



SUMMARY OF MEETING OF 28 APRIL 2006

OPENING OF MEETING, APOLOGIES, CONFIRMATION OF THE MINUTES & BUSINESS ARISING

Council met at ARPANSA's Miranda office on 28 April 2006. All members were present except for Em Prof Cliff Walsh. Mr Peter Burns, Director, Environmental & Radiation Health Branch, ARPANSA attended as an observer. Mr Wayne Dawes, Manager, Hazardous Materials and Radiation Section and Mr Craig Lamberton, Director, Specialised Regulation, Department of Environment and Conservation, New South Wales attended for discussion on radiation protection in NSW. Mr David Tredinnick, Manager, Policy and Source Security Unit, ARPANSA attended for the security of sources item. Associate Professor Andrew Wood of Swinburne University & Chair of ARPANSA's ELF Working Group attended by teleconference for the ELF item. The minutes of 25 November 2005 were confirmed without amendment and it was noted that actions from this meeting had been completed. Ms Kidziak welcomed all members and congratulated the CEO on being awarded the Public Service Medal in the Australia Day honours list.

PROGRESS IN ESTABLISHING A NORM STAKEHOLDERS GROUP

Council was informed that ARPANSA had invited a range of Government, industry and environmental organisations to nominate persons for a stakeholder group to assist ARPANSA in developing guidance material on NORM for relevant industries. While several groups were yet to answer, nine persons had been nominated. A project plan for NORM work will now need to be developed, including involvement of the stakeholder group.

COUNCIL ADVICE TO CEO ON EMERGING MEDICAL RADIATION ISSUES

Council discussed the draft advice to the CEO on emerging medical radiation issues, and made a number of proposals for changing the paper. Council agreed that there was a need to put its advice forward to the CEO, noting that the CEO may, after consideration of the document, request Council to carry out further work. The next draft will be prepared for circulation and sign-off by Council members within the next month.

PROGRESS IN DEVELOPING AN ELF STANDARD

Associate Professor Andrew Wood, Swinburne University and Chair of ARPANSA's ELF Working Group informed Council of recent developments in the drafting of the ELF Standard. A/Prof Wood described the original proposal and reviews undertaken by the working group, and the current stage of progress. The draft had recently been reviewed by the ELF Consultative Group and a revised version discussed at the March 2006 RHC meeting.

At its March 2006 meeting, RHC noted that community concern centred on childhood leukaemia for which a precautionary approach is proposed. RHC requested that a full regulatory impact statement (RIS) be prepared, examining the options of publishing a regulatory Standard, publishing a non-regulatory Standard with educational strategies for the leukaemia issue, and not publishing a Standard. The RIS would need to examine costs and benefits of these options. A/Prof Wood informed Council of the mandatory precautionary

statement in the Standard, the advisory material on precaution proposed in Annex 6, and some questions still under consideration by the working group.

Council members discussed a range of issues with A/Prof Wood, including the difficulty of identifying the benefits of a Standard in RIS terms, differences with the ICNIRP Guidelines and IEEE Standard, whether the RIS would cover the whole frequency band, the wording of the precautionary statement, and why the epidemiological evidence on childhood leukaemia was not used as the Basic Restriction in the Standard. Council thanked A/Prof Wood for the presentation and asked to be kept informed of progress.

HEALTH EFFECTS OF CHERNOBYL ACCIDENT – 20 YEAR REVIEW

Mr Burns gave a presentation to Council on the recent publication by The Chernobyl Forum: 2003-2005, which reviewed the legacy of health effects from the Chernobyl reactor accident after 20 years. Council was also provided with an OECD/NEA *Report on Stakeholders and Radiation Protection: Lessons from Chernobyl 20 Years After*. Mr Burns gave a brief overview of the reactor and the releases of radioactive material that occurred during the accident. He advised that the report described the exposed populations as including the emergency workers, the recovery workers, evacuees, people in significantly contaminated areas, and people in contaminated areas, including the estimated number of people in each group, the estimated doses received by each group, and the projected numbers of excess cancers. The figures projected that about 10,000 cancer deaths would occur in the above groups.

Council was advised that the International Agency for Research on Cancer (IARC), part of the World Health Organisation, recently reviewed the potential cancer burden in Europe from the Chernobyl accident. That report concluded that there could be 16,000 resulting cancer deaths in the European population of 570 million over the next 80 years (i.e. about 0.01% of all cancer deaths).

Council was informed that the conclusions of the Chernobyl Forum Report in relation to health effects were:

- While there have been many post-Chernobyl studies of leukaemia and cancer morbidity, most studies had methodological limitations and lacked statistical power. There is therefore no established evidence that the incidence of leukaemia or cancer (other than thyroid) has increased in children, those exposed in-utero, or adult residents of the 'contaminated' areas.
- For most solid cancers the minimum latent period is likely to be much longer and it may be too early to measure the full radiological impact of the accident.
- The absence of a demonstrated increase in cancer risk (apart from thyroid cancer) is not proof that no increase has in fact occurred, given the limitations of the studies.
- There is strong evidence of a dose response relationship for thyroid cancer.
- Recent findings indicate that there is a possible doubling of leukaemia risk among Chernobyl liquidators, a small increase in pre-menopausal breast cancer in the most contaminated districts (related to radiation doses), cataracts may be possible at lower doses than previously experienced (~250mGy), and there are possible cardiovascular effects. All of these need further investigation.
- There has been a modest but steady increase in reported congenital malformations in both 'contaminated' and 'uncontaminated' areas of Belarus since 1986, which does not appear to be radiation-related.

- Other effects being examined include cytogenetic markers that could be used for dose/risk estimation, and immunological problems for which there is conflicting laboratory data and no definite clinical effect, which will be researched in the high dose liquidators.

BRIEFING ON LICENCE APPLICATION TO OPERATE OPAL REACTOR

The CEO briefed Council on the remaining processes and issues required to finalise consideration of the operating licence application for the OPAL Reactor. He noted that the cold commissioning of the reactor, which involved testing components without fuel, was virtually complete and that ARPANSA was awaiting the cold commissioning report. The cold commissioning tests included running the reactor continuously for 36 hours (including shift handovers), an emergency exercise, and a test of offsite power failure. The CEO advised Council that the Nuclear Safety Committee would be fully briefed on the cold commissioning report at its next meeting in June 2006.

ARPANSA'S WORK AND INTERNATIONAL DEVELOPMENTS ON SECURITY OF SOURCES

Mr David Tredinnick, Manager, Policy and Source Security Unit, ARPANSA, gave a presentation to Council covering ARPANSA's work and international developments in relation to the security of sources. Mr Tredinnick provided background on the categorization, and numbers and types of sources in Australia in each category, and the potential consequences of the use of a radioactive source in a radiological dispersion device (RDD). He described the background and content of the National Source Security Strategy, which includes provision for a Code of Practice for the Security of Sources, currently being prepared. The Code provides a method for categorizing sources and then requires a risk assessment and security plan to be prepared, along with security measures related to the category of source and the threat assessment. An option to follow prescriptive requirements is included for small operators without the resources to undertake risk assessment. The Code and a regulatory impact statement had been released for public comment. Twenty-four submissions were received and would be reviewed.

Mr Tredinnick discussed other Australian developments in this area, including a COAG review of hazardous material security regulation, a draft National Chemical Biological Radiological and Nuclear Security Strategy, import/export controls, the National Register of High Activity Radioactive Sources, and a training and assistance program to implement the Code. International developments described included the IAEA Code of Conduct on the Safety and Security of Radioactive Sources, IAEA Guidance on the Import and Export of Radioactive Sources, and other IAEA guidance material in development. Australia has also signed, but not yet ratified two conventions, the Convention on the Physical Protection of Nuclear Materials and the Convention on the Suppression of Acts of Nuclear Terrorism.

Council thanked Mr Tredinnick for the information and requested that the Secretariat place the issue on the agenda for further discussion at the next meeting.

REPORT FROM THE CEO

The CEO briefed Council on the activities of ARPANSA since the November 2005 Council meeting. He informed Council that ANSTO plans that the HIFAR reactor would be shut down after 2006 if the OPAL reactor was operating. ANSTO is proposing that HIFAR would initially be placed under a care and maintenance regime, before being decommissioned at a

later stage. The CEO noted that the Commonwealth low level waste repository would need to be operational for storage of decommissioned HIFAR parts.

The CEO advised Council that an amendment to the ANSTO Act was currently before Parliament. This amendment would enable ANSTO to accept and store radioactive materials arising from law enforcement activities. The Commonwealth is moving to manage its own radioactive waste. ANSTO has the capacity to condition waste, and the amendments will also ensure that it is able to do so on behalf of other Commonwealth agencies.

The second review meeting of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management will take place in Vienna on 15-24 May 2006. ARPANSA has prepared Australia's national report for the review meeting, and has responded to questions from other countries.

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 was also reported and noted.

OTHER BUSINESS

Discussion on Radiation Protection in NSW

Council welcomed Mr Craig Lamberton, Director Specialised Regulation, Department of Environment and Conservation (DEC), NSW and Mr Wayne Dawes, Manager, Hazardous Materials and Radiation Control, DEC, NSW, for a discussion on current radiation protection arrangements in NSW. Discussion included the structure of the Department, the current review aimed to reduce over-regulation, and an inquiry on regulatory impediments to growth. The NSW Radiation Advisory Council was also reviewing its strategic plan, aiming to link into national consistency processes and reviewing relationships with other stakeholders. It was noted that the National Directory process was helpful in progressing uniformity. Council thanked Mr Lamberton and Mr Dawes for meeting with Council for this discussion.

CLOSURE AND NEXT MEETING

The next meeting was scheduled for Friday 4 August 2006 at Yallambie.