Senate Standing Committee on Economics

ANSWERS TO QUESTIONS ON NOTICE

Resources, Energy and Tourism Portfolio
Supplementary Budget Estimates
19 October 2011

Question: **SR39**

Topic: **Coal Seam Gas Impact on Groundwater**

Proof Hansard Page: **Written**

Senator Waters asked:

1. What, if anything, is Geoscience doing to support good decision making regarding coal seam gas developments impacts on groundwater?

2. Is Geoscience doing any studies of Australia's groundwater systems, and the cumulative impacts of coal seam gas developments on these systems? If yes, when will these studies be completed? What gaps will remain re our understanding of (a) the groundwater systems, and (b) the likely/ potential impacts of coal seam gas developments on these systems once these studies are complete?

Answer:

1. Geoscience Australia has provided science-based advice to the Department of Sustainability, Environment, Water, Population and Communities on the groundwater-related impacts of coal seam gas (CSG) developments in Queensland.

   - In September 2010, Geoscience Australia made broad recommendations to minimise the risk of unintentional impacts on aquifers of the Great Artesian Basin, based on a review of environmental impact statements prepared for CSG developments in the Surat and Bowen Basins of Queensland provided by Santos, Queensland Gas Company Pty Ltd and Australia Pacific Liquid Natural Gas.

   - The Minister for Sustainability, Environment, Water, Population and Communities, the Hon Tony Burke, MP, approved two CSG projects on 22 October 2010, and another one on 11 February 2011, all in Queensland. The Minister imposed over 300 conditions on CSG projects to help protect groundwater dependent species and minimise environmental impacts. Those conditions are consistent with the recommendations provided by Geoscience Australia.

   - The Department of Sustainability, Environment, Water, Population and Communities sought further advice from Geoscience Australia between December 2010 and April 2011, on the minimum default drawdowns to protect critical spring's ecosystems, and on methods to survey springs.

   - The Department of Sustainability, Environment, Water, Population and Communities sought advice from Geoscience Australia between May and October 2011 on the Stage 1 Water Monitoring and Management Plans for the CSG projects provided by each of the three proponents (Santos, Queensland Gas Company and Australia Pacific Liquid Natural Gas) in accordance with the conditions of Minister Burke's approval. This advice will assist that Department to ensure that approval conditions are met.

- Minister Burke has appointed Ms Jane Coram, Leader of Geoscience Australia's Groundwater Group, as a member of the Expert Panel to provide hydrological and hydrogeological advice to the Minister relating to major CSG projects under the *Environment Protection and Biodiversity Conservation Act 1999*. Advice on the proponent's Stage 1 Water Monitoring and Management Plans, provided by Geoscience Australia to the Department of Sustainability, Environment, Water, Population and Communities, is currently under consideration by the Expert Panel together with advice on specific subject areas from other institutions.
- Geoscience Australia provided comment to the Department of Resources, Energy and Tourism in July 2011 on the Namoi Catchment Water Study Phase 2 Report. The report was prepared by Schlumberger Water Services.

2 Geoscience Australia, with CSIRO, is undertaking a study of the Water Resources of the Great Artesian Basin, which contains the Queensland coal seam gas sequences. Geoscience Australia's role is to develop a better understanding of the hydrogeology of the Basin using a range of existing information and data. This will be directly relevant to understanding the nature of the groundwater systems of the Basin, and modelling of the potential cumulative effects of coal seam gas developments on these systems. The project is due for completion by December 2012.

Understanding of Australia's groundwater systems and of the possible impacts of coal seam gas on those groundwater systems will grow progressively as data are gathered from state, Commonwealth and industry studies. These studies include groundwater models developed by the industry, modelling of the cumulative effects of multiple operations within the Surat Basin (part of the Great Artesian Basin) by the Queensland Water Commission, and appropriate monitoring before and after the commencement of CSG activities.