

Parliament of the Commonwealth of Australia

No Time to Waste

**Report of the Senate Select Committee
on the Dangers of Radioactive Waste**

April 1996

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ISBN 0 642 24872 9

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TERMS OF REFERENCE

On 9 March 1995 the Senate Select Committee on the Dangers of Radioactive Waste was established to inquire into:

- (a) the extent to which radioactive waste is being produced, stored transported, treated and disposed of in Australia;
- (b) the nature, efficiency and effectiveness of the administration, monitoring and control of such production, storage, transport, treatment and disposal, and whether these are adequate to protect the public interest;
- (c) what existing guidelines and legislation require revision by government to better protect the future public interest in an area of intrinsic potential danger to public health and the environment.

In considering these terms of reference the committee was to take into account, and where necessary report on, the following issues:

- (a) the effectiveness and extent of application, on a national basis, of the following Codes of Practice formulated and approved under the *Environment Protection (Nuclear Codes) Act 1978* for regulating or controlling nuclear activities in Australia:
 - (i) the Code of Practice for the Safe Transport of Radioactive Substances (1990),
 - (ii) the National Health and Medical Research Council Code of Practice for the Near-Surface Disposal of Radioactive Waste in Australia (1992),
 - (iii) the National Health and Medical Research Council Code of Practice for the Disposal of Radioactive Waste by the User (1985), and
 - (iv) any related or proposed Code of Practice for regulating or controlling nuclear activities (but not including uranium mining and milling);
- (b) the suitability of the *Environment Protection (Impact of Proposals) Act 1974* in protecting the environment and fostering consultation with the community in relation to the handling, transportation and storage of radioactive waste;
- (c) the scope for independent inspection or environmental audit of sites used for the storage of radioactive waste;
- (d) the significance of the expanded role for the Australian Nuclear Science and Technology Organisation (ANSTO) in conditioning, managing and storing radioactive waste under the *Australian Nuclear*

Science and Technology Organisation Act 1987 and Regulations as amended;

- (e) the adequacy of funding for research in, and the training available in Australia for skilled personnel involved in, the handling, transport, storage and security of radioactive waste;
- (f) the location, amount, state, age and type of radioactive waste in Australia (excluding material from uranium mining and milling);
- (g) the general suitability of each existing location for the storage of radioactive waste including the consideration of such factors as population density, stability of the site in geological and hydrogeological terms, surface flooding and overall environmental significance;
- (h) whether each existing location for the storage of radioactive waste has a description to indicate the likely period of duration for its use as a storage site and whether any program or plan exists for future use of the site together with a general assessment of the likely stability of existing methods of storage;
- (i) the state of planning and timing for the development of a national repository for the storage of radioactive waste and the likely legislative powers and functions to be vested in the relevant government or non-government agency responsible for the proposed repository;
- (j) the extent to which the establishment of a permanent national repository will result in the removal of radioactive waste from storage in areas generally considered to be unsuitable for reasons such as population density, site stability and other relevant factors;
- (k) existing and, where known, future arrangements for the permanent or temporary storage of intermediate and high level radioactive waste;
- (l) Australia's current and, where known, future obligations under international treaties relevant to nuclear activities;
- (m) the extent of Australia's imports and exports of radioactive material (excluding uranium mining), and the adequacy of legislative controls for such material;
- (n) the implications of any user-pays system for the management, storage and disposal of radioactive waste;
- (o) measures taken by radioactive waste producers to avoid and/or minimise the creation of radioactive waste arising from their activities (but not including uranium mining and milling); and
- (p) identification of waste avoidance and/or minimisation procedures that could be followed by these producers (but not including uranium mining and milling).

ACKNOWLEDGMENTS

The Committee wishes to thank all the people who contributed to the Inquiry by preparing written submissions, giving oral evidence or by assisting with the arrangements for public hearings and inspections. The Committee is grateful for the interest shown and the advice provided. Although it was not possible to invite all of those who made submissions to give oral evidence, or to mention all submissions in the report, the Committee took into account all of the material provided in the preparation of its report.

The Committee would also like to thank the temporary staff for their assistance during the course of the Inquiry. The support provided by Sonja Weinberg as Principal Research Officer and Executive Assistants Jan Liddell, Helen De Gail and Yvonne Beaver was greatly appreciated.

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GLOSSARY

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Appendix 3 - Commonwealth Bodies Involved with Radiation
Appendix 4 - National Health and Medical Research Council Codes
Appendix 5 - Commonwealth and State Radiation Control Legislation

ABBREVIATIONS

AAEC	Australian Atomic Energy Commission
ADI	Australian Defence Industries
AIRP	Australian Institute for Radiation Protection
ALAEV	As Low as Economically Viable
ALARA	As Low as Reasonably Achievable
ALARP	As Low as Reasonably Practicable
ALATA	As Low as Technically Achievable
ANDRA	French Nuclear Authority (Agence nationale pour la gestion des déchets radioactifs)
ANSTO	Australian Nuclear Science and Technology Organisation
ANA	Australian Nuclear Association
ARL	Australian Radiation Laboratory
ASTEC	Australian Science and Technology Council
ATSIC	Aboriginal and Torres Strait Islander Commission
BHP	The Broken Hill Proprietary Co Ltd
CEPA	Commonwealth Environment Protection Agency
CSIRO	Commonwealth Scientific & Industrial Research Organisation
DEST	Department of Environment, Sport and Territories
DFAT	Department of Foreign Affairs and Trade
DHSH	Department of Human Services and Health
DIST	Department of Industry, Science and Technology
DPIE	Department of Primary Industries and Energy
EIS	Environmental Impact Statement
EPA	Environment Protection Agency/ Authority
GATT	General Agreement on Tariffs and Trade
HIFAR	High Flux Australian Reactor
HLW	high level waste
IAEA	International Atomic Energy Agency
ICRP	International Commission on Radiological Protection
ILW	intermediate level waste
LHRL	Lucas Heights Research Laboratories
kBq	1,000 becquerels
LLW	low level waste
mSv	millisievert
NHMRC	National Health and Medical Research Council
NIMBY	Not in my back yard
NIABY	Not in anyone's back yard
NRIC	National Resource Information Centre
NSB	Nuclear Safety Bureau

OECD	Organisation for Economic Cooperation and Development
PER	Public Environment Report
RADWASS	Radioactive Waste Safety Standards
Sv	sievert
μSv	microsievert
UN	United Nations

PREAMBLE

Conduct of the Inquiry

The Senate Select Committee on the Dangers of Radioactive Waste was established on 9 March 1995 and the terms of reference were advertised in newspapers with a national coverage in April 1995. The Committee received 78 submissions and 16 supplementary submissions which are listed in Appendix 1.

The Committee examined 117 witnesses at 11 public hearings representing 70 individuals or organisations (See Appendix 2). The hearings commenced in Canberra on 23 June 1995 followed by hearings in Adelaide on 5 July 1995, Perth on 27 July, Sydney on 2 August, Sutherland on 3 August and Brisbane on 4 August 1995. The Committee then held further hearings in Canberra on 16 and 23 October and 13 November, in Sydney on 11 December and in Kalgoorlie on 13 December 1995.

The Committee also held *in camera* hearings in Canberra on 13, 20 and 30 November and in Sydney on 11 December 1995. During the Inquiry the Committee inspected the temporary storage sites at Woomera, the Australian Nuclear Science and Technology Organisation facilities at Lucas Heights, the Esk temporary storage facility (Queensland) and the Mt Walton repository (Western Australia).

Cooperation by Commonwealth Bodies

Commonwealth Bodies

Most Commonwealth bodies involved in the Inquiry were cooperative and the Committee appreciates the efforts of those officers who provided substantial submissions and additional information on matters relevant to the Inquiry.

Department of Industry, Science and Technology

After the commencement of the Senate Select Committee Inquiry, Senator the Hon. Peter Cook, former Minister for Industry, Science and Technology, announced a parallel inquiry into the transport arrangements for the movement of radioactive material from Lucas Heights and St Marys to Woomera. This inquiry was conducted by Mr Mike Codd who reported to the then Minister on

31 July 1995. This report was not made available to the Committee until 3 October 1995.

The Department of Industry, Science and Technology did not make a submission to the Senate Committee until 25 October 1995 and only reluctantly appeared before the Committee on our insistence. The Department also withheld correspondence from the Committee for four days until the relevant Deputy Secretary had gone overseas. The Department also delayed its reply to concerns of the City of Port Augusta Council until a convenient time after the transport of radioactive waste to Woomera had been completed. The Committee is disappointed at the lack of cooperation by a Commonwealth Department which had a key role in this issue.

The Committee believes that this approach is not conducive to developing a professional relationship in which to undertake community consultations for the siting of future national facilities. The resentment expressed by the State Government, local councils, the Aboriginal community and the public of South Australia will make it more difficult for other Commonwealth departments to conduct similar exercises in that State in the future.

Australian Federal Police

The Australian Federal Police refused to provide the Committee with important information in relation to the suspected importation of radioactive materials claiming public interest immunity. The Committee did not require that the Senate determine the acceptability of this claim as this information was obtained from another source. The Committee believes, however, that the information relevant to the radioactive material did not constitute a risk in terms of the national interest. The Committee does not think that the claim of public interest immunity was justified.

Senator Grant Chapman
Chairman

RECOMMENDATIONS

Recommendation 1

The Committee recommends that in order to conform with international standards on separating the regulatory body from the regulated industry, the Australian Institute of Radiation Protection as proposed regulator should have no substantive operational functions or commercial activities in nuclear science (Paragraph 2.88)

Recommendation 2

The Committee recommends that the Minister responsible for the proposed Australian Institute of Radiation Protection be required to act to ensure that the administrative arrangements avoid conflicts of interest (Paragraph 2.90).

Recommendation 3

The Committee recommends that the Government should structure the proposed Australian Institute of Radiation Protection to maintain an arm's length relationship with the industry as far as possible having regard to international best practice, and the industry be required to provide the information the regulator needs to perform its functions (Paragraph 2.94).

Recommendation 4

The Committee recommends that the proposed Australian Institute of Radiation Protection structure should include appropriate community representation (Paragraph 2.99).

Recommendation 5

The Committee recommends that the proposed Australian Institute of Radiation Protection legislation should include a provision to the effect that 'any person may take action in court to restrain a breach of this Act' (Paragraph 2.102).

Recommendation 6

The Committee recommends that the Government review current procedures for developing national guidelines to ensure that they are prepared in a more timely manner (Paragraph 2.111).

Recommendation 7

The Committee recommends that the Commonwealth together with the States and Territories should act to expedite revision of national codes and development of a nationally agreed regulatory scheme (Paragraph 2.111).

Recommendation 8

The Committee recommends that Commonwealth regulation of Commonwealth bodies under the proposed Australian Institute of Radiation Protection legislation should conform to a nationally agreed scheme (Paragraph 2.111).

Recommendation 9

The Committee recommends that the Australian Customs Service should consult with the Australian Radiation Laboratory and the State and Territory radiation authorities to develop better procedures for recognising radioactive imports and for co-ordinating licensing procedures (Paragraph 2.121).

Recommendation 10

The Committee recommends that an up to date inventory of all existing and potential radioactive waste be prepared and that this be maintained to detect any changes to the current accumulation rates (Paragraph 3.51).

Recommendation 11

The Committee recommends that the transportation of significant amounts of radioactive materials should require an assessment of the most appropriate transport mode (Paragraph 5.20).

Recommendation 12

The Committee recommends that State governments and local councils en route should be fully notified of the route and contents of radioactive waste consignments and should be given sufficient practical knowledge to be able to devise and implement contingency plans (Paragraph 5.21).

Recommendation 13

The Committee recommends that a feasibility study be conducted into the suitability of disposing of the low level contaminated soil from Fishermens Bend in an active uranium mine (Paragraph 6.102).

Recommendation 14

The Committee recommends that a feasibility study be conducted into disposing in an active uranium mine of that portion of the ANSTO waste that is suitable for disposal at a municipal tip (Paragraph 6.103).

Recommendation 15

The Committee recommends that the Commonwealth Government ascertain the extent to which the States and Territories could benefit from disposal of low level wastes in uranium mines (Paragraph 6.105).

Recommendation 16

The Committee recommends that appropriate maximum emission levels as well as average monthly limits be imposed on emissions of tritium and iodine¹³¹ from ANSTO (Paragraph 6.120).

Recommendation 17

The Committee recommends a national above ground storage facility be established which has the capacity to take low, intermediate and high level radioactive waste (Paragraph 7.18).

Recommendation 18

The Committee recommends that the national facility be adequately engineered to withstand all possible climatic conditions, no matter how unlikely (Paragraph 7.35).

Recommendation 19

The Committee recommends that the public, particularly the local community, should be involved in consultation on the construction of a national storage facility and the transport arrangements to any such facility (Paragraph 8.62).

Recommendation 20

The Committee recommends that a management committee for the facility be established including an equal number of representatives from the local community and the users of the national storage facility, together with a representative from the Australian Institute of Radiation Protection and one from the relevant State or Territory authority. This Committee should oversee the design, construction and management of the facility (Paragraph 8.63).

Recommendation 21

The Committee recommends that the managers of the national storage facility be required to produce an annual report to Parliament (Paragraph 8.64).

Recommendation 22

The Committee recommends that the Commonwealth Government establish a Committee with representatives from a cross section of relevant bodies to recommend the allocation of research funding for radiation issues. The Committee could comprise representatives from the Australian Institute of Radiation Protection, the National Health and Medical Research Council and Commonwealth authorities, State and Territory authorities, the academic community and industry with relevant expertise (Paragraph 9.22).