

Please find attached, ANSTO's submission to the Dounreay Radioactive Waste Substitution Consultation, 2010. The respondent form is the first page of the attached file.

If you have any questions regarding this submission, please don't hesitate to contact me.

Kind regards,

Therese Donlevy.

**Therese Donlevy PhD**

Senior Adviser, Strategy and Planning  
Australian Nuclear Science and Technology Organisation

Locked Bag 2001, Kirrawee DC NSW 2232

T 02 9717 3279

M 0448 937 168

F 02 9717 6111

E [therese.donlevy@ansto.gov.au](mailto:therese.donlevy@ansto.gov.au) <<mailto:therese.donlevy@ansto.gov.au>>



**Australian Government**



Nuclear-based science benefiting all Australians

9 March 2011

Dounreay Radioactive Waste Substitution Consultation  
Scottish Government  
The Rural and Environment Directorate  
Environmental Quality Division  
Area 1-H North  
Victoria Quay  
Leith, Edinburgh, EH6 6QQ

To Whom It May Concern,

The Australian Nuclear Science and Technology Organisation (ANSTO) is an overseas customer of International Nuclear Services, having had research reactor fuel reprocessed at Dounreay, with cementation of resulting wastes. ANSTO is pleased to have the opportunity to respond to the Dounreay Radioactive Waste Substitution consultation; our submission consists of both this covering letter and the attached response to the consultation questions.

Under the current contractual conditions, ANSTO will receive fifty-one cemented drums of reprocessing wastes from Dounreay, each of 500 L volume. ANSTO has also had spent research reactor fuel reprocessed in France, and will receive those reprocessing wastes in a small number of canisters containing vitrified (glass) wastes.

Should the Dounreay Radioactive Waste Substitution consultation be supported, the resulting advantages are that:

- The logistics of the transportation to Australia would be greatly simplified if substitution were permitted;
- Specialised design, manufacture and licensing of new transportation and storage casks for cemented waste drums would no longer be required, since such casks for vitrified canisters already exist; and,
- Only one type of reprocessing waste would be received in Australia, thus streamlining the licensing processes for the future National Radioactive Waste Management Store, compared to the situation arising if both vitrified and cemented reprocessing wastes were to be received.

The responsible officer for any correspondence related to this submission is:

Dr Therese Donlevy  
Senior Adviser, Strategy and Planning  
ANSTO  
Locked Bag 2001  
Kirrawee DC NSW 2232  
AUSTRALIA

Email: [therese.donlevy@ansto.gov.au](mailto:therese.donlevy@ansto.gov.au)  
Phone: 612 9717 3279

Kind regards,

A handwritten signature in black ink that reads "Therese Donlevy". The signature is written in a cursive style with a large, stylized loop at the end of the last name.

Therese Donlevy  
Senior Adviser, Strategy and Planning, ANSTO

**ANSTO Response to  
Dounreay Radioactive Waste Substitution Consultation 2010**

*Question 1 Do you agree that a waste substitution policy should be adopted for radioactive waste arising from overseas research reactor fuel reprocessing contracts at Dounreay?*

YES.

A waste substitution policy would permit at least two objectives to be achieved – (1) a decrease in the number of radioactive waste transports within and from the United Kingdom; and (2) potential early closure of the reprocessing contracts through return of substituted wastes.

*Question 2: Do you agree that substituting cemented Materials Test Reactor radioactive waste for Prototype Fast Reactor radioactive waste should be an available option to finalise the overseas contracts?*

NO COMMENT.

This option is not relevant to ANSTO's wastes and so we feel unable to comment further.

*Question 3: Do you agree that substituting vitrified radioactive waste from Sellafield for cemented Materials Test Reactor radioactive waste and/or Prototype Fast Reactor radioactive waste should be an available option to finalise the overseas contracts?*

YES.

Substitution by a more concentrated form of waste, such as Sellafield vitrified wastes, for cemented Materials Test Reactor radioactive waste would result in fewer radioactive packages being transported within the UK and internationally. The logistics of the radioactive waste transport would therefore be simpler.

*Question 4: Do you agree with the proposals to ensure broad environmental neutrality for the United Kingdom?*

YES.

Ensuring the principle of broad environmental neutrality will result in no comparative disadvantage to the public or the environment from the waste substitution. As waste substitution would decrease the number of shipments, there would be an advantage on environmental grounds with respect to reduction in carbon emissions from transport activities.

*Question 5: Do you agree that all of the relevant implications of the proposed policy have been identified?*

YES