

Summary Report

ANSN Safety management of research reactors

Third Annual Meeting of the

Regional Advisory Safety Committee for Research Reactors

in Asia and the Pacific (RASCAP)

Serpong, Indonesia 31 Aug–4 Sep 2015

Background

The International Atomic Energy Agency (IAEA) promotes networking and regional cooperation in order to improve information exchange and the dissemination of knowledge on research reactor safety. The Member States participating in the Asian Nuclear Safety Network (ANSN) Regional Workshop on the Establishment of a Regional Safety Committee for Research Reactor Operating Organizations, held in Vienna, Austria, in March 2013, established the Regional Advisory Safety Committee for Research Reactors in Asia and the Pacific (RASCAP) with the aim of enhancing the safety of research reactors in the region. RASCAP acts mainly as an advisory group to advise on important safety issues in the region and to strengthen the effectiveness of the operating organizations' safety committees. RASCAP also facilitates the use of qualified human resources to address specific safety issues, including the application of the IAEA Code of Conduct on the Safety of Research Reactors and relevant IAEA safety standards.

The first meeting of RASCAP was held in Viet Nam in 2013 and the second meeting was held in Malaysia in September 2014. During the second RASCAP meeting, the participating Member States agreed to hold the Committee's third annual meeting in Indonesia from 31 August to 4 September 2015.

Objectives

The workshop objectives were to provide a forum for Member States to exchange information and share knowledge and experiences related to the safety issues of research reactors of common interest within the region, including, in particular:

- Human resource development, including training and qualification of operating personnel;
- Periodic testing and inspection programmes for research reactor safety;
- Consideration of safety factors in the periodic safety review of research reactors;
- Peer review of the periodic safety review of the G.A. Siwabessy Multipurpose Reactor (RSG-GAS) in Serpong, Indonesia;
- Review of the actions taken by the Member States in implementing the recommendations made at previous RASCAP meetings in 2013 and 2014; and
- To develop the work plan of RASCAP for 2015.

Work Done

Day 1 Monday 31 August 2015

In a brief opening session, Prof. Djarot Sulistyo Wisnubroto, Chairman of BATAN welcomed the participants and Mr. Deshraj Rao (IAEA) presented the meeting objectives and expected results. Mr. Yusi Eko Yuliantor of Indonesia chaired the meeting and the agenda was adopted with minor adjustments. Mr.

Mark Summerfield of Australia, Mr. M. Rawi Mohamed Zin of Malaysia and Ms. Thelma Artificio of Philippines volunteered to be the rapporteurs.

IAEA representative made a presentation on the periodic safety review of research reactors. This was followed by a series of country presentations in plenary sessions as follows:

- Lessons learned from OPAL - PSR Mr Mark Summerfield – Australia
- Safety management system at Bangladesh Triga Research Reactor by Mr M. A. Sarder and Ms Jahanara Begum – Bangladesh
- Current status of the RSG-GAS reactor operation by Mr Yusi Eko Yulianto – Indonesia
- Activities in research reactors in Kazakhstan by Mr Murat Tulegenov - Kazakhstan
- PSR and refurbishment activities at HANARO by Mr Min Jin Kim – Republic of Korea
- Function and role of safety, health and environment committee at Malaysian Nuclear
- Agency with regard to research reactor by Mr M. Rawi M. Zin – Malaysia
- Status of PRR-1 and future plans by Ms Artificio Thelma – Philippines
- Functioning of Reactor Safety Advisory Group of TRR by Mr Anantachai Pechrak and Mr D. Saengchantr – Thailand
- Ageing management for DNRR by Mr Tuan Nguyen Minh – Vietnam

Day 2 Tuesday 1 September 2015

A technical visit to the RSG-GAS research reactor at Serpong, Indonesia was performed by the participants. During this technical visit the meeting participants discussed with the RSG-GAS operating personnel several aspects regarding the reactor operational safety including house-keeping, fire safety, radiation protection and various operational aspects.

Rest of the time of the day was dedicated to the following presentations:

- Safety aspect and operating experience of RSG-GAS (Safety Performance Indicator) by Mr. Saiful Bakhry (BATAN), Indonesia
- Fuel Fabrication technology of RSG-GAS reactor fuel by Mr. Supardjo (BATAN), Indonesia
- Innovation project for TRIGA2000 research reactor, Bandung by Mr. Tukiran (BATAN), Indonesia
- Periodic safety review regulation in Indonesia by Mr. Azizul Hakim (BAPETEN), Indonesia
- Reactor modification regulation in Indonesia by Mr. Wiryono (BAPETEN), Indonesia

The presentations were followed by discussions on the national practices with respect to PSR, and Training and qualification of operating personnel in the participating Member States.

Day 3 Wednesday 2 September 2015

Two presentations were made as follows:

- Training and qualification of operating personnel of research reactors by Mr Deshraj Rao, IAEA
- Periodic safety review of RSG-GAS reactor by Ms. Endiah PH (BATAN), and Mr. Yusi Eko Yulianto (BATAN), Indonesia

A peer review of the scope and methodology for periodic safety review of RSG-GAS reactor was performed by the participants based on the IAEA safety standards. The peer review resulted in additional recommendations and suggestions both to the consideration of the safety factors as well as the methodology.

Rest of the day time was dedicated to the working group sessions, in which participants in three working groups discussed different safety factors as recommended by the IAEA safety standards and applied to the RSG-GAS PSR process.

Day 4 Thursday 3 September 2015

Working group sessions were continued and the groups discussed various safety factors in detail as applied to the RSG-GAS reactor and within the scope of the working group discussions, performed a gap analysis against the IAEA safety standards.

In a plenary session, working groups' reports were discussed.

Day 5 Friday 4 September 2015

In plenary sessions, the work plan for 2016 was developed, and the participants performed a review of the actions taken by the Member States in implementing the recommendations made at the second RASCAP meeting in 2014.

Draft meeting report was discussed together with conclusions and recommendations, and the meeting was closed.

Workshop achievements / Recommendations

The RASCAP, as the regional network, is considered by the participants as an excellent forum for the exchange of information, knowledge, and experiences in relation to safety issues of research reactors in the region. RASCAP also helps in harmonizing the national practices to be in accordance with the IAEA safety standards and strengthen the effectiveness of the national RSCs.

The presentations and discussions during the meeting showed that following the previous RASCAP meeting recommendations, there have been further improvements within Member States in relation to the operation of their RSCs consistent with the requirements of IAEA safety standards.

The meeting also noted that following previous RASCAP recommendations, progress has been made on the implementation of ageing management programmes in many of the RASCAP Member States.

PSR of research reactors is attaining increased attention among the research reactors in the region. The meeting noted that a periodicity of ten years for PSR is optimum and practical, considering the experience of the Member States. This experience showed that significant safety improvements could be implemented as a result of performing PSRs. The meeting recommended that operating organizations of research reactors of the region should initiate the activities in this direction, if not already done.

The discussion on the training and qualification of research reactor operating personnel showed that there is a need to further improve training programmes in some research reactors in the region, in particular for training of maintenance personnel and re-training of operating personnel. The meeting also recommended that the operating organizations should have a clear succession planning for reactor operating personnel to ensure retention of the knowledge and competencies within the organizations.

The participating Member States strongly recommended IAEA to continue support the functioning of RASCAP for the benefits of the safety of research reactors in the region including their annual meeting.



This project is conducted by the IAEA, with funding by Japan, among others