AUSTRALIAN RADIATION PROTECTION AND NUCLEAR SAFETY AGENCY

ARPANSA

OFFICE OF THE CEO - Dr John Loy PhD

4 February 2003

Gillian Gould
Committee Secretary
Joint Standing Committee on Treaties
Parliament of Australia
Parliament House
CANBERRA ACT 2600

Dear Ms Gould

I refer to your letter of 30 January 2003 requesting additional information pertaining to the Committee's review of the proposed ratification of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

The attached response addresses the three questions you raised.

Yours sincerely

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RESPONSE TO QUESTIONS RAISED BY
JOINT STANDING COMMITTEE ON TREATIES

1. *Could you inform the Committee of the arrangements that the States and Territories of Australia have set in place for the management of spent fuel and radioactive waste?*

A distinction to make between arrangements for management of radioactive waste and spent fuel is that States and Territories deal with radioactive waste only, whereas the Commonwealth has responsibility for radioactive waste and spent fuel.

ARPANSA issued licences to operate to ANSTO's Fuel Operations nuclear installation on 22 June 2001 and for ANSTO's "Waste Operations and Technology Development" nuclear installation on 22 February 2002.

The Fuel Operations installation is authorised to manage and store HIFAR new and spent fuel elements, of varying enrichment in uranium-235, in fuel casks, hot cells, storage ponds and dry storage wells at the Lucas Heights site.

One of the conditions of the licence for the Reactor Fuel Storage installation was for environmental monitoring to be conducted. As part of the ANSTO Environmental Action Plan, groundwater sampling from existing boreholes near the spent fuel storage facilities occurs six-monthly and these typically show very low activity. In compliance with a special licence condition, two additional boreholes were provided adjacent to those that house the spent fuel storage and handling ponds.

The licence to operate the ANSTO "Waste Operations and Technology Development" nuclear installation includes several buildings at the Lucas Heights site where the following activities are authorised:

- low and intermediate level solid waste storage;
- low level liquid waste storage and treatment;
- intermediate level liquid waste storage and treatment;
- waste services, such as laboratories and decontamination facilities; and
- operation of the molybdenum 99 waste solidification plant.

Other licences for facilities or sources issued by ARPANSA to other Commonwealth entities such as CSIRO and the Department of Defence include conditions for radioactive waste. These require the licence holder to

- develop, maintain, and implement arrangements for their radioactive waste management in a form acceptable to the CEO of ARPANSA,
- make arrangements for the control and monitoring of all radioactive discharges to the environment; and
- make arrangements for consultation with local government and other relevant statutory authorities on any radioactive waste issues.

Government policy also dictates the return of US origin spent fuel to the US, and for other spent fuel to be sent to France for reprocessing with the return of vitrified waste from France to be kept in the proposed national store.

In relation to radioactive waste, all jurisdictions have a Regulatory Authority established to control all uses of ionizing radiation, including radioactive materials and radioactive waste, within their jurisdiction. In most jurisdictions the Regulatory Authority is within the Health portfolio, except for SA and NSW where the Regulatory Authority is within the EPA. All jurisdictions have regulatory systems in place that require authorisation of the possession and use of radioactive materials, including dealing with radioactive waste, and discharges of radioactive material to either air or water. General information on the regulatory systems is available in the Final Report on the NCP Review of Radiation Protection Legislation (May 2001). The report and links to each of the relevant State/Territory regulations (except Queensland, which did not participate in the review as it had recently met its NCP obligations) can be found at the ARPANSA web site (see http://www.arpansa.gov.au/news/ncp_old.htm). The Queensland Radiation Safety Regulation 1999 can be obtained from http://www.legislation.qld.gov.au.

Where possible, sealed sources are usually required to be returned to the supplier when they become obsolete. Many jurisdictions also operate a store for radioactive waste/obsolete radioactive sources. For example, in Queensland there is a purpose-built radioactive waste storage facility at Esk. WA has established a radioactive waste facility within a hazardous materials disposal site at Mt Walton East. Victoria has a purpose-designed store within the Peter MacCallum Cancer Institute complex in East Melbourne.

Detailed descriptions of radioactive waste management arrangements are currently being compiled by all jurisdictions for inclusion in the National Report required under the Joint Convention. Preparation of the National Report is being coordinated by ARPANSA.

2. *How are these Codes and standards agreed upon?*

ARPANSA's codes and standards are developed through the Radiation Health Committee (RHC), an advisory body to the CEO of ARPANSA, established under the ARPANS Act. Membership of the RHC includes a senior radiation protection regulator from each jurisdiction, the CEO of ARPANSA, a public representative and two others (currently a nominee of the Royal Australian and New Zealand College of Radiologists, and a non-ionizing radiation expert).

Drafts are developed by working groups reporting to RHC, and undergo a public comment stage and where relevant, a regulatory impact assessment process meeting the *COAG Principles and Guidelines for National Standard Setting and Regulatory Action by Ministerial Councils and Standard-setting Bodies*. As all jurisdictions are represented on RHC, and as the codes are prepared with the intention that all jurisdictions can implement them, the codes are normally agreed by consensus. Having been agreed by the RHC, the Radiation Health and Safety Advisory Council will advise the CEO on the adoption of the code or standard. The Council's consideration of a code usually involves reviewing the process undertaken to develop the code to ensure that the appropriate consultation and regulatory steps have been adequately addressed. Council may also request that additional work is undertaken, such as the production of an accompanying explanatory guide, which was requested for the Radiofrequency Exposure Standard. With the recommendation of the Council the CEO will then authorise publication of the code.

Current codes, and new codes in preparation, related to radioactive waste are:

RHS 13: *Code of Practice for the Disposal of Radioactive Waste by the User (1985)* – this Code is currently under review. A public comment version of the revised code is expected to be released with a regulatory impact statement during 2003.

RHS 35: *Code of Practice for the Near-surface Disposal of Radioactive Waste in Australia (1992)*. This code is still current.

[PDF file versions of both of these codes are available from the ARPANSA web site under the drop down lists: /publications/Radiation Health Series]

Code of Practice for the Pre-disposal Management of Radioactive Waste. This is a new code in development. A first draft is expected to be presented to the Radiation Health Committee during 2003.

Code of Practice for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing. This Code is being prepared to replace two former codes in the "Nuclear Codes" series produced under the Environment Protection (Nuclear Codes) Act 1978 (now repealed). These Codes are:
Code of Practice on Radiation Protection in the Mining and Milling of Radioactive Ores (1987).
Code of Practice on the Management of Radioactive Wastes from the Mining and Milling of Radioactive Ores (1982). [These two codes are also available in PDF format from the ARPANSA web site under the /publications/Nuclear Codes drop down list]

3. Are these codes enforceable in all Australian jurisdictions?

Codes are currently adopted by jurisdictions on a voluntary basis and used as they see fit. While some codes are directly adopted in regulation (eg The Transport Code), in many cases jurisdictions enforce the requirements by using the codes as conditions of licence or registration.

Initiatives towards uniformity of regulatory frameworks across Australia, which are currently progressing, will ensure that codes are adopted within the regulatory framework in each jurisdiction. In 1999 the Australian Health Ministers' Conference (AHMC) agreed to the proposal for a *National Directory for Radiation Protection*, which will establish a uniform framework for radiation protection, including provision for the national adoption of codes and standards. Specific provisions will be included in the Directory by following the agreed process, and with a 10 of 13 vote by RHC. A discussion draft of Version 1.0 of the *Directory* has been prepared by RHC and is currently released for public comment (see www.arpansa.gov.au/for_comm.htm).

The draft *Directory* also indicates the current usage of the various Codes and Standards within States, Territories and the Commonwealth (see Annex 3), and whether they are adopted by regulation or used as conditions of licence.