



Australian Government

Nuclear Safety Committee

## Summary of the meeting held on 25 February 2005 ARPANSA – Miranda Campus

### OPENING OF MEETING

All Members attended with the exception of Professor Marcela Bilek, Emeritus Professor Ian Polmear and Dr Alan Roberts who had tendered their apologies.

### CONFIRMATION OF THE MINUTES OF THE MEETING OF 5 NOVEMBER 2004

The minutes of the previous meeting were confirmed with minor amendments.

### OPAL REACTOR COMMISSIONING PROCESS – BRIEFING

#### Explanation of commissioning process and timetable

The Committee was advised that to assess the application for the operating licence application for OPAL, ARPANSA needed to determine whether the:

- Safety Analysis Report demonstrated that the as-built reactor met the design criteria approved through the approval of the construction licence; and
- results of the pre-commissioning activities and the outcomes of the cold commissioning program demonstrated that the safety relevant systems operated in practice as they had been designed to do.

The Committee received a briefing on the commissioning process for OPAL. ANSTO required CEO approval to construct items important for safety including that the detailed design was in accordance with the application. The overall cold commissioning program had been approved. Details of the commissioning program for specific safety items of interest would be examined by ARPANSA.

The four commissioning stages for OPAL would be:

- **Stage A – cold commissioning:** This stage would be done without fuel and, as such, would be effected under the construction licence.
- **Stage B1 – hot commissioning:** Reactor close to criticality, but at zero power.
- **Stage B2 – hot commissioning:** Reactor run at low power (<400 kW) but with no flow.
- **Stage C – hot commissioning:** This is the power ascension stage, up to full power.

The latter three stages required fuel in the reactor and therefore could not take place unless a licence to operate OPAL was issued by ARPANSA. The objective of each of the commissioning stages from a safety perspective was to demonstrate safety performance of Safety Category 1 and 2 items.

Each stage would involve the preparation of a summary report and ARPANSA would assess reports prior to ANSTO continuing to the next stage of the process.

### NSC involvement in OPAL reactor commissioning process

The CEO advised that he would like to receive NSC opinion/advice on the outcomes of the commissioning program. The Committee could receive briefings and oral presentations from ANSTO, INVAP and ARPANSA if necessary during the commissioning. The commissioning was not expected to commence until September 2005.

The Committee requested a briefing from ANSTO staff, which should include details about the joint operation of HIFAR and OPAL, and a visit to the OPAL site, at the time of the June meeting.

## **OPAL REACTOR OPERATING LICENCE CONSIDERATION**

### **Summary of teleconference of 11 February 2005 and Discussion on NSC advice to the CEO on the Application for a Licence to Operate the OPAL**

The Committee had held a teleconference on 11 February 2005 to determine how to address the request from the CEO to provide advice on the application for an operating licence for OPAL.

During the teleconference, the Committee formed two Working Groups (WGs) to consider the Waste Management and Conduct of Operations issues. The two WGs would meet over the ensuing months to formulate their advice. A draft final report from each WG would be tabled at the June 2005 meeting for final consideration and approval by the full Committee. This timetable would meet the CEO request for Committee advice to be provided by early July 2005 to assist in the licence decision process.

Documentation would be forwarded to WG members on request and ANSTO could be asked to provide briefings where necessary.

### **Waste minimisation in radioactive waste management**

The Committee noted a suggestion that waste produced from the OPAL reactor might be reduced by lowering the power of the reactor at appropriate times. The Committee was uninformed about the practical or waste management implications of such a proposal but noted that the issue was not covered in the application for a licence to operate OPAL. It requested ARPANSA to seek clarification from ANSTO on the issues involved.

## **REPORTS**

### **General Report from the CEO**

The CEO highlighted several issues involving ARPANSA including:

- That an IAEA peer review of the operating licence application would commence on Monday 28 February 2005 and continue until Friday 11 March 2005.
- Two Abnormal Operations Report submitted by ANSTO relating to incidents where a maintenance worker had opened a valve and was contaminated with tritiated heavy water and a valve that had not been fully closed had resulted in a water leak.

Further investigations were proceeding into these issues and would be reported on in quarterly reports.

- An ANAO audit of the ARPANSA regulatory procedures was nearing completion and would be tabled in Parliament in March. ARPANSA has set up a review of its procedures in response to the issues raised in the report. The Committee would be briefed at the June meeting on the outcomes of the report.

### **Report on Council – Meeting of 26 November 2004**

The Committee noted the summary of the November Council meeting with particular reference to:

- The imminent release of the new ICRP Recommendations, now expected in 2006;
- The continuation and the summary of public submissions on the NORM issue;
- Future issues for consideration by the Council; and
- The adoption of the intervention recommendations.

Members were also advised that the recommendations arising from the Indicator for Sustainable Development for Radioactive Waste Management were available on the ARPANSA website ([http://www.arpansa.gov.au/pubs/rhsac/isd\\_rw.pdf](http://www.arpansa.gov.au/pubs/rhsac/isd_rw.pdf)).

### **Report on RHC – Meeting of 10-11 November 2004 and provisional agenda for the meeting of 9-10 March 2005**

The Committee was advised that:

- RHC was considering several issues relating to radioactive waste management including that approval had been given for a new Code of Practice for the Pre-disposal Management of Radioactive Waste to proceed to the Regulatory Impact Statement stage;
- A statement on cosmic radiation exposure had been placed on the ARPANSA web site (<http://www.arpansa.gov.au/pubs/rhc/cosmicstat.pdf>); and
- The Codes and Standards preparation program was continuing and several publications were expected to be finalised before the end of 2005.

### **Progress Report on construction of OPAL Reactor**

The construction phase was nearing completion and the operating licence application was currently being reviewed by ARPANSA staff. A vigorous inspection program was in progress with over one hundred separate inspections performed since the last meeting.

Two items of plant on the critical pathway for construction were resulting in delays.

- The reflector vessel; and
- The cold neutron source, which was being constructed in Russia.

### **NEXT MEETING**

The next meeting was scheduled for Friday 17 June 2005.