

## SUMMARY OF MEETING OF 4 APRIL 2003

### OPENING OF MEETING, ATTENDANCE, APOLOGIES & COFIRMATION OF MINUTES

Council met at Stamford Hotel, Sydney Airport on 4 April 2003. All members were present except for Dr de Klerk, Prof Lowe and Dr Dickie.

Council congratulated Dr Arthur Johnston, who had been awarded a Public Service Medal for outstanding public service in the development of environmental standards, particularly relating to the Kakadu National Park.

### BUSINESS ARISING FROM THE MINUTES

The public comment period on the discussion draft of the National Directory for Radiation Protection had now been completed and 27 submissions had been received. A further draft of the Directory was in preparation. Advice had been received from the Office of Regulation Review on the areas requiring analysis in the Regulatory Impact Statement.

The Council letter to the Radiation Health Committee (RHC) and the RHC's response on veterinary radiology issues were tabled. Council was informed that the RHC had referred the matter to the Veterinary Code Working Group to consider whether the provisions in the draft were adequate for the extent of radiography undertaken for yearling sales.

### COUNCIL ADVICE TO CEO

#### Radioactive Waste

Council's recommendations on radioactive waste had been forwarded to the CEO in December 2002 and the CEO's responses had now been received.

It was agreed that the recommendations and the CEO's response would be placed on the Council web page. In relation to the individual recommendations, Council agreed to prepare the discussion paper on NORM and TENORM requested by the CEO in his response to *Recommendation 1*. Terms of Reference, timelines and an initial outline of the project would be prepared for next meeting.

In relation to the remaining Recommendations, Council noted that some recommendations were already being dealt with and that others were to be referred to either the Radiation Health Committee or Nuclear Safety Committee.

## **Precautionary Principle**

Council's advice on Precautionary Approaches in Radiation Protection had been forwarded to the CEO in December 2002, and his response was tabled for discussion. Council also noted that a reply from Environment Australia on this issue had now been received. The CEO's response informed Council that precautionary approaches had already been adopted in Radiation Protection Series (RPS) publication 1 on ionizing radiation (via the optimization process), and in RPS 3, the Radiofrequency Standard. The CEO advised that he will continue to bring precautionary approaches into the standard-setting processes of ARPANSA, particularly in regard to the environment.

## **NUCLEAR SAFETY OVERVIEW**

Council's terms of reference included nuclear safety, and a briefing on three of the fundamental nuclear safety documents published by IAEA was provided. These were IAEA Safety Series 110, *The Safety of Nuclear Installations*, International Nuclear Safety Advisory Group (INSAG) Report 4 *Safety Culture*, and INSAG Report 10 *Defence in Depth in Nuclear Safety*.

Safety Series 110 describes the safety objectives, legislative and regulatory framework, management of safety, and technical aspects of safety for nuclear installations. INSAG 4 describes the features of safety culture, including policy level commitment and management structures, managers' commitment and individuals' commitment. INSAG 10 describes 5 levels of Defence-in-Depth, ranging from prevention of abnormal operation and failures, to mitigation of radiological consequences of significant releases.

Council also received a presentation on the application of these concepts in ARPANSA's Regulatory Assessment Principles (RAP), of which the fundamental principles include a commitment to safety culture and implementation of defence-in-depth.

## **EMERGENCY RESPONSE AND INTERVENTION LEVELS**

### **Australia's Arrangements for Emergency Response to Radiation Accidents**

Council received a presentation on Australia's arrangements for emergency response and ARPANSA's role and current work in emergency response. Traditional emergency response planning centred around the HIFAR reactor and the Replacement Research Reactor, nuclear powered warship visits to Australian ports, radioactive satellite debris, and radiation source accidents. A newer concern was of radiological terrorism, including sabotage, nuclear weapons – either acquired or improvised, and radiological dispersion devices. The primary responsibility for initial radiation emergency response lies with the States/Territories, with Commonwealth assistance being requested via Emergency Management Australia, which would coordinate the resources of various Commonwealth departments and agencies. ARPANSA's role and capacity includes that of regulator of Commonwealth entities, provision of expert advice, radiation monitoring, radionuclide identification both in the field and in the laboratory, dose assessment, modelling, and as a member of various national and international emergency planning and response groups.

### **Issues arising from comment on draft Intervention Levels**

Council was informed of the issues arising from public comment on the draft Intervention Recommendations, and in particular the outcomes of the discussion on the topic at the Radiation Health Committee meeting. Council noted that the major issues included the

intervention level for iodine prophylaxis in children, where RHC had agreed that there was a need for further explanation. A Technical Report on the known risks of radioiodine exposure and relevant protective actions in the context of other risks during a radiological emergency will be developed. The question of whether to pre-distribute iodine to homes also raised considerable comment and RHC had agreed to re-write the paragraph on this issue to discuss advantages and disadvantages, but acknowledge that pre-distribution was an operational issue for emergency response organisations. There had also been criticism that the draft was based too much on power reactor considerations in international documents and RHC had agreed that the draft needed to reflect current issues for Australia. The draft would also be modified to acknowledge that immediate sheltering when there was little information on the extent of an accident was sensible, while longer-term sheltering would still be based on the intervention levels. Terminology would be adapted to ensure that where relevant it was consistent with Australian emergency management terminology. The concept of emergency workers 'volunteering' to enter high radiation areas had also been an issue in comments, and RHC had agreed that the current wording should be amended. A revised version of the Intervention Recommendations will be released for a second round of public comment later in the year.

## **NRPB REPORT ON BRITISH NUCLEAR VETERANS**

Council received a briefing on the NRPB Report W27 concerning the health of British nuclear veterans. The study follows up two previous studies and analyses an extra 8 years of data. There were 21,357 participants in the tests, however only 1716 (8%) were exposed to radiation. Only 37 received doses greater than 100mSv. While the total deaths (including controls) had doubled since the earlier report, the cancer rates were less than the national rates. For leukaemia, the numbers for both participants and controls were low compared with the population, the control group in particular being abnormally low. For 20 other cancer types studied, only 4 showed significant differences between the participants and controls - bladder, prostate and liver cancer were increased among participants, while kidney cancer was increased among controls. Council was also informed that an Australian survey was being undertaken. There are about 17,000 people on the Australian record. Dose reconstruction was also to be undertaken in this survey.

## **COUNCIL FORWARD WORK AGENDA**

Council reviewed the list of forward agenda items that had been identified at the November 2002 meeting, and noted that work on many of these items had already commenced. Issues included review of the ICRP recommendations, interaction with the RHC and NSC, security of sources, radioactive waste, Council contribution to RHC publications, uniformity, risk communication, ultraviolet radiation protection, emergency response, use of consultants or ARPANSA staff to prepare reports, and keeping informed on international developments. Council also discussed the possibility of developing a document outlining how ARPANSA interacts with the public, which had been raised at the NSC meeting in February. It was agreed that a draft would be prepared for next meeting. The document would ultimately be published on the ARPANSA web site.

## **REPORT FROM THE CEO**

The CEO reported on a number of international conferences and meetings he had attended recently. These included:

- Conference on Safety Culture in Nuclear Installations (Rio De Janiero, Dec. 2002)
- Conference on Radioactive Waste Management (Vienna, Dec. 2002)
- Working Group on Code of Conduct on the Safety of Research Reactors (Vienna, Dec. 2002)
- Program Committee meeting, Conference on Radiation & the Environment (Vienna, Mar. 2003)
- Meeting to review Code of Conduct on Security of Sources (Vienna, Mar. 2003)
- Meeting with key National Radiological Protection Board (UK) staff, including Director-designate Prof Roger Cox (March 2003)
- Meeting with key National Radiation Laboratory (New Zealand) staff (April 2003).

In New Zealand, the CEO had discussed a closer involvement for New Zealand in the Australian uniformity processes leading to the National Directory for Radiation Protection. The CEO also advised on the Replacement Research Reactor, amending the Australian Radiation Protection and Nuclear Safety Regulations to ensure that the definitions capture the National Radioactive Waste Repository as a nuclear installation, the release of the MARTAC report on Maralinga, progress towards ratifying the Joint Convention, a national patient dose survey being undertaken by ARPANSA, an ARPANSA ELF survey, which is now to be a Victorian survey rather than a national survey, and that the ELF Standard working group had commenced its task.

### **Reports from the Radiation Health Committee & Nuclear Safety Committee**

Council noted the summary report on the Radiation Health Committee meeting. The meeting had discussed a range of issues related to the publication program, and had received a presentation on the review of the IAEA Code of Conduct on the Safety and Security of Radioactive Sources. The Council noted the report of the Nuclear Safety Committee meeting.

### **OTHER BUSINESS**

#### **Update on Adoption of 2001 Transport Code in Australia**

Council was informed that only SA and Victoria were yet to adopt the Transport Code, and that both of these States were nearing adoption.

#### **Progress on Interventional Cardiology Questionnaire**

Council was advised that a draft questionnaire was with the Cardiac Society for comment prior to a trial at a small number of pilot centres, and later distribution to all cardiology centres. Council would be kept informed of progress.

#### **Developments on Use of Radiation in Preventative Medicine**

Council noted that NSW had moved to require an independent referral for CT scanning, and informed consent in writing. Council requested that the Secretariat seek advice from all jurisdictions on action being taken on this issue.

### **CLOSURE AND NEXT MEETING**

The next meeting was scheduled for 31 July 2003 at ARPANSA's Yallambie office in Melbourne.