

Radiation Health & Safety Advisory Council

an advisory body to the CEO of ARPANSA, established under the ARPANS Act 1998
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DRAFT MINUTES OF MEETING OF 3 AUGUST 2001

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1. OPENING OF MEETING & ATTENDANCE

Council met at ARPANSA's Miranda Office on 3 August 2001. The following were present:

Members: Dr Rick McLean (Chair)
Dr Nick de Klerk
Dr Arthur Johnston
Dr John Loy
Mr Peter Raue
Dr Lorraine Robb
Dr Richard Smart
Dr Garry Smith

Secretariat: Mr Alan Melbourne
Ms Heather Letwin

Observer: Dr Ches Mason

The Chair opened the meeting at 9:30 am and welcomed all members. He also advised that Mrs Fitch had recently been appointed to a temporary position (for 6 months) with the IAEA in Vienna and had been granted Leave of Absence from the Council until the end of 2001. Council requested that the Secretariat write to Mrs Fitch and congratulate her on her IAEA appointment.

Council members commented on the lateness of papers distributed for this meeting. It was agreed that wherever possible the Secretariat would distribute papers two weeks in advance of the meeting, that papers would be labelled with the agenda item number, and that the final email would include an annotated agenda that specified what papers have been distributed, how (email or hard copy) and when.

2. APOLOGIES

Dr Dickie, Ms Plues, Ms Kidziak

3. CONFIRMATION OF MINUTES OF 9 APRIL 2001

The minutes were confirmed with the following corrections:

6.2 Replace first sentence of second paragraph with: *Council members commented on the need to deal with uranium mining and radioactive waste separately from other natural materials.*

7. (last sentence of third paragraph): Change: "...could be summarised..." to "...could also be summarised...".

12.1 Replace fifth sentence of first paragraph with: *An international symposium to be run jointly by ARPANSA, the Supervising Scientist Group (a Division of Environment Australia), and several international organisations, has been planned for July 2002 in Darwin.*

4. BUSINESS ARISING FROM THE MINUTES

4.1. Council Precautionary Principle Working Group

A copy of the latest version of the Precautionary Principle paper was tabled for Council's information. It was noted that the two page advice to the CEO, which was to be based on this paper had not been produced as yet. Council requested that the two page advice paper be prepared within the next two months, for circulation prior to the next meeting. Both papers would then be circulated to ANZFA, the Office of Gene Technology, and TGA to seek their views. The Precautionary Principle papers would be documents owned by and attributed to the Council. It was also suggested that the papers should be examined by ARPANSA's legal officer to ensure that they could not be used in a way not intended by Council.

4.2. Council & the Public

A letter from Sutherland Shire Council (2 May 2001), which included their Consultation Policy was tabled, along with Council's reply to earlier correspondence from Mayor Sonda (16 May 2001), and Sutherland Shire Council's Code of Meeting Practice.

As indicated in the reply to Sutherland Shire, Council had placed its agenda on the ARPANSA web site more than a week in advance of the meeting, along with an invitation to make submissions. ARPANSA's Public Affairs Officer had circulated this information to many interest groups. A proposal for a web chat room may be trialled at a later meeting. A post-Council briefing had also been advised on the web site and would be held if any interested persons arrived. Mr David Noonan, Australian Conservation Foundation, had advised the Secretary of his intention to submit a paper on the Radioactive Waste agenda item, but it had not been received. No advice of intentions to attend the post-Council briefing had been received. In the event, the briefing did not proceed as no person attended at the stated time.

The CEO also advised of the Engadine public meeting on the research reactor construction licence application, where a new meeting format had been used. There were three booths and people were able to wander, pick up information and ask questions individually. A combined question and answer session had then been held and the format was considered to have worked well. The next such meeting would include the airborne discharge authorisation issued to ANSTO.

Council noted that there had been some technical difficulty in preparing PDF files on the HIFAR licence for the web page. Mr Raue offered to assist ARPANSA officers to resolve the problem.

4.3. Record of Teleconference of 1 May 2001

Council noted the record of the Teleconference.

5. COUNCIL RADIOACTIVE WASTE WORKING GROUP

The Chair summarised the background to this item. The CEO had written formally asking the Council to advise on radioactive waste issues. This request had been converted into

terms of reference for the working group, and the five members of the working group had been asked to prepare information on two issues each. The last of these papers was received three weeks ago, and will now be collated into a single paper for circulation prior to the next Council meeting. The Chair also noted that the CEO had foreshadowed that he will seek advice on disposal of intermediate level waste at a later time.

In discussion, Council was informed that the Department of Industry, Science and Resources had released a paper discussing siting criteria for the proposed intermediate level national store for radioactive material. The Secretariat would obtain copies for Council members.

6. INTERVENTIONAL CARDIOLOGY

The Cardiac Society of Australia had nominated Professor David Muller, St Vincent's Hospital, Sydney to liaise with Council over radiation safety issues in cardiology. A teleconference had been held between Prof. Muller, Dr McLean, and Dr Julian Thomson of ARPANSA's Medical Radiations Branch. As a result a joint letter from Council and the Cardiac Society will be sent to all Cardiology Units. The letter described ARPANSA's and Council's roles, referred to an increase in radiation injuries, that it was important to find out what was happening in Australia, and provided information from ICRP 85 on avoidance of injuries. It was intended that a questionnaire would be developed later to obtain baseline data on equipment, personnel and procedures. The questionnaire would be piloted at cooperative sites, and later sent to all cardiology centres in Australia. When the draft letter has been approved by the Cardiac Society, a copy will be sent to Council members for information.

7. RADIOFREQUENCY STANDARD - PROGRESS REPORT AND DISCUSSION OF ISSUES

The CEO informed Council of the current progress towards a Standard on Radiofrequency Fields, and issues that had arisen in working group discussions. Copies of the Agenda papers from the Radiation Health Committee meeting were tabled, along with a draft extract of the minutes on the Committee's discussions. The draft Standard had been released for public comment in March for a period of two months. Over sixty submissions were received. The working group had met in July and was still considering the comment received. The issues that had arisen relate to the magnitude of the basic limits, where the spatial peak SAR was important to the public as it related to mobile phone use. Tissue averaging volume (whether 1 gram as in IEEE or 10 gram as in ICNIRP) was a consideration in this debate.

Companies operating induction heaters had indicated a problem in complying with the Reference Levels in the draft Standard, but may still be able to demonstrate compliance with the Basic Restrictions. There may be a need for a Code of Practice to cover use of this equipment.

The working group had presented the Radiation Health Committee with three options in relation to the precautionary approach. These centred around whether or not the precautionary approach should be a mandatory part of the Standard. The Radiation Health Committee had prepared some observations for the working group, and asked that they

consider the matter further. Council discussed the options presented and some members generally agreed with the intent of option 2 but felt that the wording was inappropriate. Dr Smith offered to talk to the working group about the Sutherland Shire Council's approach to planning issues and the precautionary principle.

The working group is due to meet again on 15-16 August to complete consideration of the public comment. It is then likely that there will be a meeting in September to finalise the draft.

8. A POSSIBLE NATIONAL SURVEY OF ELF

The CEO discussed the RHC agenda papers considering the value of a national survey of ELF levels in homes. The possibility had arisen following release of the UK Advisory Group on Non-Ionizing Radiation (AGNIR), which had said that despite the absence of animal and laboratory evidence, there was still some epidemiological evidence of an association between ELF and childhood leukaemia where long term average exposure was greater than 0.4 μ T. In the UK only 0.5% of homes exceeded this level. A survey could provide a comparison with levels in Australian homes. Surveys in other countries have assessed exposure in different ways including by calculation, historical field levels, 48 hour measurements, spot measurements and personal dosimeters. The most recent studies have pooled all of this data and found an association. It is not certain whether the association is due to bias, but it cannot be explained away at this time.

Mr Karipidis of ARPANSA's NIR Branch has designed and costed a study to examine the levels in Australian homes. The CEO requested Council advice on whether a survey at the costs indicated was worth doing.

Council members raised a number of points in discussion, including:

- Australian Bureau of Statistics have houses selected as representative to meet various levels of precision & sampling. It could be helpful to seek their involvement in the survey;
- The Doll Report refers to schools, and it may be useful to include them in the survey;
- The purpose of the survey was important in determining the approach taken;
- The confidence levels and precision were related to the purpose of the survey. If it was to establish the average levels then the confidence levels quoted were appropriate. If it was to determine the distribution or the number of homes above a certain exposure level, then the confidence levels and precision would be different and the statistics used for the proposed survey would need to be re-examined;
- There would be some value in combining home monitoring and personal monitoring, as the personal monitoring results could be useful in future epidemiological studies; and
- The Senate report had suggested that a survey would be of value.

The CEO indicated that the study was to provide public knowledge of the levels in Australia and the circumstances in which they arise, as well as comparison with other studies such as the UK study.

Council decided that a small group consisting of Mr Raue, Dr de Klerk and Dr Robb would provide feedback on the issues that need to be considered.

It was also considered that a small pilot survey could establish issues to be resolved before a larger survey was undertaken. A segment of the pilot could assess exposure by calculation to determine whether calculated exposure can be correlated with measured exposure.

The Executive Summary of a Californian Public Utilities Commission Report on EMF was tabled. It had been prepared by three appointed experts reviewing the evidence presented by a National Institutes of Environmental Health Sciences working group in 1998, along with relevant studies published since 1998.

Council was advised that International Agency on Research on Cancer had completed a formal assessment of ELF and had classified it as a class 2B carcinogen, in that there was some human evidence, which was not supported by animal or laboratory studies.

WHO will undertake a review of non-cancer health effects of ELF next year. The Doll group in the UK is examining any possible association with Alzheimer's disease.

9. NEW TRANSPORT CODE - APPROVAL OF FINAL CODE

Mr Melbourne tabled a report on the process undertaken to develop the new Transport Code, which had now been approved by Radiation Health Committee, along with a copy of the Code.

Australia controls transport of radioactive materials by adopting the IAEA transport regulations within an Australian code of practice, which clarifies and modifies the IAEA regulations for Australian circumstances. The most recent IAEA regulations were now being adopted worldwide, so that there was a need for Australia to update its code.

The process to develop the code included formation of a working group, consideration and comment on drafts by the Radiation Health Committee, development of a Regulatory Impact Statement (RIS) to meet the Council of Australian Governments' (COAG) requirements, a period of public consultation, review by the working group of the 23 submissions received, and Radiation Health Committee consideration of the final draft and the approach taken by the working group to the comment received.

Mr Melbourne noted that the particular issues requiring clarification in the Code included the exemption levels for natural materials, and default dose rates for packages containing natural uranium and thorium.

NSW EPA had expressed a concern at the July Radiation Health Committee meeting that the RIS was qualitative not quantitative, and would not meet their requirements. However, the Office of Regulation Review had assessed the RIS as meeting the COAG requirements. Ms Plues was an apology for this meeting, but had forwarded her dissent concerning the adequacy of the RIS by email.

Council discussed its role in endorsing Codes, and noted that its role in the Act was "to advise the CEO on the adoption of codes".

Council agreed to advise the CEO to adopt the Transport Code (proposed Dr Smart, seconded Dr Johnston), and noted Ms Plues objection. The Secretariat will advise Ms Plues of this decision. Dr Smith agreed to advise of any questions regarding the Code within one week, as he had not received the emailed report.

Council requested that reports similar to that provided for the Transport Code be provided for other codes presented to Council, to describe the process undertaken in developing the Code.

10. REPORT FROM THE CEO

The CEO advised that he had issued a licence for the HIFAR reactor in June 2001. The documents released included a safety evaluation report, a statement of reasons, the licence and conditions. Licences for fuel management and radiopharmaceutical production had also been issued, along with a discharge authorisation. The discharge authorisation applied until the start of 2002, and in the mean time there will be a public consultation process on that issue.

The construction licence application and Preliminary Safety Assessment Report (PSAR) for the replacement research reactor had been received in May. The full PSAR had been made available to Sutherland Shire Council and other local Councils, State Libraries and environmental groups. Summaries were available on ARPANSA's web site, on CD and in print. The first round of public submissions was due to be completed by 5 September 2001. An international Peer Review had now been completed and published. It broadly concluded that the PSAR was a satisfactory basis for considering the licence. It described 22 issues where further responses had been obtained and in some recommended further work.

A public forum has been proposed for September. This will be a two-day event where members of the general public can make submissions and ask questions. ANSTO, INVAP and ISR (in relation to waste issues) had agreed to be involved. However, the Sutherland Shire Council and environmental groups had advised that they did not want to be involved unless it takes the form of a judicial process. Therefore the forum will not proceed.

A program of testing for strontium-90 in bone samples had been undertaken in Australia from 1957 until 1978. ARPANSA had inherited the records of this program. The program had been to assess the effects of fallout from nuclear weapons testing. The results had been published and made known. Whether informed consent was obtained for use of the samples was not known. ARPANSA was creating a database of the records, and preparing a report for the Minister. The program had showed small but measurable contamination in humans by strontium-90 from atmospheric testing.

The CEO had also attended an International Advisory Committee meeting in Geneva for the WHO EMF project. The WHO role included establishing the research agenda, recommending an approach to developing standards, producing fact sheets, and conducting health reviews. WHO would review non-cancer ELF issues in 2002.

The CEO had also attended a meeting to consider the need for international action on research reactors. More than half of the operating research reactors are over 30 years old,

and many were shut down but not decommissioned. The state of the fuel, particularly high-enriched uranium, also had to be considered. The meeting had considered whether an International Convention was required, but developed a plan for an assessment survey, a code of conduct and the strengthening of IAEA monitoring. This will be discussed further at the IAEA General Conference later this year.

11. COMMITTEE REPORTS

11.1. Report from Radiation Health Committee

The draft report of the Radiation Health Committee meeting on 18-19 July 2001 was tabled. It included reports on the RF Standard and Transport Code, but also consideration of radioactive waste issues and the development of a code on pre-disposal management. Advice on disposal of smoke detectors was also being prepared. This was based on a paper by Queensland Radiation Health. The Secretariat will provide a copy of this paper to Dr Smith. Reports on the Mining Code and Safety Guide covering radiation protection and waste management issues were also provided. The code was well advanced and the safety guide was developing. Of the other publications being reviewed by RHC, none had been released for public comment, and so would not be likely to be presented to the next Council meeting.

11.2. Report from Nuclear Safety Committee

The Nuclear Safety Committee report was tabled. The report outlined the Committee's workplan to consider the major issues identified for advice to the CEO (seismic design, accident analysis, and spent fuel and waste management). Working groups had been formed on each issue, and a timetable for their work established.

12. OTHER BUSINESS

Mr Raue queried whether any decisions had been made regarding establishing a database for reporting of RF exposure effects as recommended by the Senate Inquiry. The CEO responded that ARPANSA had formed a working group, which met recently to develop the framework for a database, and how it would operate.

Mr Raue also advised that he had received a letter from a Maralinga veteran, Mr Alan Batchelor. It was agreed that Mr Raue should discuss the letter with relevant ARPANSA staff to assist in formulating a reply.

Dr Smith noted that it was an important issue for the Nuclear Safety Committee working groups to gain access to information that they requested. The CEO was not aware of any issues, but suggested that it would be helpful if requests for information were specific about what was required.

Council also discussed the summary to be presented to a post-meeting briefing, should it be required.

13. CLOSURE AND NEXT MEETING

The next meeting is proposed to be held on 30 November 2001 at ARPANSA's Yallambie Office. However given that several members of Council were not present the Secretariat will send an email shortly to confirm availability of all members on that date.

The Chair closed the meeting at 3:00pm.

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