts and Posters

Attachment 3: Presentation on ISCORS Guidance

### **"On the Margins"**

Numerous discussions were held on the margins related to the ongoing development and next steps related to the IAEA International BSS. This included an informal meeting of the members of the international agency joint secretariat to discuss preparations for the upcoming Radiation Safety Standards Advisory Committee (RASSC). The IAEA indicated that members of the joint secretariat would shortly receive a compilation of the many comments that have been posted to the IAEA web site. Further, there will be a distillation of key topics from those comments that will be used to guide the discussions at RASSC. A further meeting of the joint secretariat is planned for immediately following the RASSC meeting in order to plan next steps, and the meetings that are foreseen as necessary to prepare the next draft of the BSS. The NRC staff continues to have a unique opportunity to participate in the joint secretariat discussions through my ongoing invitation to serve as the chairman of the joint secretariat working meetings. It is expected that several meetings will be needed to resolve the comments and prepare a next draft. Although the IAEA had previously indicated that it was planning for a technical meeting in

February, 2009, such a meeting is now seen as unlikely, given the large amount of work that will be necessary to resolve the comments, and lack of adequate time between the RASSC meeting and February. The staff trip report from the RASSC meeting will provide new details of the anticipated schedule of developments.

I engaged a number of individuals on topics related to the ongoing staff review of the ICRP recommendations, and the preparation of an options paper for Commission consideration in December 2008. In particular, I explored the implementation of occupational dose limits in the medical field, specifically for interventional radiology and interventional cardiology. Although these modalities of treatment are not under NRC jurisdiction, previous interactions with the Agreement States and the Conference of Radiation Control Program Directors (CRCPD) have indicated that the requirements of the states will evolve based on the NRC considerations. It was interesting to note that in many countries, the dose of record for the physician is taken from the dosimeter located under the shielding apron, which is a significant departure from the current NRC requirements. The dose recorded in this location is substantially lower than either the results of a badge located on the collar, outside of the shielding, or of a calculation of effective dose using two dosimeters, as currently provided as a method for demonstrating compliance in 10 CFR Part 20. Thus it is not necessarily surprising that compliance with a 20 mSv (2 rem) dose limit is possible for these individuals. Several of the individuals I discussed the issue with expressed the opinion that implementation of the effective dose concept, already permitted by NRC regulations, would substantially reduce the reported occupational exposures, and could go a long ways towards reducing the impact of any possible change to dose limits, or the use of a more formalized dose constraint as recommended by ICRP. These topics will be addressed in the staff's options paper.

A discussion with representatives from the U. S. Department of Energy Off-Site Source Recovery Program revealed their desire to have permission to examine old sealed source and device registry sheets that are not part of the current on-line registry. These representatives indicated that they are permitted to pick up and disposition sources for which there is formal documentation, and a registry sheet is one of the best documentations available. The view was that access to these historical sheets would position the Off-Site Source Recovery Program to disposition additional, potentially very old sources which it cannot currently do. Contact will be made directly with representatives of the Materials Safety and State Agreements Division.

A discussion with a representative from Pacific Northwest Laboratory (PNL) revealed their desire to obtain funding for a study on the local background existing around current nuclear power facilities. They suggested that such a study could be a useful adjunct to discussions with local stakeholders, and could also be a useful supplement to the work currently funded by the Office of Research to re-examine the cancer mortality data for areas surrounding the nuclear power facilities. I requested that the PNL representative contact the Office of Research.

A representative from Sudan inquired about the availability of "codes of practice" for various industrial and medical uses of radioactive material. I provided the individual with background information on the NUREG-1556 series of documents, available on the NRC public web site, which provide licensing guidance for these activities. I also suggested that he make contact with the NRC Office of International Programs for more information, and with the CRCPD for information that may be available from that organization. Contact with at least one representative of the CRCPD attending the conference was made.