

## International Trip Report

**Subject:** United States Nuclear Regulatory Commission (NRC) staff participation in the International Atomic Energy Agency (IAEA) International Experts' Meeting (IEM) on Enhancing Transparency and Communication Effectiveness in the Event of a Nuclear or Radiological Emergency and other related meetings with IAEA personnel on the margins.

### Travelers:

- Eliot Brenner, Director, Office of Public Affairs (OPA), 301-415-8200;
- Lawrence Kokajko, Director, Division of Spent Fuel Alternate Strategies, Office of Nuclear Material Safety and Safeguards (*Please Note: Mr. Kokajko's primary purpose for this trip was to discuss his transition to acting Nuclear Safety Attaché*);
- Jane Marshall, Chief, Coordination Branch, Office of Nuclear Security and Incident Response (NSIR), 301-415-7854;
- Jack Ramsey, Senior Level Advisor for International Nuclear Safety Assistance, Office of International Programs (OIP), 301-415-2744 (*Please Note: Mr. Ramsey's primary purpose for this trip was participation in a program planning meeting for the "International Conference on the Safety and Security of Radioactive Sources"*); and
- Eric Stahl, International Relations Specialist, OIP, 301-415-0246

**Dates and Location:** June 18-20, 2012; Vienna, Austria

**Purpose of Trip:** To participate in the IAEA IEM on Enhancing Transparency and Communication Effectiveness in the Event of a Nuclear or Radiological Emergency.

**Desired Outcome:** To share information on NRC activities and to learn what international counterparts are doing to enhance transparency and communication effectiveness during nuclear and radiological emergencies. In addition, the travelers will attempt to positively influence the outcomes of the meeting and influence the direction IAEA will take with the Action Plan on Nuclear Safety.

**Results Achieved:** This IEM provided an excellent forum for the NRC to discuss its strategies and lessons learned related to communicating effectively with the public, federal, state and local partners, international counterparts, and other stakeholders, and provided a forum for the NRC to continue actively shape the global nuclear safety regime. Mr. Brenner provided a presentation on "Communicating in a Nuclear Emergency: The Changing Environment," and Mr. Ramsey provided a presentation on "USNRC Approach to Effective Communications with International Counterparts," which were both well received.

In addition, NRC staff took the opportunity to meet with IAEA and United States Government counterparts. Mr. Kokajko and Mr. Stahl began preparing for the upcoming transition of Nuclear Safety Attachés at the U.S. Mission to International Organizations in Vienna (UNVIE) with Mark Shaffer and discussed the next IEM scheduled for September 2012. Ms. Marshall met with representatives from the IAEA's Incident and Emergency Center (IEC) to discuss topics of mutual interest. Mr. Ramsey participated in the program planning meeting for the "International Conference on the Safety and Security of Radiological Sources" scheduled for October 2013 in Abu Dhabi. Please see the "On the Margins" section for more detailed information on these discussions.

**Summary of Trip:** In September 2011, the IAEA General Conference unanimously endorsed the approval of a draft “Action Plan on Nuclear Safety” in light of the accident at the Fukushima-Daiichi Nuclear Power Plant. The Action Plan, covering all relevant aspects relating to nuclear safety, emergency preparedness, radiation protection, and the international legal framework, sets out a comprehensive program of work in twelve major areas to strengthen nuclear safety worldwide. Under one of these areas, titled “communication and information dissemination,” the IAEA Secretariat was requested to organize a number of international experts’ meetings to analyze all relevant aspects of, and learn the lessons from, the Fukushima-Daiichi nuclear accident. This IEM, focused on enhancing transparency and communication, was organized in response to that request.

The objective of this IEM was to analyze relevant aspects for enhancing transparency and effectiveness in communications during a nuclear or radiological emergency in the light of the Fukushima accident, and to identify lessons learned and best practices for improving information dissemination. The meeting provided a forum for discussion and the exchange of information among communications experts on the challenges involved in delivering easily understandable information during major emergencies, as well as in communicating with global audiences via traditional, electronic and social media. The meeting dialogue emphasized strengthening public confidence by addressing public concerns more effectively through improved emergency communication.

This forum was the second IEM hosted by the IAEA. The first workshop, on “Reactor and Spent Fuel Safety in Light of the Fukushima Accident,” was held in March 2012 and attended by several NRC managers and staff including the Executive Director of Operations. The next IEM, on “Protection Against Extreme Earthquakes and Tsunamis in the Light of the Accident at the Fukushima-Daiichi Nuclear Power Plant,” will be held in September 2012, and will include the participation of NRC Commissioner George Apostolakis (please see additional information on this IEM in the “on the margins” section of this report).

The meeting was attended by approximately 250 people from 65 countries, representing national governments (including regulatory authorities), international organizations, nuclear utilities, media, non-governmental organizations, academic, research institutions and other interested stakeholders. The meeting was formally opened by Claude Birraux, First Vice President of the French Parliamentary Office for the Evaluation of Scientific and Technological Choices, who served as the IEM Chairperson. Working sessions from the IEM included: Challenges in Communication during the Fukushima Nuclear Emergency; Case Studies in National Regulator and Affected Operator’s Experiences during Nuclear and Radiological Emergencies; Case Studies in Enhancing the Inter-Agency Response in Support of Effective Public Communication during a Nuclear or Radiological Emergency; and Identifying Best Practices in Effectively Addressing Public Concerns through Transparent Communication during Major Emergencies. The Chairpersons’ Summary and all presentations will be placed on the meeting’s website: <http://www-pub.iaea.org/iaeameetings/44228/International-Experts-Meeting-on-Enhancing-Transparency-and-Communication-Effectiveness-in-the-event-of-a-Nuclear-or-Radiological-Emergency>.

There were several reoccurring themes emphasized throughout the meeting. Nearly every speaker and commenter highlighted the need for clear, prompt and constant communications with all relevant stakeholders during nuclear and radiological emergencies. In addition, the participants agreed that public trust is crucial to credibility, which is necessary for effective communication and must be earned in advance of emergencies. Several speakers noted the value in having dedicated, trained public spokespersons who can effectively communicate with

the public. The importance of communicating internationally and having an integrated social media strategy were other lessons learned from the Fukushima-Daiichi accident. Several countries setup special websites in the aftermath of the accident that included real-time radiation protection information for their country and translated information about the situation in Japan, which was lauded. All countries also acknowledged the significant human resource burden required to staff an emergency response center during a Fukushima-type event.

Based on presentations and related discussions during and on the margins of the meeting, it is clear the NRC is a global leader in effective communications and emergency response. Although some countries discussed their communications and response abilities, the NRC's experience with social media, emergency exercises and staffing, and ability to use advanced technology assets to assist during emergency communications is significantly more advanced than most.

The United States provided four presentations during the IEM, including two from the NRC:

- Mr. Brenner provided a keynote presentation on “Communicating in a Nuclear Emergency: The Changing Environment,” during “Working Session III: Identifying Best Practices in Delivering Easily Understandable Information during Emergencies of Major Public Concern by National Governmental Authorities and Disaster Response and Humanitarian Relief Organizations.” Mr. Brenner’s presentation highlighted the NRC’s use of social media and its effectiveness during the Fukushima response.
- Mr. Ramsey provided a presentation on “USNRC Approach to Effective Communications with International Counterparts” during “Working Session IV: Challenges in Communication during the Fukushima Nuclear Emergency.” Mr. Ramsey’s presentation shared information about the NRC’s incident response organization and lessons learned from the NRC’s experience during the September 11 terrorist attacks and 2003 northeast blackout, including coordination with Canadian and Mexican regulatory authorities and the IAEA.
- Former Pennsylvania Governor Richard Thornburgh provided a keynote address on the “Challenges in Ensuring the Public’s Right to Know,” which touched on his experiences during the Three Mile Island accident, including the importance of providing decision-makers with reliable information and also imploring authorities to willingly correct their own mistakes, when necessary.
- Paul Dickman, Senior Policy Fellow, Argonne National Laboratory, discussed “The Role of Professional Societies in Communicating During a Nuclear Crisis” on behalf of the American Nuclear Society (ANS). Mr. Dickman discussed the number of “nuclear experts” spouting inaccurate or misleading information in the media during the immediate aftermath of the Fukushima accident and the call from ANS members to refute the misinformation. He suggested that professional societies can fill a gap by fact-checking and correcting falsities that government and industry do not have the ability to do, due to transparency issues or resource limitations.

Several national regulators provided presentations during the IEM, including:

- Yoshinori Moriyama, Japan Nuclear and Industrial Safety Agency, provided a presentation on “Crisis Communications: Challenges and Lessons Learned During the Fukushima Nuclear Emergency.” He noted that one of Japan’s major challenges during the Fukushima response was having decision-makers and spokespersons at different locations, which negatively affected the government’s ability to provide timely and consistent messaging to the public. Mr. Moriyama also defended Japan against some criticisms concerning the lack of communication, by stressing the chaotic, fluid nature of

the situation and lack of validated data. He also noted that Japan intends to send regulators to the operators' emergency response center(s) during future incidents.

- Carmen Martinez-Ten, Spanish Nuclear Safety Council, provided remarks on "Enhancing Crisis Communications After Fukushima," including conclusions from the "International Regulators Workshop on Crisis Communication: Facing the Challenges" (which was attended by Chairman Jaczko and Mr. Brenner), held in Madrid in May 2012;
- Patricia Wieland, Brazilian Nuclear Energy Commission, provided remarks on "National Experience in Informing the Public and Enhancing Transparency – the Goiania Accident," and stressed the importance of demonstrating empathy to those affected by the nuclear or radiological incident.
- R. Bhattacharya, India Atomic Energy Regulatory Board, presented on the "Regulator's Role in Enhancing Transparency in Informing the Public about Radioactive Sources Outside Regulatory Control in India," a case study of the 2010 Mayapuri incident in Delhi. The Indian Government determined a "lack of awareness and carelessness" by Delhi University (the previous owners of the recycled source) led to the accident.
- Lee Jong-In, Korea Institute of Nuclear Safety, spoke about "Addressing Public Concerns Through Transparent Communication in Korea," including holding public meetings with people in the vicinity of Korea's nuclear power plants related to special post-Fukushima inspections and emergency preparedness and response issues.
- Lasse Reiman, Finnish Radiation and Nuclear Safety Authority, provided remarks about "Gaining and Retaining Public Trust in Nuclear Power Matters: the Constraints and Enabling Conditions for Transparency." He noted a current WENRA (Western European Nuclear Regulators Association) initiative to coordinate during emergencies to create "similar awareness and messaging."
- Andre-Claude Lacoste, French Nuclear Safety Authority (ASN), spoke about "Creating the Legal Framework for Transparent Communications with the Public on Nuclear Safety-Related Issues." In an effort to be fully transparent, ASN publishes all inspection reports online. Mr. Lacoste also discussed the French Government's response to the September 2011 Centraco industrial accident.
- Gordon White, Canadian Nuclear Safety Commission (CNSC), served as the IEM Co-Chair and provided remarks on "Best Practices and Lessons Learned in Effective and Transparent Public Communication during Emergencies of Major Public Concern - a Canadian Perspective." Canada has submitted a proposal for the Convention on Nuclear Safety (CNS) Extraordinary Meeting in August 2012 to revise the CNS guidance documents to emphasize nuclear safety by requiring public reporting of peer review missions and by sending nuclear safety concerns to the IAEA Board of Governors.
- Vasliki Tafili, Greek Atomic Energy Commission, discussed "Communication during the Fukushima Nuclear Accident: the Perspective of a Non-Nuclear Country" and emphasized the need to balance "national characteristics" (i.e. anti-nuclear sentiments) with "practical facts" (i.e. what is relevant for the Greek population) during emergencies.
- Eric Ngotho, Kenya Radiation Protection Board, provided remarks on "Effective Communication of a Nuclear or Radiological Emergency – a Developing Country's Perspective," noting Kenya does not have significant experience in dealing with nuclear and radiological events; therefore, many people are not educated about the related health hazards and do not report radiological exposures.
- Marina Mishar, Malaysia Atomic Energy Licensing Board, discussed "Radiological Risk Communication in Malaysia" and noted that Malaysians were particularly interested in understanding what other countries were doing to protect their own citizens, which demonstrates the need for international coordinating on messaging during emergencies.

- Anne Marit Østreng, Norwegian Radiation Protection Authority, provided remarks on “Nuclear Crisis Communication in a Non-Nuclear Country.” She stated that most nuclear and radiological planning in Norway is focused on incidents in neighboring countries (since Norway does not have any commercial nuclear power plants, although they do have two research reactors); however, if a Fukushima-type incident happened in Europe, the country (and continent) would be completely overwhelmed and fail at communicating effectively. Ms. Østreng stressed that information from credible sources (affected state and IAEA) must be shared amongst nuclear and non-nuclear countries alike.
- Maria Dimitrova-Krusteva, Bulgarian Nuclear Regulatory Authority, gave a presentation on “Effective Practices in Public Communication to Mitigate Undesirable Outcomes for the General Public as a Result of Nuclear or Radiological Emergencies,” which echoed most of the themes discussed throughout the week.
- M. Florescu, Romanian National Commission for Nuclear Activities Control CNCAN), discussed “CNCAN’s Experience and Lessons Learned in Public Communication as a Consequence of the Fukushima Accident” and expressed the serious concern shared by Romanians about whether Europe could handle a Fukushima-type of event.

Other interesting points from the meeting included:

- Denis Flory, Deputy Director General for Nuclear Safety and Security, IAEA, admitted that IAEA “fell short” in explaining technical information to the public in a clear way. Mr. Flory also noted that IAEA will be increasing transparency by publishing member state peer reviews on its website in the future.
- Anthony Stott, Eskom (South African utility), discussed why the International Nuclear Event Scale (INES) is not a tool to provide “live commentary” during emergencies and offered several prospective changes to INES guidance, which will be addressed again during the upcoming July 2012 Officer’s Meeting, including information on why “Level 7” events can have the same rating, but disparate consequences (i.e. Chernobyl vs. Fukushima).
- Elena Buglova, Director, IEC, IAEA, spoke about IAEA’s mandate (which is limited to serving as the coordination ‘focal point’ for the 16 relevant United Nations agencies and disseminating information received from member states) in emergency response situations. She stated that although there is room for improvement, the IAEA’s response was “effective and comprehensive;” a statement that was not universally accepted. During the Fukushima response, 230 IAEA staff worked at the IEC 24/7 for 54 days.
- Hiro Hasegawa, Tokyo Electric Power Company (TEPCO), noted that it is “impossible to manage” all the required media communication during an emergency. TEPCO’s abilities were also hampered by the inaccessibility of its off-site response centers, which changed the planned communication channels.
- Several presenters and commenters noted the confusion created by the United States declaration of a 50 mile evacuation zone for American citizens in Japan. They asserted that this announcement damaged the credibility of all stakeholders involved in the response and raised uncertainty for people both inside Japan and abroad. ASN’s early statements about INES scale ratings were also criticized.
- There was a reasonable debate over the three days of the meeting about the value and potential harm of speculation during nuclear and radiological emergencies. Several participants argued that it is important to provide information as early as possible (even if it has not been validated) and make precautionary recommendations based on these. Others disagreed, stating that although prompt information sharing is crucial,

uninformed and inconsistent recommendations can be a “communications disaster,” with Mr. Lacoste noting “we are safety authorities, not CNN.”

- The NRC-led/initiated daily coordination conference calls with ASN, CNSC and the United Kingdom’s Office for Nuclear Regulation, were noted in both the Canadian and French presentations as an example of a best practice related to international communication.
- There were calls from several participants to hold a follow-up workshop to discuss actions recommended as a result of the IEM.
- In his closing remarks, Mr. Birraux noted that IAEA can help with enhancing transparency and communication, but that it is up to the member states to improve their respective capabilities and foster public trust.

**On the margins:** Throughout the IEM, Mr. Brenner was approached by a number of regulatory counterparts (including Mr. Lacoste of ASN and counterparts from Nigeria and the United Arab Emirates) to hold exchanges and/or training with their organizations on social media and public communication. Mr. Brenner also briefly met with Serge Gas, the incoming Director of IAEA’s Division of Public Information, who noted that IAEA is considering setting up a communicator-to-communicator electronic system for keeping each other informed similar to what exists now within the Nuclear Energy Agency’s Working Group on Public Communications.

Mr. Kokajko and Mr. Stahl began preparing for the upcoming transition of Nuclear Safety Attachés at the U.S. Mission to International Organizations in Vienna (UNVIE) with Mark Shaffer. Mr. Kokajko had the opportunity to meet most of the UNVIE staff and attend the weekly IAEA Affairs Section meeting. Cyndi Jones, who has been selected as the new Nuclear Safety Attaché, will report to UNVIE in September. Starting July 16 and lasting until her arrival in September, Mr. Kokajko will serve as the acting Nuclear Safety Attaché.

Mr. Stahl, Mr. Shaffer and Mr. Kokajko met with Ovidiu Coman and Kenta Hibino at the IAEA International Seismic Safety Center to discuss the upcoming IEM on “Protection Against Extreme Earthquakes and Tsunamis in the Light of the Accident at the Fukushima-Daiichi Nuclear Power Plant,” scheduled for September 4-7, 2012. The purpose of the meeting is to share lessons learned from recent earthquakes and tsunamis, to exchange information on the development of recent technologies related to site evaluation and nuclear safety related to seismic issues, and to identify areas where further research is necessary. Commissioner Apostolakis has agreed to participate in the meeting; IAEA representatives have requested that he provide remarks on the “Application of Deterministic and Probabilistic Approach to Hazard Assessments” during a “Special Session” on the first day of the conference that will include an update to the situation at the Fukushima-Daiichi site. The meeting will also include a plenary session and four technical sessions related to seismic and tsunami hazards and safety.

Ms. Marshall met with Ms. Buglova and representatives from the IAEA’s IEC to discuss topics of mutual interest. Ms. Buglova highlighted the IAEA’s intent to expand its response role during events, to include development and publication of independent assessments. She further pointed out the mandate for the independent assessments during events contained in the “Action Plan on Nuclear Safety” approved by the IAEA Board of Governors at its September 2011 meeting. Ms. Buglova also shared her intention to have the IEC continue to develop procedures and processes for responding to a nuclear event and to make those materials available to member states. Ultimately, the IEC would like to be a reliable international information source for nuclear or radiological events.

Mr. Ramsey participated in the program committee planning meeting for the “International Conference on the Safety and Security of Radioactive Sources” scheduled for October 2013 in Abu Dhabi. The purpose of the conference is to “promote a wide exchange of information on key issues relating to the safety and security of radioactive sources, including: progress made at the global level since 2005; remaining challenges to ensure safety and security of sources throughout their life cycle, especially the long term management of disused sources; and how to maintain a high level of awareness and support for the safety and security of sources by policy makers.” The program committee meeting focused on the thematic areas to be addressed and identification of invited speakers, panellists, rapporteurs and chairpersons.

**Points for Commission Consideration/Interest:** Although this meeting did not touch areas of prospective Commission policy changes, the Action Plan on Nuclear Safety and related IEM series has received a high-level of visibility across the nuclear community in the United States and abroad; therefore, it is recommended that this report be shared with the Commission.

**Pending Actions/Future Activities:**

- OIP will continue to keep OPA and NSIR staff apprised of international developments and/or follow-up meetings relating to communications during nuclear emergencies.
- OIP will work with Commissioner Apostolakis and his staff to ensure he is prepared for his participation in the next IEM.
- OPA will coordinate with OIP concerning any follow-up discussions with international counterparts concerning public affairs and social media.