

**WM'00 Conference, February 27 – March 2, 2000, Tucson, AZ**

**INTERNATIONAL COOPERATIVE EFFORTS IN THE INTERNATIONAL ATOMIC  
ENERGY AGENCY JOINT CONVENTION ON THE SAFETY OF SPENT FUEL  
MANAGEMENT AND ON THE SAFETY OF RADIOACTIVE WASTE MANAGEMENT**

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**ABSTRACT**

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management was adopted on September 5, 1997, by a Diplomatic Conference convened by the International Atomic Energy Agency (IAEA). The objectives of the Joint Convention are to maintain a high level of safety worldwide in spent fuel and radioactive waste management, to ensure that during all stages of spent fuel and radioactive waste management there are effective defenses against potential hazards, and to prevent accidents with radiological consequences and to mitigate their consequences. The Joint Convention was opened for signature in Vienna on September 29, 1997, and will remain open for signature until its entry into force. The Joint Convention will enter into force ninety days after ratification by twenty-five States (Countries or Governments) including ratification by fifteen States each having an operational nuclear power plant. On September 29, 1997, the Department of Energy Secretary Federico Peña signed the Convention for the United States (U.S.). However, this Joint Convention still requires the U.S. Senate advice and consent for ratification and the President of the United States to ratify.

The U.S. participated in the drafting process for the Convention on Nuclear Safety (CNS) and became a party on July 10, 1999. The CNS was developed after Chernobyl to raise the level of nuclear safety around the world, and the CNS applied to civilian nuclear power only. The CNS contained a preambular statement that lays out a commitment to develop a similar Convention on the safe management of radioactive waste. In response to this CNS commitment, a group of experts from 50 countries convened to prepare a draft of the Joint Convention. The Department of Energy's (DOE's) Office of Environmental Management (EM), having both spent fuel and radioactive waste as its responsibilities, and the Nuclear Regulatory Commission (NRC) and Environmental Protection Agency (EPA) support the Department of State (DOS) in requesting the U.S. Senate to provide advice and consent to ratify the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

This paper describes the purpose of the Joint Convention, the benefits of U.S. participation in the Joint Convention, the U.S. Senate ratification process and the proposed strategy for the National Report required by the Joint Convention, and how international cooperative efforts such as this can help strengthen the worldwide safety culture of spent nuclear fuel and radioactive waste management.

**PURPOSE AND SCOPE**

This Joint Convention establishes a series of broad commitments with respect to safe management of spent nuclear fuel and radioactive waste and is referred to as an "incentive" convention. It does not delineate standards the Parties must meet but instead requires the Parties to "take appropriate steps" to ensure the safety of their spent fuel and waste management activities. The overall goal is that over time, all the Contracting Parties to the Joint Convention will attain a higher level of safety with management of their spent nuclear fuel and radioactive waste.

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The scope of the Joint Convention applies to the “safety of spent fuel management” when the spent fuel results from the operation of civilian nuclear reactors. “Spent fuel held at reprocessing facilities as part of a reprocessing activity is not covered in the scope of this Convention unless the Contracting Party declares reprocessing to be part of spent fuel management. It also applies to the safety of radioactive waste management when the radioactive waste results from civilian applications. However, this Convention shall not apply to waste that contains only naturally occurring radioactive materials and that does not originate from the nuclear fuel cycle, unless it constitutes a disused sealed source or it is declared as radioactive waste for the purposes of this Convention by the Contracting Party. The Convention does not apply to the safety of management of spent fuel or radioactive waste within military or defense programs, unless declared as spent fuel or radioactive waste for the purposes of this Convention by the Contracting Party. However, this Convention shall apply to the safety of management of spent fuel and radioactive waste from military or defense programs if and when such materials are transferred permanently to and managed within exclusively civilian programs” (1).

### **BENEFITS**

Each Contracting Party to the Convention is required to prepare a National Report. The DOE’s Office of Environmental Management will be responsible for the preparation of the U.S. National Report working with the NRC, the EPA, and the DOS. The benefits to the U.S. through the review process of the National Reports include:

- a means to help harmonize international approaches to assessing and managing risks and raising the target level of safety associated with spent fuel and radioactive waste, thus strengthening the worldwide safety culture;
- an opportunity to influence the development of nuclear safety programs in other countries, through international cooperation on the life-cycle management of spent fuel and radioactive waste;
- an opportunity to review the National spent fuel and radioactive waste management programs of other Contracting Parties and to benefit from their experience;
- A vehicle, through the drafting of the U.S. National Report, to help harmonize management and assessment techniques used by the DOE, NRC, and EPA programs and activities associated with safe management of spent fuel and radioactive waste;
- a means to identify possible areas for bilateral and multilateral technical and regulatory cooperation; and
- an opportunity to promote a stable technical environment and safe regulatory system in developing countries, thereby supporting trade in services and products of U.S. companies.

### **U.S. SENATE ADVICE AND CONSENT FOR RATIFICATION OF THE JOINT CONVENTION**

In order for the U.S. to participate under this Convention, the U.S. Senate must give advice and consent for ratification of the Joint Convention and Presidential approval/ratification must be obtained. The experience with the CNS was that it took approximately 4 years to obtain Senate advice and consent. Many unrelated issues to the CNS were brought up during the Senate process and caused delays. In an effort to accomplish a smoother U.S. Senate process, an Executive Steering Committee was formed and

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composed of representatives from the NRC, the EPA, and DOS, as well as members from the DOE's Office of Environmental Management; General Counsel (GC); Civilian and Radioactive Waste Management (RW); and Nonproliferation and National Security (NN). Key activities of the Executive Steering Committee are: 1) the strategy and briefings to obtain Senate advice and consent for the ratification of the Convention; 2) identifying the data sources and assumptions of the U.S. National Report; and 3) coordination of the U.S. National Report preparation.

There were various briefings that occurred to pave the way for U.S. Senate advice and consent for ratification of the Joint Convention. A basic briefing package was prepared, reviewed, and agreed upon by the DOE, NRC, EPA, and DOS representatives of the Executive Steering Committee on the Joint Convention. All the involved agencies briefed their senior management on the Joint Convention. Following these briefings, the NRC briefed the Organization of Agreement States and the NRC and the EPA briefed the Conference of Radiation Control Program Directors. DOE and NRC briefed the Office of Management and Budget, and DOS, DOE, and the NRC briefed the Nuclear Energy Institute. DOS, DOE, NRC, and EPA will brief the U.S. Senate Foreign Relations Committee to seek Presidential approval for submission of the Joint Convention to the U.S. Senate for advice and consent for ratification of the Joint Convention in calendar year 2000.

The ratification package for the Joint Convention consists of two letters—one to the President from the Secretary of State and one to the U.S. Senate from the President. These letters recommend that the Joint Convention be transmitted to the Senate for advice and consent for ratification and explains the background, purpose, and scope of the Joint Convention. An Article-by-Article Report of the Joint Convention is also a critical part of the ratification package as is a certified copy of the Joint Convention. The Joint Convention will be submitted to the U.S. Senate Foreign Relations Committee for advice and consent for ratification by the President.

### **PROPOSED STRATEGY FOR THE NATIONAL REPORT**

Under the terms of the Joint Convention, all Contracting Parties are required to prepare a National Report. A proposed format for the National Report has been drafted. The National Report is to describe spent fuel management policy; spent fuel management practices; radioactive waste management policy; radioactive waste management practices; criteria used to define and categorize radioactive waste; a list of the spent fuel management facilities subject to this Convention, their location, main purpose and essential features; an inventory of spent fuel that is subject to this Convention and that is being held in storage and which has been disposed of. This inventory shall contain a description of the material and, if available, give information on its mass and its total activity. The report shall also contain a list of the radioactive waste management facilities subject to this Convention, their location, main purpose and essential features. It also includes an inventory of radioactive waste that is subject to this Convention that is being held in storage at radioactive waste management and nuclear fuel cycle facilities, has been disposed of, or has resulted from past practices. This inventory shall contain a description of the material and other appropriate information available, such as volume or mass, activity and specific radionuclides. The report shall also contain a list of nuclear facilities in the process of being decommissioned and the status of decommissioning activities at those facilities (1).

The DOE's Office of Environmental Management will take the lead, working with the other affected agencies, the NRC, the EPA, and the DOS, in preparation of the National Report. DOE's EM Office has the lead since we have both spent fuel and radioactive waste responsibilities. DOE EM prepared an outline and a table identifying the types of information needed for the report and the data sources. The outline and data source table was discussed and reviewed by the participating agencies and used in briefings to support the ratification process of the Joint Convention. Key assumptions for the U.S. National Report are that the Report use existing information and data and that it be prepared within

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current budget resources. No significant burdens or unfunded mandates for States and industry should result from the Joint Convention.

The U.S. will apply lessons learned from the CNS in preparing the National Report for the Joint Convention. For example, it was recommended during the CNS National Report review process that Rapporteurs and Chairpersons be selected by all the CNS members rather than the Country Groups and then assign the selectees to Country Groups in which their own country was not a member. This would avoid “conflict of interest” issues. It is likely that the format and review process for the National reports for the Joint Convention will be similar to the CNS’s, but currently these guidelines are in draft form.

The U.S. is to participate in international review meetings every 3 years as required by the Joint Convention. Within six months of the Joint Convention’s entry into force, decisions will be taken on the mechanism for establishing each Country Group for the first Review Meeting. Not later than approximately six months before each Review Meeting, an Organizational Meeting will be held to establish Country Groups and to select Group Coordinators and Rapporteurs.

It is proposed that each Contracting Party shall have a reasonable opportunity to discuss the reports of any other party. The following recommendations are proposed in the Draft Guidelines regarding the review process (2): Up to two months before each Review Meeting, all Contracting Parties and observers may submit questions and/or comments on individual National Reports, and these would be distributed to all Contracting Parties. Review starts with a short presentation from the particular Contracting Party whose report is to be reviewed. This Contracting Party would answer the substantive written questions they previously received. There would then be a discussion period on the report and on all questions that have been submitted. This process would be repeated for each National Report. Finally, the Country Group members would discuss and agree to the content of each report to be presented to the Plenary Meeting by its Rapporteur (2). Attached is the schedule for review of the National Reports

as stated under the terms of the Joint Convention. As shown in the attachment, the receipt of the National Reports is officially required 2 years after the Joint Convention is entered into force.

### **CONCLUSIONS**

The Joint Convention has received international support. As of January 31, 2000, 40 States have signed the Joint Convention and 13 States have ratified it (9 with operating nuclear power plants). It is hoped that the U.S. will ratify the Joint Convention in calendar year 2000. The Joint Convention was discussed at several G-7 Economic Summit Meetings and reaffirmed at the 1996 Moscow Nuclear Safety and Security Summit.

The United States has always supported a policy to make nuclear safety an important domestic and international priority. It supported and participated in the Convention on Nuclear Safety and supports the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. Together the Joint Convention, in conjunction with the Convention on Nuclear Safety, will form a joint mechanism to strengthen the worldwide nuclear safety culture. Efforts such as this Joint Convention can impact the safety culture worldwide as countries strive to improve their management of spent fuel and radioactive waste. The U.S., through its participation in the Joint Convention and in working with the other Contracting Parties, can help to harmonize and strengthen international approaches to assessing and managing nuclear risks. The U.S. through its participation in the Joint Convention can also assume a leadership role and help influence the development of nuclear safety programs worldwide.

See attachment at the end of the paper

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## REFERENCES

1. Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, International Atomic Energy Agency Information Circular, INFCIRC/546, 24 December 1997.
2. Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, Guidelines Regarding the Review Process, JC-SFRW/PREP3/DRAFT/Document 2, 1999-07-01.

### TIME CHART

