

Seminar On Peaceful Use Of Nuclear Energy And Nuclear Non-Proliferation

The Seminar on Peaceful Use of Nuclear Energy and Nuclear Non-Proliferation was held at the headquarters of AELB on February 8 until 10, 2012. This event was co-organized by Atomic Energy Licensing Board (AELB) and Integrated Support Center for Nuclear Non-Proliferation and Nuclear Security (ISCN) of Japan Atomic Energy Agency (JAEA) with cooperation of 40 participants from various local agencies such as Royal Malaysia Police, Universiti Tenaga Nasional (UNITEN), Universiti Kebangsaan Malaysia (UKM), National Security Council (MKN), Tenaga Nasional Berhad (TNB) and Nuclear Malaysia Agency. A total of 10 experts from JAEA, AELB and International Atomic Energy Agency (IAEA) have been invited to share their knowledge and experience related to the use of nuclear energy.

As an agency which has a variety of nuclear fuel facilities and handles a lot of nuclear material, JAEA has taken the role of international organizations to make a contribution in strengthening the nuclear non-proliferation. Nuclear Non-Proliferation is an effort to prevent the spread of nuclear weapons, fissile material, and weapons-applicable nuclear technology and information. The organization of this seminar is in line with AELB's role as the responsible agency for controlling and regulating atomic energy activities in Malaysia.

During the seminar, various issues related to Fukushima accident, international frameworks of nuclear safety, security and nonproliferation/safeguards, export/import control were actively discussed. The AELB and ISCN organizers agreed and recognized that an appropriate and effective national system for Nuclear Non-proliferation/Nuclear Security is vital in facilitating the peaceful use of Nuclear Safeguards/Non-proliferation and Security.

A series of presentations by the experts has been provided and followed by a very interactive question and answer session. During the seminar, participants from both sides strongly mentioned to continue the cooperation in this field for future event. In the following wrap-up meeting, the representatives of the AELB and



ISCN delegation with Director General of AELB; Y.M. Raja Dato' Abdul Aziz Raja Adnan (first row, 3rd from left) and AELB officers.



AELB Director General Y.M. Raja Dato' Abdul Aziz Raja and ISCN delegation during the meeting.

ISCN discussed the issues to enhance the future cooperation by including topics related to Strengthening State System of Accounting for and Control of Nuclear Material (SSAC) and human resources education, Additional Protocol and Nuclear Security. With this cooperation, it will give opportunity for the Malaysian participant to join the training course provided by the JAEA. There is also a plan for the training courses to be held in Malaysia as this can allow more local participants to be involved.



Participants of the seminar together with the experts from IAEA, AELB and ISCN.



Y.M. Raja Dato' Abdul Aziz Raja Adnan presenting a memento to Mr. Masao Senzaki; Director of Integrated Support Center for Nuclear Nonproliferation and Nuclear Security (ISCN) under JAEA.



Representative of ISCN is giving a speech during the seminar.

IAEA-Norwegian project, Capacity Building in Safety Assessment of Nuclear Power Plant



Experts are showing the steps to run the Risk Spectrum program to the participants.

AELB has been selected by the IAEA among the countries in Southeast Asia as the country to implement the “pilot project” under the IAEA Norwegian Funded Extra-Budgetary Program for the development of expertise in aspect of safety assessment of nuclear power plants. This training program is divided into several parts and will continue throughout the year 2012. The most recent program was held on April 2 until 6, 2012. IAEA’s consideration in choosing Malaysia is based on the research done by them which indicates Malaysia has the potential to develop nuclear energy program. Hence, it is necessary for Malaysia to have enough experts and professionals in the field of nuclear safety.

This program consists of two main components, namely Probabilistic Safety Assessment (PSA) and Deterministic Safety Assessment (DSA). This international activity is a joint workshop which involves participation from Vietnam that provides an opportunity for local participants to enhance cooperation with other country in nuclear safety assessment expertise. This workshop also involves the participation of various local agencies which consist of Malaysian Nuclear Agency, UKM, UNITEN and TNB which have been merged to be a Safety Core Group. This workshop has been designed to support the development of required safety assessment capacity and

competency. It provides courses and training necessary to achieve knowledge of safety requirements associated with the design and operation of nuclear facilities, and focuses on development of specialized knowledge essential for assessment and evaluation of safety. The content is based on international best practices and expertise which presented by IAEA professionals and senior experts with vast experience in the evaluation of nuclear safety. The safety assessment knowledge modules are divided into two parts. The first part is essential knowledge that addresses the fundamental aspects of safety assessment, providing the basis for subsequent specialized training in the areas of DSA and PSA. The second part provides practical applications with specialized training and development of analytical skills which focused on the development of computer tools. Integrated Training and Accident Analysis System (ITAAS) has been developed for the area of DSA. This system is based on the RELAP5 code. Risk Spectrum acts as a computer tool for PSA model.

The content of this workshop is structured so that at the end of the program, there will be a group with a strong foundation of knowledge in the safety assessment for having responsibilities related to nuclear power plants (NPPs), research reactors, and other nuclear facilities in Malaysia.



Malaysian and Vietnamese participants from various agencies together with the experts during the workshop.



Experts from IAEA and Risk Spectrum.

Global Threat Reduction Initiatives (GTRI) Visit to Malaysia and Advance Course on Search and Secure Orphan Sources



Happy faces of the participants after the practical exercise.

Malaysia had received a visit from the Global Threat Reduction Initiatives (GTRI) on February 20 until 25, 2012. AELB-GTRI cooperation have started from year 2009 which purposely in that time focuses on the improvement of security control at the facilities which deals with radioactive material in excess of the activity is more than 1000 Ci. Since then, a total of four facilities of categories 1 radioactive material in Malaysia have received this assistance, including a university. On this particular visit, GTRI has done an assessment of the assistance given to the pioneer receivers, discussed the scope



During Practical Exercise at Site 1.

of assistance which is extended to the facilities dealing with radioactive sources that have the activity more than 10 Ci at any time. GTRI also was taken to visit the various locations of the radiation source facilities that have the potential to receive assistance within this new scope to increase the physical protection to secure the radioactive sources.

To further enhance Malaysia's capability in order to address the presence of orphan sources, an advance training was held at Renaissance Hotel, Kuala Lumpur and jointly organized by AELB and GTRI on March 5 until 9, 2012. Various agencies have been invited to attend this course which consists of Royal Malaysia Police (RMP), Royal Malaysia Customs (RMC), SMART, Malaysia Maritime Enforcement Agency (MMEA), Malaysian Nuclear Agency, Fire and Rescue Department and AELB. This course is conducted in two methods which are in the classroom and practical training at the actual field.

Two scrap metal collection site was used as a training site for practical exercise. It was a great success for the participants in this course when the actual radiation sources have been discovered in the second location practical exercise. Both AELB and GTRI are looking forward to have more cooperation in the future in order to achieve the goal in protecting the radioactive material from any malicious act.

MEST Training on The Respond to Nuclear and Other Radioactive Material Detection at National Borders

On February 29 until March 2, 2012, a training known as Train the Trainer to the Mobile Expert Support Team (MEST) for Detection of Illicit Trafficking of Nuclear and Other Radioactive Materials at National Borders was held with the purpose to develop a team of experts which will respond promptly to any assistance required by Front Liner Officer (FLO) for any detection that was made by Radiation Portal Monitor (RPM). This training was attended by a total of 12 employees from AELB and 2 from Royal Malaysia Customs (RMC) Officers. Representatives from the Royal Malaysia Police (RMP) and Malaysia National Security Council (NSC) were also present in the capacity as observers.

The module in this training covers the aspects of translating raw data from RPM to ensure the state of health and understanding the peak energy analysis that identifies the presence of radionuclide which has activated the warning alarm for RPM detection.

It also involves practical training where the participants do practical training in Port Klang, which houses the secondary inspection station for verification of the radionuclide present which was detected by RPM. During this practical training, all participants have shown their commitments and effort on

confirming the present of the radionuclide. We wish, after this training the participants will be able to provide rapid response to FLO so that any daily business at the border to be going smooth and well. Deepest appreciation is given to RMC on logistical support such as transportation to Port Klang and practical success of the secondary inspection there.



During Practical Exercise at Site 1.



During Practical Training at Secondary Inspection.

Nuclear Power Regulatory Infrastructure Development Plan (NPRIDP)

International consultant ENCONET has prepared the initial report of legal nuclear power program plan for the preparation of legal regulatory infrastructure for nuclear power program in Malaysia entitled Nuclear Power Regulatory Infrastructure Development Plan (NPRIDP). This 5-year proposed plan began in 2011 has been developed in accordance with IAEA guidelines with emphasis on 19 infrastructures of nuclear power program as recommended by the agency.

The preparation of this plan is one of the four scopes of the first phase of this study, which began in June 2011 since the Government of Malaysia through its Cabinet has made a decision to consider nuclear power as an option of alternative energy source for electricity generation post 2020. The objective of this NPRIDP is to review and evaluate Malaysia's national preparedness and readiness in the areas of regulatory infrastructure for the supervision of nuclear power plants and come up with recommendations.

Malaysia Nuclear Power Corporation (MNPC) as the leader of this study has already conducted a series of meetings and discussions with various agencies to ensure this study is in accordance with the current situation in Malaysian and at the same time meets international practices.



Nuclear Power Regulatory Infrastructure Development Plan (NPRIDP) Report.

Expert Review on the Final Draft of Atomic Energy Regulations on Nuclear Installation

The Expert mission to review the final draft of Malaysia's Atomic Energy Regulation on Licensing of Nuclear Installations, under the Asian Nuclear Safety Network (ANSN) was organized from March 19 until 23, by the IAEA in cooperation with the Atomic Energy Licensing Board (AELB) on behalf of the Government of Malaysia. The objectives of the meeting were to assist the Malaysia's Atomic Energy Regulatory Body, AELB to get familiarization with the licensing practices and exchange experience on the approaches through the presentations and review by the experts and subsequent discussions among the participants. The workshop also provided a forum for the AELB participants to discuss the national practices and exchange experience with the experts on this subject. Based on expert observation and advice as well as input from the discussion amongst participants, a number of recommendations were provided for enhancing understanding and competence to develop regulatory requirement documents, in particular for the licensing of nuclear installations in Malaysia.

Recent and Upcoming Events

- May 7 – 18, 2012, Hanoi, Vietnam
RELAP5 & Joint EK Workshop
- May 28 – June 1, 2012, Zwentendorf, Austria
Plant Walk-Down Workshop, Zwentendorf Nuclear Power Plant
- June 11 – 12, 2012, AELB Headquarters
Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities
- September 3 – 7, 2012, AELB Headquarters
National Workshop on Preparation and Assessment of the EIA for the NPP site
- October 1 – 5, 2012, AELB Headquarters
Expert Mission to assist Development of Management System
- October 8 – 13, 2012, AELB Headquarters
National Workshop on the Review of Site Evaluation Report for NPP
- October 30 – Nov 2, AELB Headquarters
Workshop on Regulatory Framework

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