



**SUMMARY OF MEETING OF 25 NOVEMBER 2005**

**OPENING OF MEETING, WELCOME TO MEMBERS, CONFIRMATION OF MINUTES & BUSINESS ARISING**

Council met at ARPANSA's Miranda office on 25 November 2005. All members were present except for Dr Arthur Johnston, Em Prof Ian Lowe and Em Prof Cliff Walsh. Mr Peter Burns, Director, Environmental & Radiation Health Branch, ARPANSA attended as an observer and Mr Pat Davoren, Director, Radioactive Waste Management, Department of Education, Science and Training attended for agenda item 9. Ms Kidziak welcomed all members to the new triennium for Council. In particular, Prof Peter Johnston, Mr Ian Sawyer and Em Prof Cliff Walsh (not present) were welcomed as new members of Council.

The minutes of 5 August 2005 were confirmed without amendment and it was noted that actions from the last meeting had been completed

**ADVICE TO CEO ON NORM**

The Chair informed Council that the advice to the CEO on NORM management had been finalised after the August 2005 Council meeting and that a response, as tabled, accepting the recommendations was received from the CEO.

The CEO advised members that it was time to move forward on the safe management of NORM, that it was important to work co-operatively with industry and State/Territories to achieve national uniformity, that regulation was not necessarily the endpoint, the use of real life data was important, and there was a need for consistency with international frameworks. The CEO would write to stakeholder groups by late December and request their interest in joining a Stakeholder Consultative Group on NORM. He noted that it was intended to raise public awareness on NORM by creating, in consultation with stakeholder groups, a web page on ARPANSA's web site containing links and information on NORM. The CEO would inform Council of any progress on NORM.

Council discussed the CEO's response and noted that consultation and communication were important, raising awareness needed to be carried out in a non-threatening way, and there needed to be consistency in regulation and terminology. Council also noted that the notion of safety will be more risk-based in the future and information on risk was sparse in relation to NORM. It would also be helpful to develop Australian guidance on clearance criteria for uranium mining or other sites as part of the process of examining NORM, with the aim of achieving consistency of approach across Australia. Council was informed of IAEA documents on NORM, including IAEA RS-G-1.7, *Application of the Concepts of Exclusion, Exemption and Clearance*, four draft safety guides/reports that are being developed, and the preparation of a document containing requirements that may be included in the revision of the basic safety standards (BSS).

The Chair recommended that a progress report be included on the agenda of the next Council meeting and that Council be provided with an update on IAEA and any other international developments on NORM.

## **ADOPTION OF CODE OF PRACTICE FOR RADIATION PROTECTION IN DENTISTRY**

The process to develop the *Code of Practice and Safety Guide for Radiation Protection in Dentistry* was described. The final Regulatory Impact Statement (RIS) has been cleared by the Office of Regulation Review (ORR). One late submission was received from the Victorian Dental Practice Board.

Council was informed that the main issues raised in public comment were that the quality assurance procedure was too complex, some thought that more than 5% of dental X-ray equipment would require modification under the Code, recordkeeping requirements with respect to keeping and providing previous exposure histories needed to be consistent with ARPANSA Radiation Protection Series publication 1, and that a request to relax provisions regarding the holding of uncooperative patients had not been agreed. The Radiation Health Committee had endorsed the draft Code progressing to Council.

Council noted that there were issues including comments from the Victorian Dental Practice Board, handheld portable dental X-ray units, a Foreword and cone-beam CT units to be finalised. Council discussed the issues and decided that the Code should include the CT units but not the handheld units. Council noted that the Code would be amended and then circulated out-of-session within three weeks for Council recommendation for the Code to be adopted and published.

## **COUNCIL ADVICE TO CEO ON EMERGING MEDICAL RADIATION ISSUES**

The Chair informed Council that the development of the advice on emerging medical radiation issues had commenced following the November 2004 Council meeting, several experts in medical radiation had given valuable presentations to Council since the meeting, and South Australia Environment Protection Agency had developed a paper on regulatory issues. The Chair advised Council that a draft advice to the CEO, containing recommendations, had been prepared, that the advice needed to be reviewed by Council, and that a preliminary recommendation on the advice was required.

Council discussed the draft in detail and decided on the matters still requiring attention.

The Chair indicated that a revised draft advice would be circulated to Council members for comment at the beginning of February 2006 so that it can be considered at the April 2006 Council meeting.

## **BRIEFING ON RECENT REPORTS ON EFFECTS OF LOW DOSES OF IONIZING RADIATION**

Mr Burns gave a presentation to Council on recent studies on the effects of low doses of ionizing radiation. He listed a number of recent reports, including UNSCEAR 2000 Report – Annex G: *Biological Effects at Low Radiation Doses*, NCRP 136 – *Evaluation of the Linear-Nonthreshold Dose-Response Model for Ionizing Radiation*, a draft ICRP report on health risks attributable to ionizing radiation, the draft ICRP Committee 1 Task Group Report on the probability of a low dose threshold for radiation-related cancers, and compared them to the prepublication draft of the BEIR VII report on the health risks from exposure to low levels of ionizing radiation.

The UNSCEAR 2000 Report concluded that even at low doses there was a risk of developing cancer, and that analysis of the data produced a linear relationship between low doses of radiation and tumorigenesis.

The BEIR VII report contained similar conclusions to UNSCEAR 2000. The BEIR VII Committee concluded that there was insufficient evidence of the possible contribution to cancer risk of adaptive responses, post-irradiation genomic instability and bystander signalling effects. However, the Committee found that the genetic variation in the population was an important factor in estimating radiation cancer risk and that low dose induced genetic risks were very small when compared to baseline risks in the population.

A study by Preston et al (2004), of the Japanese bomb survivors gives the latest data for acute exposures. The results are not dissimilar to those observed by Cardis et al (BMJ 29 June 2005) for nuclear industry workers for chronic exposure at much lower doses. A study by Darby et al on the risk of exposure from radon in homes also shows effects for long term chronic exposure at low doses. Other chronic exposure studies examining the relationship between fluoroscopy and breast cancer in North America, the exposure of individuals resulting from discharges into the Tetcha River from plutonium production, and the relationship between the Chernobyl accident and childhood thyroid cancer were reviewed. Studies by Mole (1990) of prenatal exposures of the fetus, and the Doll and Wakeford (1997) cancer studies, showed effects at low acute doses.

## **BRIEFING ON RADIOACTIVE WASTE MANAGEMENT**

### **Commonwealth Actions on Radioactive Waste Management**

Mr Pat Davoren, Director, Radioactive Waste Management, Department of Education, Science and Training, addressed Council on the progress of the Commonwealth Radioactive Waste Facility. In July 2005 the Minister for Education, Science and Training, Dr Brendan Nelson MP, announced three potential Commonwealth sites in the Northern Territory for the storage of low and intermediate level waste: Fishers Ridge (near Katherine), Harts Ridge and Mt Everard (both near Alice Springs).

It is proposed that site investigations would take place over the next 12 months, the Minister for the Environment would be approached in late 2006 for an environmental assessment of the preferred site(s), and then a decision would be made on the preferred site in late 2007. Assessments of the siting, construction and operating licences by ARPANSA would take place from 2008 to 2011 so that operations would commence in late 2011.

A Communications Strategy has been developed. It includes an information pack and a project web site, which was available at [www.radioactivewaste.gov.au](http://www.radioactivewaste.gov.au). As part of the Communications Strategy public meetings were held with stakeholders and indigenous groups.

The Commonwealth Radioactive Waste Management Bill 2005 had been introduced. It gave the Commonwealth the legal power to site, construct and operate the facility.

The CEO tabled a paper which provided Council with an update on current progress on the Radioactive Waste Management Strategy.

### **Tokyo Conference on Safety of Radioactive Waste Disposal**

The Chair informed Council of the proceedings of the *International Conference on the Safety of Radioactive Waste Disposal*, which she attended in Tokyo, Japan on 3-7 October 2005. It

included discussion on the Joint Convention, ageing reactors, NORM, societal concern on waste disposal, confidence building in steps and processes, siting with particular emphasis on lessons learnt, environment impact assessments, political issues, the goals of successful siting, the location and construction of geological disposal facilities, near surface disposal of waste, and the IAEA assisted borehole disposal of disused radioactive materials. The Chair noted the broad coverage and that it was a worthwhile and timely Conference.

### **REPORT FROM THE CEO**

The CEO advised Council that the ARPANSA Annual Report had been published and that ARPANSA was responding to the 19 recommendations made by the ANAO in their Regulatory Review Report.

The CEO informed Council of an incident at ANSTO Radiopharmaceuticals and Industrials (ARI) involving a high recorded dose of 65 mSv on a TLD badge of a maintenance worker. The incident is undergoing further investigation.

The CEO reported that the assessment of the licence application to operate the OPAL research reactor was proceeding and the pre-commissioning phase had been undertaken. ANSTO hoped to start cold commissioning before the end of the year and it was expected to take 3 months. Another peer review on procedures of major activities involved in operating a reactor was to be undertaken next week. A public forum on the reactor licence will be held on 8 and 9 December 2005, in which the panel members will be Dr Lars Hogberg, former Director General of the Swedish Nuclear Power Inspectorate, and Professor Jim Falk, Director of the Australian Centre for Science, Innovation and Society, University of Melbourne.

The CEO had attended meetings of the Joint Parliamentary Committee on Public Accounts and Audit, the Parliamentary Inquiry into Australia's Uranium Resources, the Senate Estimates Committee, and the Radioactive Waste Bill Committee. He had also attended the Australasian Radiation Protection Society Conference and WHO EMF meeting, both held in Melbourne in November. The WHO EMF meeting discussed mobile telephony and health, with a focus on current research. The WHO was going through a risk assessment process on RF and ELF. The WHO's full assessment of ELF and static fields would be completed soon and the WHO IARC study of RF and the risk of cancer should be completed next year.

### **COMMITTEE REPORTS**

Reports from recent meetings of the Radiation Health Committee and Nuclear Safety Committee were tabled and noted.

### **PROGRESS ON NATIONAL DIRECTORY FOR RADIATION PROTECTION, EDITION 2**

Council was advised of progress in preparation of Edition 2 of the National Directory for Radiation Protection. It was intended that Edition 2 would be completed by July 2006 and then submitted for AHMAC and AHMC approval.

### **CLOSURE AND NEXT MEETING**

The next meeting was scheduled for Friday 28 April 2006 at Miranda.