NEWSLETTER

RADIOACTIVE WASTE MANAGEMENT

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The Workshop on RWM-FNCA 2000 to be held this December

The Workshop on Radioactive Waste Management (RWM)-FNCA2000 is scheduled for December 12-14, including a technical tour to relevant facilities in Sydney, Australia. The Workshop will be hosted by Australian Nuclear Science & Technology Organisation (ANSTO) as a local host and the Science and Technology Agency (STA) of Japan, in cooperation with Japan Atomic Industrial Forum, Inc. (JAIF).

In the coming Workshop, considering the radiation accident by spent cobalt-60 occurred in Thailand last February, the special one-day session on "Spent Radiation Sources (SRS) Management" would be organized to review the SRS management status in each country. Based on the report from each participating country, discussions will be focused on the problems concerning the regulatory and technical aspect of the SRS management, seeking what role FNCA framework would be able to play in improving the SRS management in each country.

Due to the effect of this special one-day session, sub-meeting will be held shortly and sequentially after the first day of the Workshop.

Overall Schedule

Monday, 11

Arrival of Foreign Participants at Sydney

Tuesday, 12

The first day of Workshop

Sub-meeting

Wednesday, 13

The second day of workshop

Thursday, 14

The third day of workshop

Friday, 15

Technical Tour to ANSTO

Saturday, 16

Departure of Participants from Sydney

Tentative Program

<1st day>

-Country Report on RWM status/progress

In each country

-Submeeting

Reduction Technology of RW

Database format on RW /SRS

<2nd day>

-Special session on SRS Management

<3rd day>

-Round table discussion

Consolidated report

Proposal related to SRS Management

3-year Plan

The Person in Charge of Workshop

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Topics in Japan

New Japanese RWM Project Leader was Nominated

Dr. Toshiso Kosako was nominated as a new Japanese RWM Project Leader. Mr. Shingo Tashiro retired from Radioactive Waste Management Center in March 2000.

Dr. Toshiso Kosako is an associate professor at Research Center for Nuclear Science and Technology, in the University of Tokyo and works as one of the ICRP member, a member of Japanese radiation protection board, a technical advisory member of nuclear safety in Science and Technology Agency of Japanese Government etc.

His main interests lie in radiation safety, radiation dosimetry and radiation shielding. He covers the researches of the reassessment work of Hiroshima and Nagasaki Atomic-bomb survivors' dosimetry, radiation shielding of reactors and large accelerators, neutron spectroscopy, radiation streaming experiment, sky shine experiment, radioactive waste safety management and radiation protection.

Dr. T. Kosako with Dr. D. Beninson
(main commission member, former ICRP chairman)
at the ICRP meeting in October,2000.

His laboratory consists of 4 research assistants, 1 researcher, 7 technicians, 22 students and 2 part-time technicians, covering 1.7MV Tandetron accelerator, Co-60 and Cs-137 irradiation facilities, sub-critical assemblies, whole body counter etc. These equipment are used for collaborate utilization in the University.

His hobbies are manufacturing of small goods and swimming.

Some Troubles about RWM in Japan

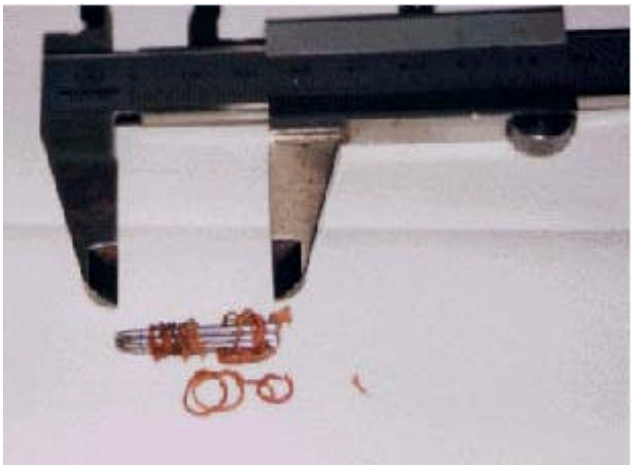
In April, iron works in Wakayama Prefecture found the spent RI source (Cs137, Am241-Be. For water density meter use) in the scrapped metal container imported from the Philippines.

In May, another iron works in Hyogo Prefecture also found the spent RI source (Ra-226. For medical use) in scrapped metal.

In June, it was found that Monazite (one of the radioactive mineral including ThO_2 in a very small quantity) was stored in Nagano Prefecture by one corporation illegally without any notice to government.

These troubles did not cause any health problems, but give alarm on the possibility that radioactive material stolen into the environs of people's life.

Some countermeasures against these troubles are under discussion among the people and regulatory organization.



Spent RI source found in Hyogo Prefecture
(Ra-226, 4 needles for medical use)

Topics from FNCA

Korea

RWM's Project Leader of Korea was Nominated

Dr. Myung-Jae Song
General Manager, R&D Division, Nuclear Environment Technology Institute (NETEC), Korea Electric Power Corporation (KEPCO)

Invitation for the Subscription of LLRW Disposal Facility Site

Korean government has made much effort to obtain a LLRW disposal site for the last decade.

However, they have failed several times due to the strong objection from the local residents and the environmentalists as well as due to the low confidence on the safety issues. And the task was originally performed by Korea Atomic Energy Research Institute (KAERI).

Nuclear Environment Technology Institute, a special division of Korea Electric Power Corporation is an organization that has taken the responsibility from the KAERI on behalf of the government since 1997.

NETEC has decided to open the subscription for the repository candidate site. The open subscription is believed to be the most transparent way to communicate with the local residents and environmentalists. NETEC has officially announced the open subscription system to the nationwide local governments last June. The deadline for the subscription is February, 2001.

The site will be mainly composed of acceptance/inspection buildings.

If a site is successfully secured on time, the low level waste burial facilities will be open by 2008, and the interim spent fuel storage facilities will be available by 2016.

While the site selection process is going on NETEC and Korean government will be continuing hard efforts for the public acceptance, and will endeavor their best efforts to enhance the safety features.

Thailand

Seminar on Radioactive Waste Program was held in Bangkok, in Cooperation with Japan

Mr. Banchong Wangcharoenroong
Director of RWM Division,
Office of Atomic Energy for Peace (OAEP)

The special one-week seminar relating to the Radioactive Waste Program was held at OAEP in Bangkok, Thailand. From August 7 to August 11, two lecturers, Prof. Toshiso KOSAKO and Dr. Nobuyuki SUGIURA, of the University of Tokyo did the following lectures based on the sponsorship of STA (Science and Technology Agency) of Japan. About 70 persons from OAEP, universities, hospitals and institutes attended the lectures.

A Photo of Prof. Kosako's Lecture in Thailand

[Lecture]

A: Principle of Radiation Safety

B: Radiation Effect

C: Experience of JCO Accident

D: Emergency Preparedness

E: Radiation Safety of Radioactive Waste

F: Spent Radiation Source

[Group Discussion]

1: Regulatory System in Thailand

2: Preparedness for Radiation Accident

3: Radioactive Waste Management in Thailand

It was very informative lectures for us. We got the mutual understanding through the overall discussion successfully.

Vietnam

Evaluation of IAEA's TC Project on "Development of Infrastructure for Management of Radioactive Waste in Vietnam

Dr. Tran Kim Hung
Director, Department of International Relations and Planning, VAEC

Vietnam Atomic Energy Commission (VAEC) has just now completed the IAEA's Tc Project on "Development of Infrastructure for Management of Radioactive Waste in Vietnam". A team of experts from IAEA has evaluated the implementation and impact of the project.

This project has taken four years of implementation from 1995 to 1999 and France was the donor country of this footnote-type TC Project of IAEA. The objectives of the project are to formulate the national policy and legal framework and to establish a technical infrastructure for radioactive waste management.

This project has obtained successful results and good impact. The technical infrastructure for radwaste treatment was established in Dalat Nuclear Research Institute and the equipment effectively operated for conditioning and cementation of long time collected radwaste from nuclear technique application and research reactor operation in southern Vietnam. The project also gave the benefit of manpower strengthening and of the formulation of the regulatory system for radioactive waste management.

Australia

Radioactive Waste Management at the Australian Nuclear Science and Technology Organisation (ANSTO)

John Harries, Leader,

Environmental Physics Group, ANSTO

ANSTO is Australia's national nuclear organisation and the centre of Australian nuclear expertise. ANSTO is located at Lucas Heights about 40 km southwest of Sydney. ANSTO has a 10 MW heavy water research reactor (HIFAR) and an associated radiopharmaceutical production facility. A contract has been signed for a multipurpose 20 MW research reactor which, amongst other uses, will provide for radiopharmaceutical production and neutron beam research.

Most of the radioactive waste that has been generated at Lucas Heights over more than 40 years is stored on-site. This inventory represents some 30% of the Australian national inventory of low level and short lived intermediate level waste and some 40% of the long lived intermediate level waste.

In 1995, ANSTO issued its radioactive waste management policy which made a commitment to:

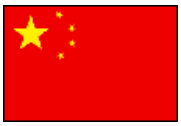
(a) Complying with all regulatory requirements;
(b) Ensuring that radiation dose rates were kept as
low as reasonably achievable (the ALARA principle); (c) Disposing of waste when appropriate disposal routes are available; and (d) being in accord with international best practice.
An extensive audit was carried out of ANSTO's waste management facilities and practices. As the result of this audit, 24 recommendations were made and these became the basis for an integrated Waste Management Action Plan, a six-year project, which is scheduled for completion in 2002.

Solidification of the intermediate level liquid waste has been a major priority of the Waste Management Action Plan. This waste is generated during the production of molybdenum-99 for radiopharmaceutical use. Routine processing of the liquid waste in a hot cell process commenced in 1999 and to date about 1.9 m^3 of liquid waste has been converted to a solid.

Another project is under way to convert this solid waste into a more durable waste form suitable for long term storage or disposal. Laboratory scale testing established the feasibility of producing Synroc with a high waste loading and its performance advantage over cement.

Aerial View of ANSTO

management policy is minimization of radioactive waste generated and stored. This is being by a number of strategies: for example, in one radioisotope production area a threefold reduction in waste volume has been achieved by separating non-radioactive waste from radioactive waste at the source.



China

RWM's Project Leader of China was Norminated

Mr. Qiao Shurong
Director, Division of Environment Protection and Emergency, Department of Safety, Protection and Health, CNNC

The Northwest Repository in China is Ready for Receiving Waste

The first low and intermediate level repository is located at the northwest of China. This repository is mainly constructed for receiving the waste from the nuclear industry produced in the past years.

The planned capacity of the repository is 200,000 m^3, the first phase is 60,000m^3 and 20,000 m^3 has been constructed now.

The Beilong Repository has been Constructed

The second low and intermediate level repository is named Beilong which is located in Guangdong Province, China. This repository is so called South repository which is near the DaYa Bay NPP and LingAo NPP. Beilong repository is constructed for receiving low and intermediate level waste from NPP and isotope application.

The planned capacity is 200,000 m^3, the first phase is 80,000 m^3, among those 8,800 m^3 has

Highlight in 2000

The First Forum for Nuclear Cooperation in Asia (1st FNCA) held in Bangkok, Thailand

The First Forum for Nuclear Cooperation in Asia (1st FNCA) was held successfully during November 10-15, 2000 in Bangkok, Thailand, co-sponsored by the Ministry of Science, Technology and Environment of Thailand (MOSTE) and the Atomic Energy Commission of Japan (AEC).

Ministerial level representatives and senior officials from Australia, China, Indonesia, Republic of Korea, Malaysia, the Philippines, Thailand, Vietnam and Japan participated in the FNCA, the International Atomic Energy Agency (IAEA) also attended as an observer. The basic theme was "Future Nuclear Energy and Its Safety in Asia" to lay more stress on the practical operation of the cooperation activities under the FNCA framework.

Besides the country paper presentation from the Delegates of FNCA countries, there were active discussions on efficient and effective ways of cooperation and the future projects of nuclear cooperation among the FNCA countries.

The 1st FNCA adopted the following vision statement and goals:

Vision Statement

"The FNCA is to be recognized as an effective mechanism for enhancing socio-economic development through active regional partnership in the peaceful and safe utilization of nuclear technology."

Goals

- To achieve socio-economic development by safe utilization of nuclear technology
- To utilize nuclear technology in those fields where it has a distinct advantage
- To respond to the needs of the FNCA countries

In the field of RWM activities, the following proposals were suggested by Japan for the future cooperative progress in the RWM:

(1) Urgent focus on good management of spent RI source. Concrete measures tackling this problem shall be discussed in Sydney Workshop.

(2) Completion of a consolidated report

Poster of 1st FNCA

The 2nd Coordinators Meeting

The 2nd Coordinators Meeting will be held in Tokyo from March 14-16, 2001. In this Meeting, the following topics will be discussed.

1) Review and evaluation of progress and/or status of overall activities
2) Coordination of activity plans for over-all cooperation under FNCA
3) Report and recommendation concerning cooperative activities to the 2nd FNCA meeting

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