The New Operation Scheme for Asian Technical Center (ATC)

ISOE ASIAN ALARA SYMPOSIUM 2014
on
Occupational Exposure Management at Nuclear Facilities

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ISOE Asian Technical Center (ATC)
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New Operation Scheme for Asian Technical Center (ATC)

・Japan Nuclear Energy Safety Organization (JNES) was in charge of ISOE ATC activities as an independent administrative agency. JNES, however, has been merged into the Nuclear Regulation Authority (NRA), as a part of restructuring of the government organization to strengthen the nuclear regulation system on March 1, 2014.

Since NRA cannot continue to operate the ATC with being a regulatory authority, managing organization of ATC should be altered.

・ The operation of the ATC has been transferred to Nuclear Safety Research Association (NSRA)

New Asian Technical Center

- **Nuclear Safety Research Association (NSRA)**

  Operational Secretariat

President of NSRA
Genki Yagawa

- Location：5-18-7 Shimbashi, Minato-ku,
  Tokyo, 105-0004, JAPAN
  (the Address of NSRA)
- Head of ATC: Aiji Yamato
- National Coordinator of Japan: Kenichiro Kaneda
- New ATC website : www.nsra.or.jp/isoe/

What is NSRA ? (1)

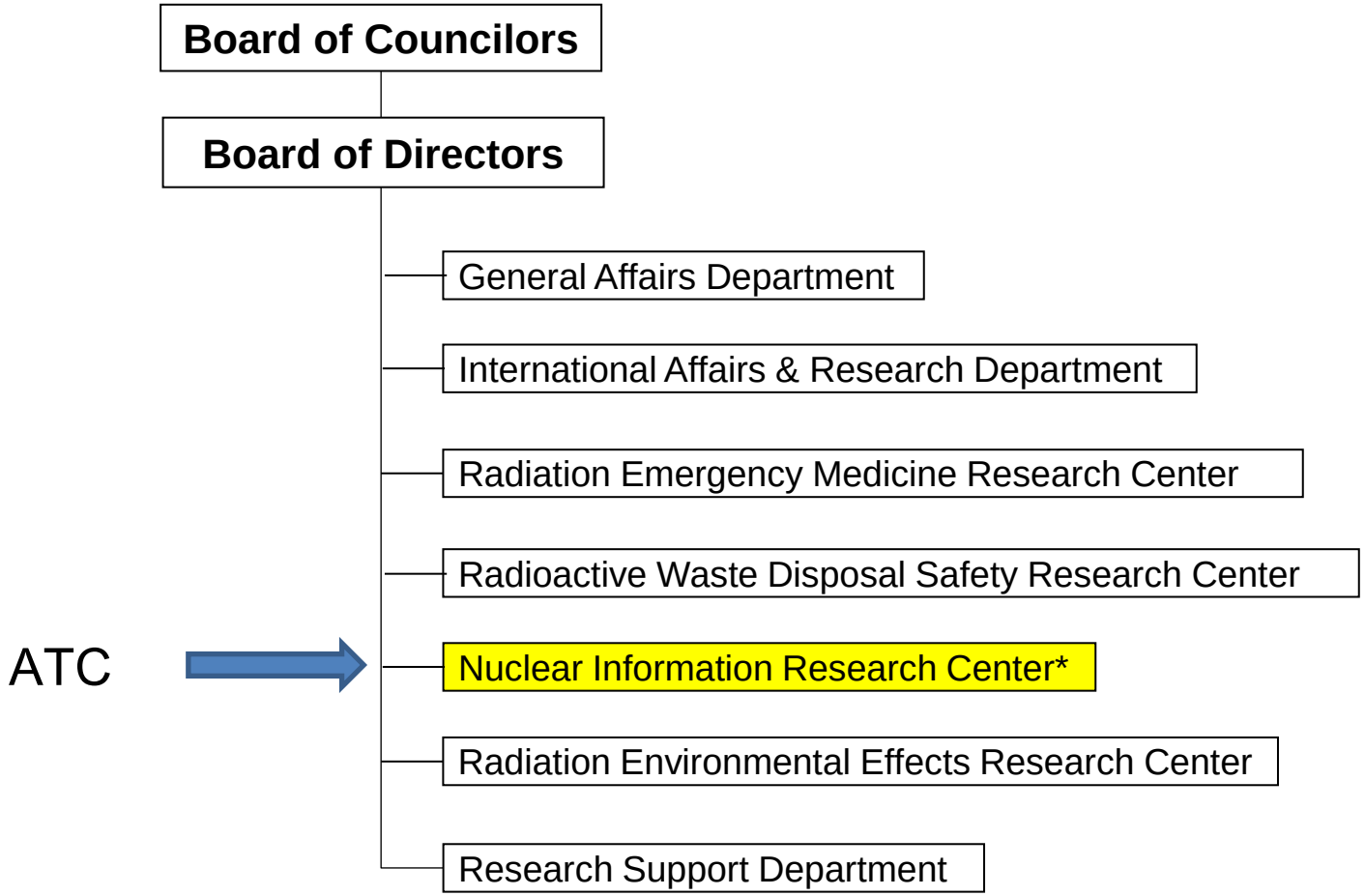
- Nuclear Safety Research Association (NSRA), established under the auspices of the Prime Minister and the Minister of International Trade and Industry on June 1, 1964, is an independent, non-profit research organization on the nuclear safety.
- NSRA was newly re-authorized by the Prime Minister in April, 2011, under the new public interest corporation system.
- From the time of the establishment, NSRA is characterized as a neutral and scientific organization because it is assigned the mission to deal with the safety aspects of peaceful use of nuclear energy. It is expected to have no special relationships with either the industry or the governmental side.

What is NSRA ? (2)

- NSRA has been dedicated itself to the very wide range of nuclear safety research activities such as nuclear installations safety, radiation protection, radioactive waste disposal, emergency preparedness, international cooperation and dissemination of information related to nuclear safety.

- NSRA activities are financed by the contribution from the member organizations and contracts with government agencies and industries.

Organization Chart of NSRA



*Nuclear Information Research Center of NSRA is in charge of ATC.

Major Activities and Services in NSRA (1)

A: Survey and Research

a. Emergency preparedness

- Radiation emergency medicine
  (training, establishment of network in all of NPP sites, etc.)

b. Radioactive waste disposal

- Geological disposal of HLW (safety regulation, migration of radionuclide, long term safety of artificial barriers, institutional control, etc.)

c. Radiation protection, radiation effects on human being

- Low radiation dose effects on human being
- Radiation protection of public, workers

Major Activities and Services in NSRA (2)

d. IAEA safety standard

- Radioactive waste management
- Nuclear facility
- Radiation safety

e. International Cooperation Research

- "The Nuclear Researchers Exchange Program" for Asian countries (MEXT* Project)
- Forum for Nuclear Cooperation in Asia : FNCA (MEXT/CAO**)

*MEXT: Ministry of Education, Culture, Sports, Science and Technology in Japan
**CAO: Cabinet Office of Japan

f. Environmental effect

- Atmospheric diffusion in nuclear plant site

g. Safety of nuclear installations

- Nuclear fuel cycle (policy, basic issues, etc.)

Certification of decontamination workers in the environment of Fukushima Prefecture

Local Government

Special education on

- Effects of ionizing radiation on human body
- Exposure dose control
- Prevention for dispersion of radioactive materials

etc.

Operational managers and Site supervisors of Decontamination companies

Qualification through Test and Training

Allowed to start decontamination works

Figure.1 Application of the Radiation Exposure Dose Limit after the Completion of Step 2

3/14 11/1

Ordinance on Exemption	Revised Ordinance on Exemption + Article.7 of Ionizing Radiation Ordinance		Articles 4 & 7 of Ionizing Radiation Ordinance + transitional measures for the Ordinance to abolish the Ordinance on Exemption
During emergency work period 250mSv (Ordinance on Exemption)	Workers starting to be engaged in emergency work after November 1	During emergency work period 100mSv (Article .7 of Ionizing Radiation Ordinance (emergency radiation exposure dose limit))	50mSv/year and 100mSv/5 years (Article 4 of Ionizing Radiation Ordinance (Normal radiation exposure dose limit))
		Workers responding to troubles with reactor cooling systems and radioactive materials release suppression systems. During emergency work period 250mSv (Revised Ordinance on Exemption)	
	Workers who have been engaged in emergency work before November 1	During emergency work period 250mSv (Transitional measures for the revised Ordinance on Exemption) *Of 20,000 workers, 167 workers had been exposed to radiation doses of more than 100mSv (incl. 146 TEPCO employees)	Workers engaged in maintaining functions of reactor cooling systems and radioactive materials release suppression systems: During emergency work period 100mSv (Article.7 of Ionizing Radiation Ordinance)
			Workers who possess highly specialized knowledge and experience that are essential for maintaining functions for cooling reactor facilities and of the radioactive material release suppression system, and who have been exposed to radiation doses more than 100 mSv: Emergency work period until 30 April 2012 250mSv (Transitional measures for the Ordinance to Abolish the Exemption) *Limited to TEPCO employees (approx. 50)

Temporary raising of emergency dose limits

After the start of accident, radiation protection of workers was implemented in accordance with the Ionizing Radiation Ordinance. However, consideration for the security of the general public and the prevention of expansion of nuclear disaster, led to the decision to raise the emergency dose limit in the affected plant to 250 mSv from 100 mSv. This was defined in the exemption ordinance of ionizing radiation corresponding to the situation derived by the 2011 Tohoku-Pacific Ocean Earthquake (Exemption Ordinance i.e. Ministry of Health, Labour and Welfare (MHLW) Ordinance 2011-23). This Exemption Ordinance was issued on 14 March 2011, and became effective on 15 March 2011.

Temporary raising of emergency dose limits

Concerning the increase of the emergency dose limits, the points below were taken into consideration:

- According to the ICRP recommendation, the emergency dose limit for the “emergency exposure situations in the serious accident” should not exceed approximately 500 mSv, with the exception in the case of life saving actions.
- It is recognized that an exposure dose under 250 mSv may not cause acute radiation symptom.
- The Radiation Council under the MEXT agreed that the dose limit was appropriate.

The abolishment of the exemption ordinance

The exemption ordinance was abolished when Step 2 of the "Road Map towards the Restoration from TEPCO Fukushima Daiichi NPP Accident", which aimed to achieve long-term stability of the reactors was completed on 16 December 2011. The dose limit exemption of 250 mSv was applied until 30 April 2012.

Thank you for your attention