

ALCOA — BAUXITE RESIDUE DISPOSAL

5740. Hon Giz Watson to the Minister for Mental Health representing the Minister for Environment

I refer to the use of Residue Storage Areas (RSAs) by ALCOA for the disposal of bauxite residue waste under its current licence, and I ask —

- (1) What environmental standards is ALCOA applying to the RSAs to ensure that there is no contamination of the soil and groundwater and no airborne pollution from residual toxic metals, substances and radioactive material stored in the RSAs?
- (2) Has the Department of Environment and Conservation carried out any compliance audits of the RSAs used by ALCOA?
- (3) If yes to (2) —
  - (a) at which sites and on what dates; and
  - (b) what were the findings of the audit at each site?
- (4) If no to (2), why not?
- (5) Is the Minister satisfied that ALCOA is using the most up-to-date technology for the disposal and treatment of bauxite residue?

Hon HELEN MORTON replied:

- (1) The Department of Environment and Conservation (DEC) has advised that Alcoa designs and constructs all new residue storage areas (RSAs) in accordance with the then Australian Government Department of Industry, Tourism and Resources' "Tailings Management — Leading Practice Sustainable Development Program for the Mining Industry (February 2007)" and the Australian National Committee on Large Dams Incorporated's "Guidelines on Tailing Dams — Planning, Design, Construction, Operation and Closure (May 2012)".

These documents address tailings management and include sections on environmental management. They also include criteria for earthquake risk, long-term stability and management of stormwater events, all of which have potential environmental implications.

To minimise environmental risks, DEC also requires Alcoa to design and construct all new RSAs with a low permeability base; a high density polyethylene geomembrane; a base drainage system; a stormwater containment system; sprinklers which have coverage of the entire mud pouring area; and a detailed groundwater monitoring program in the vicinity of the RSA.

- (2) Yes
- (3)
  - (a) DEC inspected Alcoa's RSAs at its Kwinana Refinery on 3 September 2007 and a desktop audit was conducted on 25 May 2011. The RSAs at the Wagerup Refinery were inspected and audited on 14 December 2010, and at the Pinjarra Refinery on 16 December 2010.
  - (b) At the time of inspection, DEC determined that Alcoa was compliant with its licence conditions applicable to RSAs for the Pinjarra and Wagerup Refineries. DEC identified two technical breaches of licence conditions applicable to the RSAs for the Kwinana Refinery. DEC determined that these breaches resulted in no adverse environmental impacts.
- (4) Not applicable
- (5) Alcoa has developed two pioneering and best practice processes for the treatment of bauxite residue. These are the use of carbon dioxide to treat red mud, and bacteria to destroy oxalate.