

**Economics Legislation Committee**  
**ANSWERS TO QUESTIONS ON NOTICE**  
Industry and Science Portfolio  
Budget Estimates Hearing 2015-16  
3 and 4 June 2015

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**AGENCY/DEPARTMENT:** Commonwealth Scientific and Industrial Research Organisation (CSIRO)

**TOPIC:** Groundwater and geogenics work

**REFERENCE:** Written Question – Senator Waters

**QUESTION No.:** BI-70

1. Can you give us an update on your work on deep groundwater impacts of CSG chemicals, and your work on geogenics?
2. Has the abolition of the Office of Water Science research program in the 2014 Budget had any impact on your proposed work program?
3. When do you think you'll be in a position to publish work on geogenics?

**ANSWER**

1. As outlined in previous answers to Questions on Notice (e.g. AI-6) CSIRO is a contributor to the National Assessment of Chemicals Associated with Coal Seam Gas Extraction in Australia (“the Assessment”) funded by the Office of Water Science in the Department of the Environment. CSIRO is contributing to the main risk assessment but is also conducting some other associated research, specifically:
  - preliminary laboratory studies to identify geogenic contaminants and radionuclides in Australian coal seams, and the potential for hydraulic fracturing to mobilise these contaminants
  - developing models to better understand fracture growth in Australian coal seams and the potential for fracturing fluids to move into aquifers

These fundamental studies will contribute to the understanding of the deep groundwater impacts of CSG chemicals. The Assessment is not yet finalised.

Through the Gas Industry Social & Environmental Research Alliance (GISERA), CSIRO is also conducting a project “Review of dissolved hydrocarbons in the Surat and Bowen Basins”. This project will review and evaluate existing open source and company held data on the presence of organic compounds (geogenics) in groundwater, including some deep groundwater, in the Surat and Bowen Basins in Queensland. This will allow the development of insights into the complex interactions involved in sedimentary basins, aquifers and coal seam gas (CSG) related water production. Phase 1 of this work, a literature review, is almost complete, and the data analysis is about to commence.

2. No.
3. CSIRO’s work on geogenics through GISERA is due to be completed in mid-2016. CSIRO’s work on geogenics will be published as part of the Assessment, which is yet to be finalised. Questions on the release of the Assessment or the research programme of the Office of Water Science should be referred to the Department of the Environment.