

후쿠시마 각료회의

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대 표 연 설



원자력안전위원회

NUCLEAR SAFETY AND
SECURITY COMMISSION

원자력안전위원회 위원장 강 창 순

Keynote Speech

Chairman of NSSC, Republic of Korea

● Opening

Co-Presidents, Koichiro Gemba and Maximus Ongkili,
Secretary General of IAEA, Yukiya Amano, and
distinguished delegations!

On behalf of the Government of Korea, I would like to deliver my heartfelt appreciation to the Japanese Government and the IAEA Secretariat for assembling this wonderful congregation of the Fukushima Ministerial Conference on Nuclear Safety, and it is a great personal pleasure and privilege for me to be invited here.

On this occasion, I would like to admire the expeditious recovery activities conducted by Japan after the unfortunate accident at the Fukushima Dai-ichi Nuclear Power Plant, and successful efforts of Japan and IAEA to draw the lessons learnt from the Accident and share them with the rest of the world. In particular, I would like to congratulate the newly-established NRA (Nuclear Regulation Authority) for robust nuclear regulatory services and Mr. Tanaka for his excellent leadership.

② **Actions Taken after the Fukushima Accident by Korea**

Messrs. Presidents and distinguished delegations!

As the nearest neighboring country to Japan, right after the 3-11 Fukushima Accident, the Government of Korea took the immediate step of assessing the nature of the Accident. A team of 73 experts was formed to assess the safety of all NPPs in operation as well as under construction.

The team recommended a total of 50 action items. They were sequentially drawn in four steps. The first step was to protect NPPs from natural disasters, by providing appropriate countermeasures like high seawall and water-proof sealing. The second step was to avoid progress toward severe accident conditions, by securing reactor cooling and power supply capabilities. The third step was to minimize radioactive releases to the environment, by ensuring the containment integrity using proper depressurization/vent and hydrogen control systems. And the fourth and last step was to strengthen emergency plans against extreme accidental conditions considering multi-unit accidents, by establishing a strong system of chain-of-command.

All 50 action items will be implemented by 2015, and will cost more than 1 billion US dollars.

In addition, the issue of establishing a stand-alone nuclear regulatory organization, independent from the Prime Minister's Office was raised. NSSC (Nuclear Safety and Security Commission) was accordingly formulated on October 26, 2011 for its improved independent and transparent regulatory activities. The Chairman of NSSC is in ministerial level and directly reports to the President. The missions of NSSC are two-fold: domestically, holistic management of national nuclear safety, security and non-proliferation as a whole; and internationally, contribution to strengthening of the global regimes for them as a responsible partner.

● Strengthening of Defense-in-Depth after Fukushima Accident

Messrs. Presidents and distinguished delegations!

Defense-in-depth has been the most important fundamental philosophy of reaching a high level of safety in nuclear power technology. It is to put multiple barriers between radioactive materials and humans/environment, and to take multiple layers of protective actions. It has been developed and refined by reflecting accumulated operational and accident experiences from such as TMI-2 and Chernobyl Accidents. After the Fukushima Accident, the strengthening of the defense-in-depth strategy on nuclear safety has been called upon more than ever, which I personally think, and is one of the most important lessons learnt from the Accident.

There are three: technical, organizational, and human factors in strengthening the concept of defense-in-depth. Technically, on top of robust design with sufficient safety margins, the proper site selection process is the first line of defense-in-depth in engineering, and most economical way of achieving the desired level of safety. Hence, great efforts should be exercised in NPP siting process; more stringent selection criteria and elaborate evaluation methodologies. In the manufacturing/construction stage, the desired reliability and quality of structures, systems and components needs to be assured by applying tight *pre-operational inspection and quality assurance* programs.

Let me briefly talk about organizational factor. There are two tracks in managing nuclear safety: operator track and regulator track. The necessity of establishing *independence in the regulator track* has long been discussed. Independence from outside influence and pressure, especially from operators, other Government organizations, politics, media and environmentalists has been the key element of successfully exercising the two-track system.

In human factors, the major concern is *updates on safety culture*. In particular, leadership and management, operating experience feedback, complacency, and subcontractor control have been identified as the key human-factor challenges after the Fukushima Accident.

In summary, I would like to emphasize that after the Fukushima Accident, we have learnt the importance of strengthening the defense-in-depth, especially in: siting process, preoperational inspection and quality assurance, regulatory independence, and safety culture updates.

● Closing

Messrs. Presidents and distinguished delegations!

After the Fukushima Accident, the Government of Korea once again recognized the primary concern of restoring public trust and confidence on nuclear safety by enhancing transparency and effectiveness of communication. One of our efforts was the “Unified Radiological Emergency Drill” which was conducted in Ulchin last October. It was the first national-scale emergency drill after the Fukushima Accident.

The Government of Korea also recognizes that the impact of nuclear accidents transcends national boundaries and sends a direct blow to neighboring countries. Therefore, it is important to set up a close regional emergency regime prepared against and respond to a nuclear accident. The C-J-K (China-Japan-Korea) cooperation through TRM (Top Regulators’ Meeting), which is held in Seoul last month, is a good example.

Messrs. Presidents and distinguished delegations!

The Government of Korea fully supports IAEA's pivotal roles in strengthening the global nuclear safety regime. In particular, to draw and implement the lessons learnt from the Fukushima Accident, it is important that Member States go hand-in-hand in cooperating with each other. In this aspect, IAEA's activities such as suggesting Action Plans on nuclear safety, enhancing peer review services to boost implementation performance, holding International Expert Meetings, and operating the Action Plan website have been very timely, which are well appreciated by many Member States.

Here, in conclusion, I would like to deliver the Government of Korea's willingness and commitment to actively participate in sharing our accumulated knowledge with others, further assessing mid- and long-term effects of the Accident including the environmental impact, and developing recovery and decommissioning activities closely with NRA and IAEA. Again, let me remind you one of the two missions of NSSC is the contribution to strengthening of global nuclear safety regime as a responsible partner.

Thank you for your attention!