Senate Standing Committee on Economics
ANSWERS TO QUESTIONS ON NOTICE
Industry, Innovation, Science, Research and Tertiary Education Portfolio
Additional Estimates Hearing 2011-12
15 February 2012

AGENCY/DEPARTMENT: AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION (ANSTO)

TOPIC: Return of Waste

REFERENCE: Question on Notice (Hansard, 15 February 2012, pages 28-29)

QUESTION No.: AI-19

Senator LUDLAM: I just wanted to ask you about waste—in particular, the waste that is scheduled to return in 2014-15 from overseas from the HIFAR plant. On notice, if there has been any material change, tell me where I can find an accurate estimate of the volume and the activity of the waste that is scheduled to return and how that compares to the volume and the activity of the waste that is already stored—and by that I mean the long-lived, intermediate-level material, not the low-level stuff which is already stored at Lucas Heights. My rule of thumb is that there is roughly 15 times the amount already stored securely at Lucas Heights. That is by activity—I do not know how the volume relates—compared to the amount that is contracted to return from Europe. Is that roughly correct?
Senator EVANS: This is similar to a question that I have taken on notice for the senator in relation to the bill we are dealing with currently in the parliament. The full title escapes me but-
Senator LUDLAM: It is in the Committee stage Minister
Senator EVANS: Yes, I have taken it on notice and will reply when we resume the debate. I think it is more a question of whether someone can help you now with any basic information-
Dr Paterson: I do not think we would provide any additional information at the moment. We would want to make a clear distinction between the different types of wastes and the volumes and activities. Therefore, we will take it on notice and consult with your office.

ANSWER:

The Becquerel (Bq) is the international unit used for measuring radioactivity. The currently calculated activity of the waste to be repatriated from France to Australia is 16.4×10^{15} Bq, which is significantly lower than when the spent fuel was originally sent overseas for reprocessing. The activity of the repatriated waste declines by 4 per cent a year. Therefore by 1 January 2016 (the midpoint of the 2015-16 financial year in which the waste will be repatriated), it will be 14.1×10^{15} Bq – 14 per cent lower than it is currently.

The currently calculated activity of the intermediate-level waste that is stored safely and securely at ANSTO is 4.58×10^{15} Bq. The activity of the waste to be repatriated is therefore currently approximately 3.5 times the activity of the intermediate-level waste currently stored on site. By 1 January 2016, the activity of the material to be repatriated will have declined to approximately 3 times the activity of the Intermediate Level Waste currently stored on site at ANSTO. The material returning to Australia will have undergone a process of stabilisation so

that it is safe for long-term storage in a national radioactive waste management store. The international experience is that radiation is safely contained when material is appropriately processed and shielded. It is possible to safely work near the storage casks with no specialist protective clothing.

The volume of the waste to be repatriated from France to Australia will be 13.2 cubic metres. The volume of the intermediate-level waste currently stored safely and securely at ANSTO is 427 cubic metres.