

Nuclear Safety Committee

an advisory body to the CEO of ARPANSA, established under the ARPANS Act 1998
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Summary of the meeting held on 20 June 2003 ARPANSA, Yallambie Campus

OPENING OF MEETING

The Chair opened the meeting welcoming Members to the first meeting held in Melbourne.

CONFIRMATION OF THE MINUTES OF THE MEETING OF 21 FEBRUARY 2003

The minutes of the previous meeting were confirmed with a minor amendment.

ANSTO ASSESSMENT OF EXPOSURE PATHWAYS FROM LIQUID EFFLUENT DISCHARGES

The Committee discussed the ANSTO paper on discharges and related documents from ANSTO, Committee Members and staff at ARPANSA.

The ANSTO assessment was required by a site licence condition for the RRR and was still under consideration by ARPANSA.

The ANSTO discharge levels:

- referred to the World Health Organisation drinking water guidelines;
- take into account the doses to ANSTO employees and the public; and
- were enforced through an agreement with Sydney Water on which ARPANSA is consulted.

ARPANSA were satisfied that the current discharge levels were acceptable. The ALARA principle applied to the levels and ANSTO had given undertakings that they would not increase as a result of future expanded operations.

The Committee agreed that there would be minimal dose received by any person from the use of grey water from ANSTO.

MATTERS RELATING TO THE REPLACEMENT RESEARCH REACTOR

Recent Regulatory Issues

Dr Loy advised the Committee of two recent issues at ANSTO that were of concern to ARPANSA.

1. The first issue involved a breach of the RRR Facility Licence Condition wherein the reactor pool tank was constructed with cut outs for heavy water pipes which had not been approved. A breach of the licence condition had been reported to the Parliament in a report tabled on 18 June. As a result, INVAP amended their procedures to incorporate:
 - the establishment of a group within INVAP project management structure to ensure observance of ARPANSA requirements by all parties;
 - ARPANSA's requirements in manufacturing documentation and drawings; and
 - suitable methods to implement and communicate these actions.

2. The second issue involved the incorrect rolling of the steel for the reactor pool liner, which resulted in twenty-two penetrations being in the wrong positions. The manufacturer had effected repairs on ten of the penetrations although the Designer had not approved these repairs. The CEO advised that ARPANSA would not approve the liner for use until he was satisfied that the functionality and safety of the repaired tank was not compromised compared with the original design specifications. ARPANSA would consult independent materials and welding experts to advise on the suitability of the proposed repairs.

The Committee was briefed on the mistake, the proposed repair strategy and the quality management issues. A report from ANSTO on the repairs and associated issues had just been received and ARPANSA was assessing it. The Committee would be briefed on ARPANSA's assessment at an extraordinary meeting to be scheduled in July 2003 including:

- an analysis of the proposed repair strategy;
- how the error occurred;
- the implications of the error;
- steps that would be taken to ensure that it would not happen again; and
- any evidence to ARPANSA that there had not been earlier breaches of quality control.

A summary of the meeting would be placed on the ARPANSA web site.

Progress with:

- (i) regulation of construction of items important to safety; and**
- (ii) recommendations from Regulatory Assessment Report**

Requests for approvals (RFA) were submitted to ARPANSA on a regular basis and allowed detailed review of items important for safety. Fifty-five RFAs had been approved for the construction at the time of the meeting.

Human Factors – report from ANSTO

The Committee was briefed on two documents, prepared by ANSTO and INVAP, relating to human factors issues and the RRR. The ANSTO document outlined the methodology that ANSTO intended to use and had been adopted from US Nuclear Regulatory Commission (NUREG-0711) requirements.

The INVAP document was designed to investigate the human-machine interface.

ARPANSA had not reviewed the INVAP document to date and the Committee was invited to provide formal comment on it for discussion at the next meeting.

Report on Site Licence Conditions

An ARPANSA review of the ANSTO Site Licence conditions indicated that all conditions of that licence had been either satisfied or covered under the licence to construct the RRR. As such, ANSTO would be asked to surrender the Site Licence. Some Members asked whether there might be a loss of continuity by taking such action however “prepare a site” had been defined by ARPANSA and, with the construction licence issued, the Site Licence was effectively redundant, provided relevant conditions were covered under the construction licence.

Lessons learnt from preparing the NSC Report

Members discussed aspects relating to the preparation of the NSC Report to the CEO on the ANSTO application for a licence to construct a RRR and raised several points for consideration for future projects of similar nature.

The Working Groups were considered to have done excellent work on the three issues (seismic analysis, accident analysis and spent fuel/radioactive waste) and the quality of the Working Group input was considered to have extended the expertise of the ARPANSA Regulatory Branch.

DECOMMISSIONING OF HIFAR – PRELIMINARY PROPOSAL FROM ANSTO

The Committee were advised that ANSTO had provided ARPANSA with a draft preliminary decommissioning plan for HIFAR and Members were invited to comment on it by the next meeting.

ANSTO already had a licence to decommission MOATA and had sent an officer overseas to see a reactor decommissioning in progress. The Committee requested a briefing from the officer at the next meeting.

NATIONAL RADIOACTIVE WASTE REPOSITORY – PROGRAM FOR REGULATORY ASSESSMENT

The process for issuing a licence to construct the National Radioactive Waste Repository was expected to be similar to that followed for the issuance of the RRR construction licence and would be is likely to include:

- advertisements in the Gazette and *The Australian* newspaper;
- two rounds of public submissions;
- a public forum;
- an international peer review;
- advice from the Committee; and
- assessment of all advice and comment received before any licence decision was made.

ARPANSA had not received an application for a licence at the time of the meeting.

INTERVENTION LEVELS IN RADIOLOGICAL EMERGENCIES

The Committee was briefed on the radiation emergency response arrangements in Australia and was advised of the status of the draft Australian recommendations on intervention in emergencies involving radiation exposure.

ARPANSA was preparing a technical report on the current knowledge on radiation induced thyroid cancer risks and iodine prophylaxis. This paper was expected to be tabled at the July RHC meeting and released for public comment with the revised draft Recommendations after that.

REPORTS

Report on Council – Meetings of 4 April 2003 and Agenda for the meeting of 31 July 2003

Council had received the following briefings at its April meeting:

- emergency response and intervention levels;
- the health of British atomic testing veterans; and
- radioactive waste.

The Council's recommendations regarding radioactive waste and the CEO's responses were available on the web site (http://www.arpansa.gov.au/rhsac_stat.htm). The need for a guidance document addressing pre-disposal management of waste was to be a joint RHC and NSC project. A specific referral on this matter would be forwarded to the NSC soon.

IGORR Conference – Sydney, 24-28 March 2003

A summary of the IGORR conference was tabled for Members' information.

GENERAL BUSINESS

The Committee requested briefings on the following issues at the next meeting:

- dead pigeons at Lucas Heights; and
- changes to the molybdenum production method.

CLOSURE AND NEXT MEETING

The next meeting was scheduled for Friday 17 October 2003 in Sydney although an extraordinary briefing meeting on the repairs to the reactor pool liner would take place in within 4-5 weeks of this meeting.