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INDUSTRY SCIENCE RESOURCES

News and information on the National Radioactive Waste Repository from the Department of Industry, Science and Resources

January 2001

Preferred site announced for the low-level radioactive waste repository

A site located in the Woomera Prohibited Area in the central north region of South Australia has been selected as the preferred site to hold Australia's solid low level radioactive waste.

The Minister for Industry, Science and Resources has announced that a site at Evetts Field West (Site 52a) in the Woomera Prohibited Area has been chosen as the preferred site.

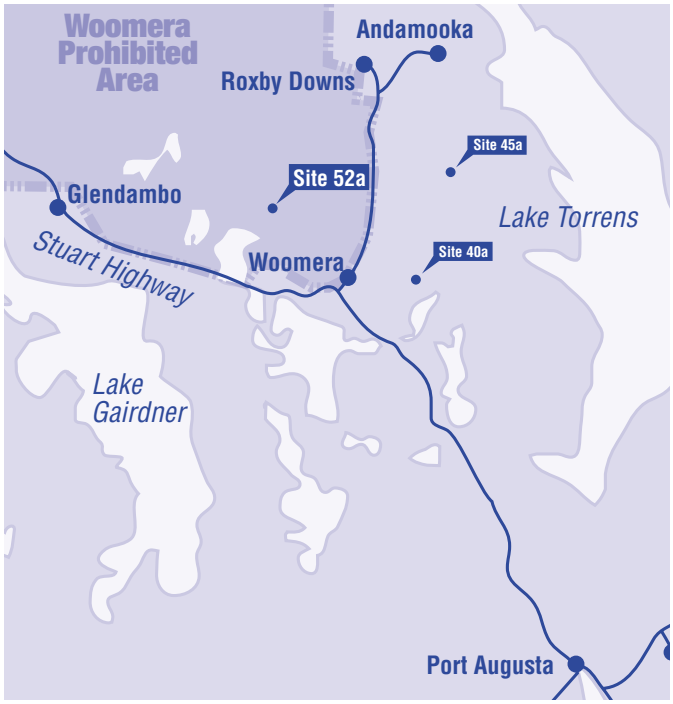
The preferred site is located on a raised plateau in flat, stony desert country with sparse saltbush on the western side of the Woomera/Roxby Downs road.

Two alternative sites, Sites 45a and 40a, have been found to be also highly suitable for the location of the repository.

Evetts Field West has been selected as the preferred site because it performed best against the selection criteria set out in the National Health and Medical Research Council's Code of Practice for the Near-Surface Disposal of Radioactive Waste in Australia.

The selection criteria include factors such as:

- geology (including clay content of rocks and geological structure)
- ground water
- transport access
- prospects for long-term control or security



Site 52a at Evetts Field West in the Woomera Prohibited Area.

The views of regional stakeholders had also been taken into consideration in selecting the preferred site.

Tests on the preferred site showed:

- surrounding landforms indicating superior drainage features to other sites, providing the best environment for the construction and maintenance of trenches
- preferred rock type consisting of clays which are resistant to ground water flow, and which will therefore provide a highly effective barrier to the waste
- superior transport access with a bitumen road
- superior security due to location in the Woomera Prohibited Area where there is restricted access

The two alternative sites are located in stony desert to the east of the Woomera/Roxby Downs road. Both are also considered highly suitable for a near-surface repository.

No known protected or endangered species appear to inhabit the three sites (although this will be checked in more detail in an environmental impact assessment).

Test bores showed the low volumes of underground water at the three sites were highly saline and unsuitable for human, agricultural or industrial use.

Tests have also shown there are no valuable minerals on the three sites.

Why in the Woomera Prohibited Area?

Much of Australia's low-level radioactive waste, about 2000 cubic metres, out of a total of 3500 cubic metres, is already being kept in interim above-ground storage in the Woomera Prohibited Area (WPA).

This waste has been stored safely there without incident for six years and will be placed in the repository when it is operational.

As part of the licensing processes to be undertaken by the Australian Radiation Protection and Nuclear Safety Agency, as well as in the environmental assessment, a detailed risk assessment will be made taking into consideration the military and other uses of the WPA.

There is a precedent for siting radioactive waste management facilities in areas used for military activities with a number of radioactive waste management facilities situated on the Nevada Test Site in the United States.

The siting of these facilities in areas set aside for military activities offers the advantage of security and restricted access, minimising the possibility of unauthorised entry.

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Site selection the result of an 8-year search

The selection of the preferred site is the culmination of an Australia-wide search and public consultation process initiated by the Commonwealth Government in 1992 after general agreement by the States and Territories on the need for a central waste repository.

The first phase of the study involved the development of the methodology for selecting a site for the repository using a computer based information system to apply internationally accepted site selection criteria.

After considering public comments in 1994, Phase 2 of the study identified eight regions in Western Australia, Queensland, the Northern Territory, New South Wales and South Australia as areas likely to contain suitable sites based on the selection criteria.

In 1998, after another 4 years of study and public comment, the central north region of South Australia was identified as the best region in Australia to locate the low-level waste repository.

This area was assessed as containing the largest area of suitable land taking particular account of the suitable geology, low rainfall and saline ground water.

From that time on an intensive process has been under way to identify the best possible site within that region. In 1999, 11 sites were drilled in the first stage of the siting investigations, and this year five sites were drilled in the second stage, and three in the third stage of investigations.

There has been extensive public consultation throughout the process, including the national release of public discussion papers, consultation with regional stakeholders through information days, newsletters and meetings with the Regional Consultative Committee, representatives from soil conservation boards, Aboriginal groups, local industry and State and local government.

The views of stakeholders have been taken into account in the site selection studies. As a result, some sites were eliminated and new sites identified for further studies.

The preferred site and the alternatives have been cleared of heritage values by Aboriginal groups.

What happens now?

The identification of the preferred site and two alternatives is an important step in the process to establish the repository, but it is not expected to begin operating until 2002 at the earliest.

Before the repository can be constructed and commence operations, it must now comply satisfactorily with environmental and radiological licensing requirements.

The proposal will now be referred for environmental assessment under the Environmental Protection and Biodiversity Conservation Act 1999.

Separate licences to site, construct and operate the facility must be obtained from the Radiation Protection and Nuclear Safety Agency before the repository can be constructed and commence operations. The licensing process will begin next year.

In addition to the extensive consultation already undertaken during the siting process, both the environmental assessment and the licensing processes will provide further opportunities for public comment.

We welcome your views

The Department of Industry, Science and Resources welcomes your views about the newsletter and the National Radioactive Waste Repository project. Your comments help us in assessing the impact of the newsletter and ensuring that it remains relevant and informative.

Want to know more?

For more information on issues covered in The Monitor:

Internet site
http://www.isr.gov.au/radwaste

Email:
Repository@isr.gov.au

Postal: National Radioactive Waste Repository, Coal and Mineral Industries Division
Department of Industry, Science and Resources
GPO Box 9839
Canberra ACT 2601

Tollfree message:
1800 682 704 (further information can be requested by leaving a message on this number).

Transporting waste to the facility

With about two thirds of Australia's existing inventory of low-level waste currently being held at Woomera, it will be a simple process to transport it the short distance to the preferred repository site.

Due to the small quantities of the material held in other parts of Australia and to be produced in the future from medical, industrial and other activities, transporting radioactive waste to the repository is expected to be an infrequent event.

During normal operations following the initial disposal campaign, the repository is expected to accept wastes only once or twice a year at the most.

Road and rail transport is expected to be used to carry radioactive waste to the repository. The transport arrangements will be considered as part of the environmental assessment and licensing processes.

There has been a long record of safe transport of radioactive materials.

More than 20 million packages containing such material are safely transported throughout the world each year for medical, industrial and research purposes.

More than 30,000 packages of radioactive material are safely transported in Australia each year under strict packaging and handling requirements.