



## SUMMARY OF MEETING OF 11 APRIL 2008

### **OPENING, ATTENDANCE, APOLOGIES & CONFIRMATION OF MINUTES**

Council met at the Stamford Hotel, Adelaide on 11 April 2008. All members were present except for Mr Ian Sawyer. Ms Kidziak welcomed all members, and noted that the Council discussion on 10 April with BHP on the expansion of the Olympic Dam Mine, and with SA EPA on regulation of uranium mining had been valuable. The minutes were confirmed without amendment.

### **BUSINESS ARISING FROM THE MINUTES**

Council members requested that a summary of RHC discussion on skills shortage issues be provided at the next meeting. The complexity of regulation of uranium mining had also arisen in the discussion with BHP and may need Council discussion. A summary of hydrogeology reports on potential Northern Territory sites for a waste repository was tabled. Council noted that community consent was also an important consideration in siting a waste repository, and that it may be that an adequate site where there was community consent would be a better option than a technically simpler site where there was community opposition.

### **REPORT ON REVIEW OF THE EFFICIENCY AND EFFECTIVENESS OF THE NATIONAL DIRECTORY FOR RADIATION PROTECTION, EDITION 1**

Mr Graeme Couch and Mr Richard Clarke of C&APL attended the meeting for this item to present the consultant's report to the Council. Mr Couch advised Council that his conclusions were that there is "effective" alignment (with some gaps) between jurisdictions' regulatory frameworks and the NDRP provisions; there is a high level of variability among jurisdictions in how they have effected alignment with NDRP; and jurisdictions have shared some frustrations with the NDRP process. Council noted that the intention of the NDRP was not to have uniform legislation, only uniform outcomes, and commented that key outcomes included having a common set of authorised activities, and common grounds for suspending or cancelling authorisations. The Codes supporting the NDRP were also an important part of the uniformity process. Regulators commented that the NDRP was a valuable document which gave weight to approaches to government requesting regulatory change. The time frame to produce NDRP changes was identified as a concern, however Council was informed of action agreed by RHC to overcome this difficulty. Council concluded that NDRP is a useful document that provided a catalyst for changes to improve uniformity, and that much progress has been made by jurisdictions since its publication. The concern about time frames and action taken in response to this were noted. Council advice to the CEO would be formulated and circulated out of session.

### **RESPONSE TO COUNCIL LETTER ON ASSESSMENT OF THE SAFETY OF NUCLEAR POWER PLANTS**

The CEO informed Council that its advice is very helpful in assisting the public to grasp the issues relating to the safety of nuclear power plants. Council's advice and his response were now on the ARPANSA web site. He noted that the Government had stated that it would not allow the development of nuclear power plants in Australia. However, nuclear power was

still an issue of major concern to the community due to Australia exporting uranium for use in nuclear fuel, the possibility of international repercussions in the event of a major accident and the potential expansion of nuclear power, including in countries in our region.

## **MEDICAL APPLICATIONS OF IONIZING RADIATION**

### **Proposal to Recommend Adoption of Draft Code**

The process to develop the draft Medical Code was described. RHC had now approved the Code and the Office of Best Practice Regulation had cleared the final regulatory impact statement. There were still some broader issues about implementation of the Code, and it had been decided to form a panel with RANZCR to discuss these issues. Council noted the extraordinary amount of work undertaken by ARPANSA staff and the RHC sub-committee to finalise the Code and congratulated them on their efforts. Council recommended that the CEO adopt and publish the Code.

### **Proposal to Recommend Adoption of Draft Radiology Safety Guide**

Mr Critchley informed Council that as there were still a few issues to be resolved by RHC, the Safety Guide was now presented only for Council information, not adoption. Council noted that with the Code approved, there was now a clear process to complete the Safety Guides quickly. The guides should be less formal than the Code and be able to be updated more frequently if required. It was expected that the Radiology Safety Guide would be finalised at the August 2008 meeting. The Nuclear Medicine Guide was also expected to be completed by that meeting, while the Radiotherapy Guide may not be completed until the following meeting in December 2008.

### **Discussion of Future Directions; Implementation of Code; DRLs**

The CEO informed Council that meetings had been held with RANZCR, including representatives attending the RHC meeting. Discussion had centred on the College's accreditation processes, standards of practice being implemented by the College, and requirements for accreditation to qualify for Medicare payments. The requirements and guidance in ARPANSA's Codes and Safety Guides need to be consistent with other processes required of RANZCR. Council noted that ARPANSA and the RHC aimed to work with the profession and had proposed a working group to discuss implementation issues, including the use of DRLs, with the RANZCR.

## **PROJECT PLAN FOR ASSESSMENT OF THE SAFETY OF SPENT FUEL MANAGEMENT AND RADIOACTIVE WASTE MANAGEMENT IN AUSTRALIA**

The CEO advised Council that in view of the position of the new Australian Government that it will not allow the development of nuclear power in Australia, he did not wish to pursue the breadth of the original request for advice. Rather, Council should review recommendations 3 and 9 of its 2002 advice in light of current developments both in Australia and internationally, and provide advice as to how ARPANSA should proceed in preparing regulatory guidance and advice to Government about the longer-term management and disposal of Australia's long-lived intermediate level waste. The review should be undertaken within the term of the current Council, which ends on 30 September 2008. RHC and NSC should be advised of the project and their input sought. Council agreed that it would undertake this task, and that the initial step should be to identify relevant documents and for members to provide items to be

considered in the report, before the end of April. Council was advised to include consideration of the disposal of radium legacy waste and molybdenum waste.

### **ICRP 103 – IMPLICATIONS FOR AUSTRALIA**

Council was informed of the main features of the new ICRP Recommendations in ICRP publication 103, and the implications for Australia. ICRP 103 maintained the three categories of exposure (occupational, public and medical), however practices and interventions had been replaced by planned exposure situations, emergency exposure situations and existing exposure situations. The paper concluded that the RPS1 Recommendations need revision to:

- change their scope to cover the new ICRP exposure situations and bands of dose constraints, and their application to occupational and public exposures
- include detail on optimisation for existing exposure situations, particularly for natural materials, including NORM and radon

RPS7, the Intervention Recommendations, should be revised to cover the use of constraints and reference levels in the planning and execution of emergency response arrangements. In addition, guidance on the remediation of contaminated sites was required, and guidance in preparation on medical exposures should include the application of optimisation to patient exposures, including the use of DRLs.

### **CURRENT RADIATION PROTECTION ISSUES IN SOUTH AUSTRALIA**

Mr Keith Baldry, Director, Radiation Protection Branch, SA EPA attended the meeting to discuss current radiation protection issues in South Australia, and Mr Rob Gaggini, Assistant Chief Radiographer, Flinders Medical Centre, attended to discuss radiation dose reduction in angiography and interventional radiology.

Mr Baldry advised that the Radiation Protection Branch has Division status in the EPA, which allows more ready access to the Minister than had existed when the Branch was part of the Health Department. The key aims are reducing risk to the community, improving the behaviour of users and community confidence that they are being protected. Current issues for the Radiation Protection Branch are:

- The Act is being reviewed and the Regulations will be reviewed. A discussion paper is to be released shortly.
- A radioactive waste facility is proposed to be developed in the Olympic Dam region.
- Solaria regulations have been introduced. The licensing provisions under the regulations will not commence until 2009.
- To develop the web site to become an information resource for radiation users. This is a large project to be undertaken over the next 12 months.

Mr Baldry advised that the challenges for his Branch included an expanding uranium mining industry and the need for streamlining of environmental regulation of uranium mining, and the recruitment and training of radiation protection staff, for which a promotion campaign on careers in radiation protection was planned.

Mr Baldry commented that the Uranium Industry Framework process, wherein government and industry have been working together, has been good. It has examined areas of regulation, skills, aboriginal issues, and communication. A consultant's report on regulation is currently being reviewed. The process will ultimately lead to streamlining of regulation of the industry. In regard to community confidence, a broad based program was needed. This could include surveys to establish whether people think they are being protected.

Mr Gaggini reported that he undertook investigations to see if dose savings in angiography and interventional radiology could be achieved. Angiography, cardiac intervention and interventional radiology are among the highest dose procedures. Mr Gaggini's study determined baseline radiation dose levels, examined dose reduction strategies, performed tests using a phantom, and applied the successful dose reduction strategies to clinical practice.

A range of technical and procedural factors that could affect dose were evaluated. Following testing, low pulse fluoroscopy, low dose acquisition and staff education were introduced to clinical practice, initially with simple procedures, but when the techniques were quickly proven, moving on to more complex procedures. Significant dose reductions were achieved over a range of procedures, leading to the conclusion that dose reductions equivalent to 200000 chest X-rays were achievable. While there was some small loss of image sharpness resulting from these changes, this was not significant for interventional work. It also took some adjustment for radiologists and cardiologists to get used to lower frame rates. Council thanked Mr Baldry and Mr Gaggini for their presentations and information.

## **REPORT FROM THE CEO**

The CEO informed Council of the following matters:

- ARPANSA had signed the contract for supply of a linac in the Medical Radiations Branch. It is expected that the linac will be in operation by September/October.
- OPAL fuel plates. The CEO advised that ARPANSA was reviewing the application from ANSTO to restart the OPAL reactor following the fuel plate incident, wherein a number of fuel plates had become displaced. As a result the fuel assemblies have been re-designed with stoppers at the top to prevent movement. ARPANSA received a submission from ANSTO on 21 December 2007 providing their root cause analysis, which indicated that there was a flaw in design, that the swaging was not consistently reliable, and that normal operation together with the other factors was sufficient to cause plate movement. ARPANSA had responded to ANSTO by accepting that there was a design flaw and that the roll swaging was suspect, but asking additional questions to establish whether it was normal operation or not. A detailed response to the questions has now been received, and a decision will possibly be made by the end of April. Replacement fuel has been manufactured and ANSTO could be ready to commence in days after receiving approval. Approval for irradiation of uranium plates for the production of molybdenum is still awaited and the new molybdenum process will also require TGA approval.

## **COMMITTEE REPORTS**

Council discussed the summary report of the Radiation Health Committee (RHC) meeting of 12-13 March 2008. In particular, he commented on the development of uniform requirements for the regulation of solaria. A draft had been prepared for inclusion in the National Directory for Radiation Protection, and a RIS is to be prepared. Victoria has adopted interim regulations, but still needs to develop a RIS. Victoria will work with ARPANSA to prepare a RIS that will be suitable nationally. SA also has regulation on solaria now. RHC had also agreed to write to the Australian Health Protection Committee about the need for consistent public health messages about solarium and solar radiation exposure.

The summary reports of the Nuclear Safety Committee meetings of 25 January 2008 and 21 February 2008 were noted.

## **CLOSURE AND NEXT MEETING**

The next meeting was scheduled for 8 August 2008.