



Summary of the meeting held on 21 February 2008
ARPANSA – Yallambie Campus

OPENING OF MEETING AND CONFIRMATION OF THE MINUTES

All Members attended with the exception of Mr Ian Drinnan and Dr Rob Lee who had tendered their apologies. The minutes of the previous meeting were confirmed without further amendment.

CORRESPONDENCE

The Committee noted the ANSTO document *OPAL Reactor – RVE Repair Design Review Meeting – 30 April to 2 May 2007, INVAP Bariloche* (E0064-DRV-001) relating to the discussion on the issue held during the meeting of October 2007.

BRIEFING ON THE OPAL REACTOR

OPAL displaced fuel plate event

The Committee was updated on the displaced fuel plate event that had occurred in the OPAL Reactor. ARPANSA had raised several detailed questions with ANSTO relating to the event and appropriate responses would be required before the reactor could be started up again. The CEO emphasised that he was seeking only the Committee's discussion of the issues during this meeting to help him formulate his decision on the matter.

Issues noted by the Committee during the discussion included:

- That close attention should be given to the quality systems in place during the manufacture of the new fuel.
- The redesigned fuel had been tested by CNEA in a flow loop using dummy fuel plates. Coolant flow tests were carried out at 116% of the flow rate of OPAL and vibration testing had been carried out on the dummy fuel assemblies.
- OPAL had the highest flow rate of all the reactors using plate type fuel elements manufactured by CNEA and the coolant flow in OPAL was upwards whereas the flow in many other reactors was downwards.
- Vibration tests had been carried out directly on dummy fuel assemblies and justification for those tests was provided in the submission.
- The thirteen displaced fuel plates were in seven fuel assemblies on the periphery of the core; none of the centre assemblies exhibited any problem.
- Although it was improbable that there would have been off-site effects if the fuel plates had completely separated from the assemblies during the event, there would have been safety issues for personnel involved with the recovery operation. If the fuel plates were damaged in the process, fission products might have been released into the reactor vessel.
- The stopper option was the only one considered for the replacement fuel and there was no submission to return to the original design which had been altered in the manufacturing process.

- Dr Snelgrove, a highly experienced consultant in research reactor fuel engaged to advise ARPANSA on the displaced fuel event, supported the revised specification for the manufacture of further fuel for OPAL. He found no unresolved safety issues and was of the opinion that ARPANSA would be justified to approve continued operation of OPAL using the proposed modified fuel elements.

RESEARCH REACTOR CONFERENCE – 5-9 NOVEMBER 2007, SYDNEY

The research reactor conference held in Sydney in November was considered to be very successful and covered such issues as:

- That some IAEA Member States were getting research reactors as a first step towards a nuclear power program.
- The Code of Conduct on the Safety of Research Reactors was seen as an appropriate way of addressing safety, age and utilisation of research reactors.
- There was a strong emphasis on periodic safety reviews and most countries adopted a 10 year cycle.
- The interaction between ARPANSA and ANSTO and the fuel plate event was also raised.

A panel discussion was held during the conference to discuss issues such as the Code of Conduct, safety of research reactors, regional issues and the next conference.

NSC Members who had attended the conference noted that it was an excellent event and commended ARPANSA and the IAEA for their organisation of it.

A technical tour of OPAL was conducted following the conference and was attended by ninety delegates. The tour covered most sections of ANSTO and the attendees were much appreciative of the experience.

INTEGRATED REGULATORY REVIEW SERVICE MISSION

Mission report and summary of outcomes

The Committee was briefed on the outcomes of the IRRS Mission and the recommendation contained in the Mission Report. The Report was an important document for ARPANSA and would provide guidance for improving ARPANSA's regulatory role.

The Chair had met the IAEA Mission Team during the review process and Members had provided comment on the earlier draft version of the Report.

DISPOSAL OF LONG-LIVED INTERMEDIATE LEVEL WASTE

NSC discussion

The RHSAC was considering issues relating to spent fuel and radioactive waste, with particular emphasis on the Australian situation, and the NSC might have a role in preparing or reviewing the discussion paper. The definition of waste would be an important consideration as would be the need for a generic safety case for future disposal.

REPORTS

General Report from the CEO

Dr Loy advised of several issues of interest to the Committee including:

- There had been little change to the operation of ARPANSA since the election of the new Government in November 2007 and ARPANSA remained with the Health portfolio.

- He had attended a meeting of the IAEA Commission on Safety Standards in Vienna in December 2007 that included discussion of the preparation of the IAEA Safety Series.
- He had participated as a team member in an IRRS Mission in Spain in January 2008.

Report on Council – Meeting of 7 December 2007

Members noted the tabled [Web summary](#) from the previous Council meeting.

Report on RHC – Meeting of 21-22 November 2007

Members noted the tabled [Web summary](#) from the RHC meeting.

OTHER BUSINESS

A Regulatory and Policy Branch inspector gave the Committee a presentation on the results of a recent inspection of HIFAR. The inspection involved a review of records of items that had been removed from HIFAR, the use of danger tags and other associated documentation. The documentation was considered thorough and reported doses were within accepted limits.

Members noted however that only four persons remained at HIFAR with one having retired following its shut-down and others expected to leave by mid-2008. NSC expressed some concern that the depletion of HIFAR staff could be an issue and that ARPANSA should be seeking an update on how the existing activities fitted in to what was originally proposed. As staff left, there would be a loss of experience and knowledge of HIFAR systems. As such, strategies and timeframes might need to be reassessed.

CLOSURE AND NEXT MEETING

The next meeting was scheduled for Friday 20 June 2008 at Miranda.