

Trip Report: IAEA IRRS Mission Follow-Up to the Republic of Korea

Travelers: Michael Weber, OEDO

Dates: December 6-20, 2014

Purpose: To serve as the Deputy Team Leader for the IAEA IRRS Mission Follow-up to the Republic of Korea.

From December 6-20, 2014, Michael Weber participated in the International Atomic Energy Agency (IAEA) Integrated Regulatory Review Service (IRRS) Mission Follow-Up to the Republic of Korea as the Deputy Team Leader. The Mission was supported by an international team of 16 senior nuclear safety and radiation protection experts from 15 IAEA Member States, one observer, and four IAEA staff members (The Team). The Team reviewed progress made in the ROK following the original 2011 Mission. Georg Schwarz, Deputy Director General of the Swiss Federal Nuclear Safety Inspectorate, served as the Team Leader.

The Team observed regulatory activities and met officials and staff from Korea's Nuclear Safety and Security Commission and related bodies. The review also included visits to the Korea Atomic Energy Research Institute (KAERI) Irradiation Facility, the Korea Nuclear Fuel (KNF) fuel cycle facility, the Korea Radioactive Waste Agency (KORAD) low- and intermediate-level waste disposal facility, the Konyang University Hospital and the DHI Changwon factory.

The Team concluded in its preliminary report that the Republic of Korea had addressed almost all issues that were raised during the earlier mission. Actions taken since then include the establishment of an independent and competent regulatory body, NSSC, which is well supported by two technical organizations, the Korea Institute for Nuclear Safety (KINS), and KORAD.

In addition to following up on issues found in 2011, the team reviewed additional areas, including regulatory oversight of all facilities related to the use of radiation, the protection of workers, patients and the public. The Team also identified a series of good practices and made recommendations to further improve the regulatory system.

Good practices identified by the IRRS team include the following:

- Use of a tracking system that provides real-time information on the location of highly radioactive sources, and
- The establishment of a comprehensive, coordinated approach that ensures that there are no conflicts between safety and security measures.

The mission identified some issues in need of attention or improvement, including the following:

- The regulatory body should be given oversight of licensees' safety culture and integrated management systems;
- The regulatory body should also be given authority to require and assess periodic safety reviews for fuel cycle facilities and radioactive waste management facilities;
- The radiation safety framework for workers in non-nuclear facilities, patients and the public should be improved;
- Operators of fuel cycle facilities should be required to conduct integrated safety assessments, including chemical and industrial hazards; and

- The regulatory framework should be regularly updated to ensure that it is in line with the latest international safety standards.

The Team noted that the government had taken several steps to improve public information and involvement in nuclear safety, and that it had applied lessons learned from a 2012 case that revealed that domestic suppliers to the nuclear industry had falsified quality assurance documents. The Team also emphasized that the country needs to further strengthen its regulatory program by devoting sufficient resources to it, and by enhancing intergovernmental coordination and improving public involvement.

A final report will be submitted to the Republic of Korea's Government in about three months.

The NSSC told the IRRS mission that it will make the report available to the public.