

Recent Activities in INRA

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1. Introduction

Nowadays, many countries announce their plans to increase the nuclear energy use in wide range, especially in electric power generation. The worldwide trend to increase nuclear energy use in electric power generation is due to recent rapid increase in energy demand for economic growth, the reduction of greenhouse gas emissions and the advance in nuclear technologies resulting in enhancement of the safety level and the performance of nuclear power plants. In the situation, the international nuclear community is continuously emphasizing on the fact that every country pursuing the nuclear energy use must place the nuclear safety in their top priority. With this priority, the international nuclear community has been making effort to ensure and to improve the global nuclear safety through Conventions (Convention on Nuclear Safety and etc.), the development and application of international safety standards and the international cooperation. Among the efforts for global nuclear safety improvement, this paper will show the recent activities of INRA (International Nuclear Regulators' Association), which has a significant impact on international community of nuclear safety.

2. Recent INRA Activities

The INRA was established as an association of top regulators in 1997 to influence and enhance nuclear safety and radiological protection from the regulatory perspective. The members include the most senior officials of well-established independent national nuclear regulatory organizations. Previously, it had 9 members from 8 member countries; U.S. (NRC), France (ASN), Sweden (SKI), U.K. (NII), Canada (CNSC), Germany (BMU), Spain (CSN) and Japan (NSC and NISA). As of March 2006, the Director General for Atomic Energy Bureau in MOST of Korea became the 10th member of the INRA. [1]

As a member, Korea has participated from its first attendance in the 19th Regular Meeting held in France on September 2006 to the most recent 22nd Regular Meeting in Washington DC on March 2008. In this paper, the major discussion topics in the recent regular meetings will be introduced, which cover the 21st and 22nd meetings.

Discussion has been focused on the following topics during the 21st meeting, which was held in Cordoba, Spain on October 2007. [2]

- The status of nuclear safety in member states
 - Safety standards harmonization
 - New nuclear power plants build plans
 - Seismic effect on nuclear power plant
 - IRRS (Integrated Regulatory Review Service) mission
 - Recent incidents/accidents in member states
- Nuclear safety infrastructure in developing countries
 - Criteria for supporting the developing countries in building their nuclear safety infrastructure
- ICRP new recommendations
 - Dose constraints and reference level
 - Effects on regulatory activities
- Nuclear security
 - Emphasizing the nuclear security in all INRA member states after 9/11
 - Uranium pellet loss / recovery accident occurred in Juzbado nuclear fuel fabrication facility, Spain
- The 4th CNS (Convention on Nuclear Safety) National Report and Review Meeting
 - Effective and efficient process of the Review Meeting
- INRA chairmanship

At the 21st meeting, U.S. was announced to have a chairmanship of INRA during the year of 2008. Also, it was agreed tentatively that Korea would be the chairman in the year of 2009.

During the 22nd meeting on March 2008, discussion has been focused on the following topics. [3]

- The status of nuclear safety in member states
 - New hires for nuclear regulatory activities
 - Activities related with new nuclear power plants
 - Communications with the public
 - Recent incidents/accidents in member states
- Emergency preparedness and response
 - Activities after 9/11 in member states.
 - Large aircraft crash impact on nuclear power plants
 - Emergency management system
 - Large fire management in chemical plants

- Operating experience feedback
 - Steps for operating experience feedback
 - Future challenges
 - Constructing the experience sharing network among the INRA member states
- Nuclear safety infrastructure in developing countries
 - Criteria for supporting the developing countries in building their nuclear safety infrastructure
 - Relationship between IAEA and INRA in supporting the developing countries

With the membership of INRA, Korea is now recognized internationally to have high level in the area of nuclear safety regulation. In addition, it is expected that the membership of INRA will have positive feedback to the further enhancement of national nuclear safety and its related nuclear technology development.

3. Conclusions

From the recent activities in INRA, the following international trends in nuclear safety regulations could be identified and summarized.

- Strengthening the regulatory effectiveness and independence
 - IAEA's IRRS mission
 - Reorganization of regulatory body
- Emphasizing the nuclear security
 - Safety and security harmonization
 - Enhancing the emergency preparedness and physical protection system of nuclear power plants
 - Large fire management in nuclear power plants
- Nuclear safety standards harmonization
 - MDEP (Multinational Design Evaluation Program) activities
 - Harmonization activities in EU
 - Application of IAEA's safety standards to their national regulatory system
- Supporting the building of nuclear safety infrastructure in developing countries
 - Continuous attention to nuclear safety in the developing countries, especially who are pursuing the nuclear programmes

Recent activities for nuclear safety in INRA are briefly introduced through the paper. These international activities are important to ensure and to improve the nuclear safety in Korea and to enhance our national prestige in the international nuclear community. Therefore, it is essential to pay attention to the international activities to develop strategic plans to cope with international situations.



Fig. 1. The 20th INRA Meeting at Madrid, Spain

REFERENCES

- [1] Terms of Reference for INRA
- [2] INRA 제 21 차 정기회의 참가결과 보고서, KINS/DR-1755
- [3] INRA 제 22 차 정기회의 참가결과 보고서, KINS/DR-1855