

## International Conference

11–15 December 2006, Athens, Greece

The *International Conference on Lessons Learned from the Decommissioning of Nuclear Facilities and the Safe Termination of Nuclear Activities* was held from 11 to 15 December 2006 in Athens, Greece. It provided a forum for more than 300 experts to exchange knowledge, experience and good practices in regulation, planning and implementation of decommissioning activities, waste management, decommissioning technologies, social and economic aspects, and decommissioning of small facilities.

The conference also highlighted the need for; (i) implementation of lessons learned in the design, operation and maintenance of new facilities; (ii) definition of clear decommissioning end point with the involvement of all interested parties; (iii) enhancing the regular exchange of lessons learned from decommissioning and facilitate the decommissioning of small facilities in countries with limited financial and human resources; (iv) establishment and management of funding mechanisms supported by realistic cost estimates especially for countries with limited resources and (v) establishment of national and international mechanisms to preserve and maintain the knowledge gained operationally that is important to the safety of decommissioning and from decommissioning experience.

The discussions also showed that immediate dismantling is the preferred decommissioning strategy; straightforward, proven and available decommissioning technologies are generally preferable and lack of disposal



DDG-NS Mr. T. Taniguchi opening the conference.

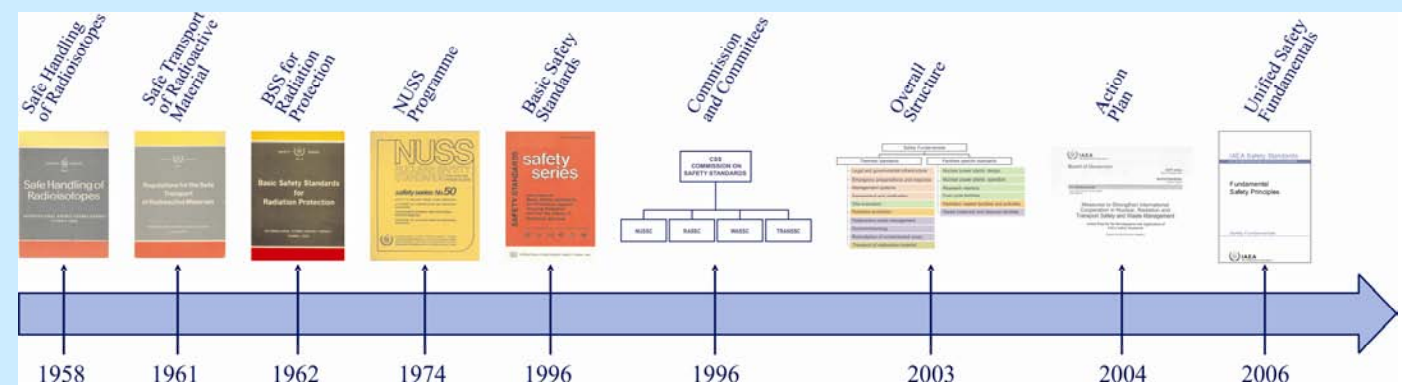
facilities is not a reason for delaying decommissioning. A report on the conference outcomes was presented to the BOG in March 2007.

A report to the Contracting Parties of the Joint Convention; and an update of the International Action Plan on Decommissioning will also be prepared.

The President's report and detailed conference proceedings are available on the IAEA conference web site (<http://www-ns.iaea.org/home/rtws.asp>). The proceedings are envisaged to be published prior to the General Conference in September 2007.

## Safety Standards Timeline

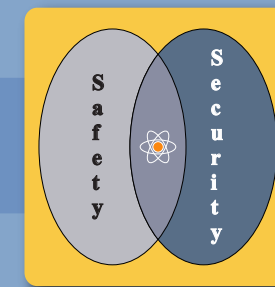
For nearly 50 years the IAEA has been carrying out its statutory functions of developing Safety Standards and providing for their application. Having completed the Action Plan approved by the BOG in 2004, the IAEA is now exploring opportunities for improve its Standards considering feedback from their use in Member States.



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Current safety activities and developments taking place in the Department of Nuclear Safety and Security

<http://www.iaea.org/OurWork/ST/NS>



## Manual for first responders to a radiological emergency

A key current focus of the Incident and Emergency Centre is the training and preparation of first responders for radiological incidents and emergencies, including situations involving the malicious use of radioactive materials.

In almost all radiological emergencies, first responders (i.e. police, fire fighters, medical) and local officials (supported by national officials) perform the initial response. Radiological emergencies are rather rare; therefore, local responders have only little or no experience which often leads to an inadequate response.

The IAEA, in recognition of this critical need, has developed a Manual for First Responders to a Radiological Emergency with the objective to provide practical guidance for those responding within the first few hours of a radiological emergency. This guidance document is co-sponsored by the Comité technique international de prévention et d'extinction du feu (CTIF), the Pan American Health Organization (PAHO) and the World Health Organization (WHO).

The Manual for First Responders provides guidance in the form of action guides, instructions, and supporting data that can be easily applied by a State to build a basic capability to respond to a radiological emergency. The guidance also contains practical procedures and tools on the response to a radiological emergency again easily and quickly adaptable by Member States to prepare first responders to respond adequately to a radiological emergency. The Manual can be used for training



Radiological Dispersal Device Exercise in Indonesia

purposes at the preparedness stage as well as during the response.

The Manual for First Responders also covers the basic concepts and terms needed by first responders and text that can be easily converted into national guidance for use by first responders. One section contains action guides for the incident commander (IC) and the overall direction of the first response, while another section contains action guides for specific responders and teams that will respond within a short time under the direction of the IC. The action guides in these two sections serve as a basis for training. The training materials for first responders were successfully tested during the national exercise of response to a radiological dispersal device (RDD) in Indonesia in September 2005.

## The IAEA's Testing Laboratory for Radiation Measurement, Monitoring and Protection — the first UN laboratory accredited to the International Standard ISO17025

The Policy and Programme Support Section (PPSS) within the Division of Radiation, Transport and Waste Security (NSRW) has been operating, for many years, a laboratory (the Testing Laboratory) for radiation safety monitoring of individuals and workplaces.

The establishment of a quality management system, as required in the International Basic Safety Standards (the BSS), started in 2000 to cover all measurement methods of the laboratory. This system is based on the international standard ISO17025 (General requirements for the competence of testing and calibration laboratories).

PPSS has gone through accreditation to demonstrate the proficiency of staff, the thoroughness of method descriptions and, most importantly, the correctness of the reported results. Accreditation is a third party confirmation of measurement performance quality, which in Member States (such as Austria) is often done through governmental organizations. The Austrian authority was chosen not only because of its closeness to the laboratory's location, but also because this organization is recognized in Europe through the EA (European Cooperation for Accreditation) and worldwide through the ILAC (International Laboratory Accreditation Cooperation) and the IAF (International Accreditation Forum). Consequently, the accreditation certificate issued by the Austrian authority is recognized as valid worldwide.

The accreditation confirms the quality of the radiation monitoring services provided to the Departments of the IAEA operating radiation sources or handling radioactive isotopes as well as individuals under contract, experts, trainees, visitors and any other persons who may be exposed to radioactive materials, other sources of ionizing radiation or to the danger of intake of radioactive materials due to activities conducted by the IAEA or under its supervision or control.

In addition, the quality management system will be a 'model' for MEMBER STATES in their undertakings to reach compliance with IAEA safety standards within the IAEA's Technical Cooperation projects for Strengthening Technical Capabilities for the Protection of Health and Safety of Workers Occupationally Exposed to Ionizing Radiation (TSA-2).



The implementation process began in 2000 with the Section recognizing the necessity and benefits, and motivating the staff of the testing laboratory to participate actively in the creation of the system.

Work started with an analysis of all processes within the testing laboratory. A need for an external expert was identified to help staff document the already existing measurement methods into procedures and working instructions. The system was developed over the following years, ending with the first internal audit (supported by the Office of Internal Oversight Services — OIOS) and the first management review in 2002. Fine tuning of the documents was done with another external expert. Incorporation into everyday laboratory practice could then be accomplished by the newly appointed Quality Manager.

The dedicated work of all staff members during the next two years led to improvements by planned validation of measurement routines and estimation of measurement uncertainties. The knowledge gained through this process is transferred to Member States upon their request.

These improvement programmes were supplemented and checked through two additional audits in 2004 and 2005, both followed by management reviews.

The audit in 2004 was done by two trained testing laboratory auditors from the Agency's Laboratories in Seibersdorf, thus supporting the Cross Cutting Activity Quality Management, established by the DG through SEC/NOT/1900 in March 2002. The audit in the year 2005 was performed by an external expert, who is operating a similar, accredited, testing laboratory for radiation protection monitoring in Vienna.

In May 2005, the testing laboratory applied for accreditation to ISO17025 through the Austrian Accreditation Board. The accreditation audit was done in May 2006, involving three auditors.

The accreditation certificate, received in December 2006, closed the process of establishing the quality management system. This provided many benefits, such as increased trust of the customers in the accuracy of the radiation monitoring results reported by the testing laboratory; streamlined managerial and measurement processes; evidence of calibrated and controlled measurement instruments; traceability of results to international SI units; validated methods with a well-established uncertainty and, supporting all of this, a well-trained, knowledgeable and motivated staff.

The knowledge gained during the accreditation process was put into a draft Safety Guide ("Application of the Management System for Technical Services in Radiation Safety") and also into a training course for Member States.

