

Senate Standing Committee on Economics
ANSWERS TO QUESTIONS ON NOTICE
Innovation, Industry, Science and Research Portfolio
Supplementary Budget Estimates Hearing 2010-11
20 October 2010

AGENCY/DEPARTMENT: AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION

TOPIC: Xenon Emissions

REFERENCE: Question on Notice (Hansard, 20 October 2010, E5)

QUESTION No.: SI-3

Senator LUDLAM—The *Sunday Telegraph* reported that they picked up 10 specific events between November 2008 and February 2009. Maybe you can corroborate whether that is true, whether there would have been 10 spikes. You said that it happened over a period of one or two days and that is not really congruent with what was reported, but I will probably rely on your direct testimony rather than what I read in the paper.

Dr Storr—I will take on notice whether there were 10 events or not. I point to the fact that an article was produced by officers from ARPANSA and ANSTO and an organisation in Austria on the testing of the international monitoring station and it was from that journal article that the *Sunday Telegraph* were able to get their information.

Senator LUDLAM—That is what they picked up. On notice, please provide us with some more fine-grain detail of exactly what was released and when if it is not on the website. If it is on the website, I would be happy to be pointed to where I can find it.

ANSWER

The time, date and activity concentration of ten detections of xenon-133 by the International Monitoring Station in Melbourne can be found in Table 1 on page 354 of the article, published in the *Journal of Environmental Radioactivity* 101 (2010) pages 353-361, which was co-authored by the Australian Radiation Protection and Nuclear Safety Agency, ANSTO and their counterparts at the Vienna University of Technology. A copy of the article, titled *Evaluation of Radioxenon releases in Australia using Atmospheric Dispersion Modelling Tools*, is attached to the response to Supplementary Budget Estimates question SI-1 (October 2010) or can be found at <http://apo.ansto.gov.au/dspace/handle/10238/2002>

From November 2008 to February 2009, ANSTO's Molybdenum-99 production facility conducted eight hot commissioning trials for Molybdenum-99 production. The runs took place on the following days:

Run No.	Run Start Date
1	23/11/2008
2	3/12/2008
3	10/12/2008
4	19/12/2008
5	29/12/2008

6	13/01/2009
7	22/01/2009
8	3/02/2009

During the hot-commissioning period, a Molybdenum-99 processing run lasted between 24-30 hours and emissions occur at various steps during the process. Figure 9 on page 359 of the article shows a time-series plot of Xenon-133 measurements at the International Monitoring Station detected over the period of November 2008 to February 2009, overlaid with the Xenon-133 releases from ANSTO's Molybdenum-99 production facility.