



YB Deputy Minister of MOSTI with AELB Board Members, IAEA officials and the ANSN Steering Committee Meeting Delegates.



Asian Rare Earth Sdn Bhd, one of the winners of the Nuclear and Radiation Safety Award, receiving their certificate from YB Tuan Haji Fadillah Yusof.

Enhancing Public Knowledge on Nuclear Safety

Hosting the Asian Nuclear Safety Network (ANSN) meeting for the first time in Malaysia last year was indeed an honour for AELB. The meeting successfully attracted 28 delegations from 11 member countries of ANSN. Malaysia's ANSN Caravan Programme, which was held in conjunction with the meeting, was recognised as a model for future ANSN Caravans. Malaysia's ANSN Caravan Programme, which was also themed "Enhancing Public Knowledge on Nuclear Safety", was highly successful in disseminating information on ANSN to the public and specialists from both the private and the public sectors, including universities. A total of 450 participants attended the programme, which also included a survey to gauge participants' level of awareness on nuclear safety infrastructure in Malaysia. The survey also sought their opinions on the possibility of nuclear energy being used as another alternative energy for generating electricity for the country in the future. Out of the total of 450 participants, 46% responded to the survey, and 93.5% of the respondents supported the idea for Malaysia to develop a nuclear power programme for electricity generation, while only 6.5% of respondents disagreed. The result indicated that Malaysia's ANSN Caravan programme was successful in addressing the negative perception of the public on nuclear activities.

Held on October 20-23, 2008 at Putrajaya International Convention Centre, the Caravan Programme and the 8th ANSN Steering Committee Meeting were key events for AELB last year. The ANSN Steering Committee Meeting was an important platform for members to discuss and track on the progress of various initiatives as well as formulate future plans. Representatives of these countries were present: China, Japan, Indonesia, Korea, Philippines, Thailand, Vietnam, Australia, France, Singapore and Malaysia. Also present were representatives of the International Atomic Energy Agency (IAEA), a body that co-ordinates and

facilitates the implementation of ANSN. The meeting was chaired by AELB Director General, YM Raja Dato' Abdul Aziz Raja Adnan.

The meeting highlighted, among others, the past activities and achievements of ANSN and its Topical Groups as well as the network's future activities to strengthen the networking among members. A new Topical Group on Legal and Government Infrastructure was established. Officiating at the event was the Deputy Minister of Science, Technology and Innovation, YB Tuan Haji Fadillah Yusof. He also launched Malaysia's ANSN website (<http://ansn/aelb.gov.my>), which enables users to pool, analyse and share nuclear safety knowledge. It is also a database for the participating countries' information on nuclear safety.

YB Tuan Haji Fadillah Yusof represented the Minister of Science, Technology and Innovation, YB Datuk Dr. Maximus Johnity Ongkili. The Minister, in his speech and read by his deputy, lauded the effort to facilitate regional co-operation in the enhancement of nuclear safety infrastructure and safety of nuclear installations in the participating countries.

The ANSN's objective of disseminating information on safety of radiation and nuclear industry in various aspects, such as operations, analysis, education, training, radioactive waste, emergency and management was highlighted during the event. Also emphasised was the fact that ANSN served as a platform for sharing and exchanging transparent and open information on nuclear safety so as to give complete information to the public in order to avert any misunderstanding when nuclear technology is implemented widely.

Also held in conjunction with the event was the seminar on Safety and Security Awareness in Industrial Radiography and also the presentation of the Nuclear and Radiation Safety Awards.

(For the full list of Nuclear and Radiation Safety Award winners, please see page 7).

Safety and Security of Radioactive Sources: Adoption of Code and Conduct

On August 16, 2008 AELB adopted the *Code and Conduct on the Safety and Security of Radioactive Sources (CoC)* and its three supporting documents, namely *Categorisation of Radioactive Sources (IAEA-TECDOC-1344)*; *Security of Radioactive Sources (IAEA-TECDOC-1355)*; and *Guidance on Import/Export of Radioactive Sources*. With this move, AELB hopes to create confidence among related international bodies as well as to facilitate import and export procedures involving radioactive material in Malaysia. AELB has also formulated relevant strategies to ensure the smooth implementation of CoC for licensees.

On June 30, 2008, AELB organised the *National Seminar on Security of Radioactive Sources* which was officiated by the Deputy Minister of Science, Technology and Innovation, YB Tuan Haji Fadillah Yusof. During the seminar, YB Tuan Haji Fadillah Yusof presented the award for Corporate Social Responsibility (CSR) to DiGi Telecommunications Sdn Bhd for the company's prompt effort in withdrawing their advertisement containing

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radioactive symbols. YB Tuan Haji Fadillah Yusof in his opening speech encouraged licensees to promote self compliance on the newly introduced security measures and to follow the good example set by DiGi Telecommunications. Some 250 licensees attended the seminar.

Following the seminar, two training courses to facilitate industries licensed by AELB to comply with CoC were conducted. The courses were:

- *Training Course on Security of Radioactive Sources*
- *Training Course on Physical Protection and Management of Radioactive Sources*

AELB had also released a notification to the industry on the adoption of *Code of Conduct on the Safety and Security of Radioactive Sources* and its supporting document. A document on *Radioactive Categorisation: Application, Safety and Security* and a handout on *Orphan Sources* are also being prepared for public dissemination.



Deputy Minister of MOSTI, YB Tuan Haji Fadillah Yusof officiating at the National Seminar on Security of Radioactive Sources.



Participants during the seminar.

Deputy Minister of MOSTI, YB Tuan Haji Fadillah Yusof presenting the award for Corporate Social Responsibility to DiGi Telecommunications Sdn Bhd.

AELB Forges Co-operation with BAPETEN, Indonesia



AELB Director General, YM Raja Dato' Abdul Aziz Raja Adnan presenting a memento to Chairman of BAPETEN, Mr As Natio Lasman.

co-operation is to ensure higher nuclear safety standards in the region. The MoU is a catalyst to further co-operation on nuclear safety and radiation protection between regulatory agencies in ASEAN and Asia Pacific. AELB and BAPETEN are regulatory bodies entrusted to ensure the safety and security of nuclear activities through monitoring and controlling illicit trafficking of radioactive material as well as safeguarding the nuclear material for its peaceful use in Malaysia and Indonesia respectively.

The MoU was signed on July 19, 2008 and witnessed by the Minister of Science, Technology and Innovation of Malaysia, YB Datuk Dr. Maximus Ongkili and the Deputy Minister of Research, Science and Technology of the Republic of Indonesia, Dr Teguh Rahardjo. Five other MoUs were also signed during the event and these were: MoUs between MIMOS, Malaysia and Institut Teknologi Bandung (ITB), Bandung as well as with Institut Teknologi Sepuluh Nopember (ITS), Surabaya and Universitas Indonesia (UI), Indonesia; and MoUs between Malaysian Industry-Government Group for High Technology (MIGHT) and Surfactant and Bio-energy Research Centre (SBRC), Indonesia as well as between MIGHT and Biomac Corporation Sdn Bhd. These MoUs encompass co-operation in many areas of science and technology that will benefit the stakeholders in both countries.

AELB signed a Memorandum of Understanding (MoU) with Badan Pengawas Tenaga Nuklir (BAPETEN), Indonesia with the objective to share technical and scientific knowledge and expertise in radiation and nuclear regulatory activities. The ultimate aim of AELB in forging this

Dialogue Between AELB and Radiation Protection Officers

AELB held a dialogue with Radiation Protection Officers (RPOs) as part of the International Conference on Radiation Protection and Workshop, which was held from August 18 to 20 at the Holiday Inn Resort Malacca. The dialogue was chaired by the Director of Policy, Code and Standard Division of AELB, Mr. Mohd Pauzi Sobari. Other dialogue panel members were the Director General, YM Raja Dato' Abdul Aziz Raja Adnan, Enforcement Director, Mr. Hamrah Mohd Ali and Licensing Director, Mr. Mohd Yasin Sudin.

A total of 77 RPOs, mainly from the radiography industry and from the oil and gas sectors, attended the dialogue. The dialogue, which lasted for nearly three hours, was noted to be a success. The panellists from AELB were able to clarify and explain several issues raised by the RPOs, and were also able to address some of the difficulties which the RPOs had long been facing. Most of the RPOs were satisfied with the results of the dialogue.



The dialogue session held at the Holiday Inn Resort Malacca.



AELB Director General, YM Raja Dato' Abdul Aziz Raja Adnan signs the Malaysia and Indonesia scientific and technological bilateral co-operation on behalf of MOSTI.

Preparation for Regulatory Control of Nuclear Power Plants



Officers from various agencies during the meeting.

In the effort to initiate the development of licensing mechanism for Nuclear Power Plants, AELB as the national regulatory authority for atomic energy activity under the Atomic Energy Licensing Act, 1984 (Act 304), held two meetings with relevant regulatory authorities involved in licensing process of conventional power plants.

Agencies which participated in the meeting were the Energy Commission (EC), Department of Occupational Safety and Health (DOSH) and Department of Environment (DOE). The first meeting was held on August 19, 2008 at AELB. Also present at the

meeting were officers from the Economic Planning Unit (EPU) of the Prime Minister's Department, Tenaga Nasional Berhad (TNB) and the Faculty of Law, Universiti Kebangsaan Malaysia (UKM).

At the second meeting which was held on November 4, 2008, additional agencies were invited from the Ministry of Housing and Local Government (MHLG) and the National Safety Council (NSC). The meeting was held to identify the roles and responsibilities of each regulatory authority in the licensing process in the event nuclear energy is considered as an alternative source for electricity generation.

Seminar on Safety and Security Awareness in Industrial Radiography

Achieving zero accident in industrial radiography activities and increasing the compliance to Act 304 were the focus of the seminar on Safety and Security Awareness in Industrial Radiography organised by AELB particularly for industrial radiographers/radiation workers. A total of 62 participants attended the seminar which was held in conjunction with the Malaysia's ANSN Caravan Programme on October 20, 2008 at Putrajaya International Convention Centre (PICC).

Sessions were held to brief participants on the following:

- basic knowledge on radiation protection of industrial radiography activity;
- accurate working procedures on industrial radiography;
- risks, possible and radiological accidents which could occur in industrial radiography activities; and
- importance in understanding the requirements of Act 304 and its subsidiary legislations while conducting industrial radiography work.



Seminar participants at PICC.

The seminar was successful in creating the awareness on the importance of radiation safety and security culture by emphasising on the correct working procedures in industrial radiography. It also provided both theoretical and practical training to the participants and increased awareness on radiation protection so as to reduce the risk of radiation accidents.

Act 304 Expert Group Meeting

The meeting was conducted at Avillion Legacy Melaka from October 23 to 26, 2008 to review the current Act, in order to ensure compliance with international obligations which cover safety, security and safeguards (3S). The expert group consisted of AELB Director General, Directors and senior officers. The meeting was chaired alternately by the Directors of AELB.

There are several new and essential provisions being proposed in the Act. For instance, the regulatory authority may issue authorisation, which can be in the form of a license, registration, approval or permit, according to specific activities as stated clearly in an amended Act. In addition, enforcement officers will have wider authority in conducting inspections and investigations if there was a breach of the law. There is also a new part derived from the Criminal Procedure Code Act 593, which describes offences and punishments in detail.

Act 304 was never amended since 1984, and hence, there was a need to review the Act in order to ensure its compliance with



Director General of AELB, YM Raja Dato' Abdul Aziz Raja Adnan with AELB officers from various divisions.

international standards. With the new amendments, the regulatory authority will be more equipped for the possible development of a safe, secured and safeguarded nuclear power programme in Malaysia.

Workshop on Validation and Verification of Safety Analysis Using Computer Codes

Two experts in Research Reactor Safety Analysis, Dr. Bang Young-Seok and Dr. Jang Chang-Sun from the Korea Institute of Nuclear Safety (KINS), Republic of Korea, were invited by AELB to conduct the Workshop on Validation and Verification of Safety Analysis Using Computer Codes held from October 28 to 31, 2008. The workshop was organised to introduce the types of Computer Codes suitable to be used to validate and verify the safety analysis report of research reactor. One computer code introduced during the workshop was Relap5, which is widely used by nuclear enforcement bodies in the assessment of safety analysis report due to its fool-proof design and its ability to lend itself to various kinds of analysis.

In attendance were 30 officers from AELB, Malaysian Nuclear Agency, Tenaga Nasional Berhad (TNB) and Universiti Tenaga Nasional (UNITEN).



YM Raja Dato' Abdul Aziz Raja Adnan presenting a memento to Dr. Bang Young-Seok and Dr. Jang Chang-Sun.



The Director General of AELB and the Korea Institute of Nuclear Safety (KINS) experts with workshop participants.

IAEA Regional Training Course on Chronic Exposure Scenarios (NORM Residues, Past Practices, Radon) and Remediation Strategies, Kuala Lumpur, Malaysia



The Chairman of AELB, IAEA experts and participants at the Regional Training Course on Chronic Exposure Scenarios and Remediation Strategies.

AELB, with the assistance of the International Atomic Energy Agency (IAEA), under the Technical Co-operation Regional Project, successfully organised the above-mentioned training course held in Kuala Lumpur on November 10-14, 2008.

The objective was to provide the participants with an understanding of the sources of chronic exposure, the requirements and guidance given in the IAEA Safety Standards pertaining to chronic exposure, approaches to controlling chronic exposure including its regulations and the remediation of chronic exposure situations as well as source and environmental monitoring.

In one of the sessions, the participants presented a concise report on national issues pertaining to chronic exposure. Issues that were addressed involved the national experience in managing sources of chronic exposures, information on policy, strategy and plans for radioactive waste management, regulatory framework



Participants during the site visit.

and safety basis for radioactive waste management, approach to safety assessment and identification of areas where international assistance and guidance are needed.

Visit by Mr. Paulo Baretto and the Regional Training Course on Nuclear Security

Mr. Paulo Baretto, a nuclear security expert of the International Atomic Energy Agency (IAEA) visited AELB on November 19, 2008. In conjunction with the visit, Mr. Paulo Baretto, who has vast experience in

nuclear power programme development, gave a presentation on the experiences of Brazil and other countries in developing nuclear power programmes for electricity generation.



Mr. Paulo Baretto, Ms Andrea Braunegeger Guelich and YM Raja Dato' Abdul Aziz Raja Adnan with officers from various agencies.

Installation of the Nuclear and Radioactive Materials Detection System in Kuching International Airport



Site evaluation at the Kuching International Airport.

An evaluation visit to prepare for the installation of the Nuclear and Radioactive Materials Detection System was made at Kuching International Airport in Sarawak on November 24 and 25, 2008. The evaluation committee comprised of representatives from AELB, Royal Malaysian Police, Royal Malaysian Customs, National Security Council and Malaysia Airports Berhad.

The installation of the detection system is important in enhancing national security by preventing illegal nuclear trafficking into Malaysia.

Some of the preparations required include training of frontline officers, the development of the Standard Operating Procedures (SOP) on the Detection System workflow and the need to look deeply into current regulations.

There are several factors that would affect the installation of the detectors such as the efficiency of the current airport system in handling passenger movement, the number of passengers arriving during peak and non-peak hours, passengers' countries of origin and their destinations, and the traffic flow of passengers when arriving at the airport.



Discussion at the Royal Malaysia Customs office, Kuching.

Upcoming Events

- **April 1, 2009:** Awareness Programme on Additional Protocol to the Non-Proliferation of Nuclear Weapon.
- **April 14, 2009:** Seminar on Safety and Security Awareness in Industrial Radiography.
- **April 13-17, 2009:** IAEA Regional Coordination Meeting for Strengthening National and Regional Capabilities for Response to Radiological & Nuclear Emergencies.
- **April 20-24, 2009:** Workshop on Safety Analysis and Regulatory Requirements for Research Reactor Modification.
- **June 16, 2009:** Seminar on Radiation Safety Awareness for institutions of higher learning, research agencies and Government agencies.

Winners of the Nuclear and Radiation Safety Awards

The winners in the various categories are:

Gauging:

- Freescale Semiconductor Malaysia Sdn Bhd
- MPI Polyester Industries Sdn Bhd

Industrial Radiography:

Global Inspection Services Sdn Bhd

Sales:

Abex Medical System Sdn Bhd

University/Research Institute:

Universiti Kebangsaan Malaysia

NORM/TENORM:

Asian Rare Earth Sdn Bhd

Oil Logging:

Schlumberger WTA (M) Sdn Bhd

Gama Irradiator:

Ansell NP Sdn Bhd



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Pooling, Analysing and Sharing Nuclear Safety Knowledge



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