

GROUNDWATER REPLENISHMENT TRIALS, BEENYUP

2655. Hon Alison Xamon to the Minister for Transport representing the Health

I refer to the groundwater replenishment trials at Beenyup, and ask —

- (1) Are levels of radioactivity in wastewater monitored for the Beenyup Groundwater Replenishment treated wastewater trial?
- (2) If yes to (1) —
  - (a) what levels of alpha and beta radioactivity will trigger greater levels of monitoring for specific radioactive isotopes;
  - (b) which isotopes will be measured; and
  - (c) what management measures are in place to monitor, mitigate and prevent radioactive material being reinjected into the Leederville aquifer?
- (3) If no to (1), why not?
- (4) What method for monitoring radioactivity has been developed?
- (5) What are the current reporting levels for radioactivity required under the Australian Drinking Water Guidelines?

Hon SIMON O'BRIEN replied:

- (1) Yes.
- (2)
  - (a) 0.5 Becquerel per litre (Bq/L) for both gross beta and gross alpha radioactivity.
  - (b) Radon 222 and radionuclide's listed in Table 7.1 Chapter 7 of the Draft Australian Drinking Water Guidelines 2010 (Only if levels of alpha or beta radioactivity above 0.5 Bq/L).
  - (c) Measures in place include:
    - implementation of the 12 elements of the risk management framework, including the hazard analysis, a critical control points system in case recycled water has levels of alpha and/or beta radioactivity above 0.5 Bq/L, it will be diverted away from injection;
    - source protection programs and the implementation of multiple treatment barriers to minimise levels of alpha and beta radioactivity in the treated water; and
    - Memorandum of Understanding between the Water Corporation and the Department of Health for the Groundwater Replenishment Trial.
- (3) Not applicable.
- (4) Gas flow proportional counting (ERH\_RAS\_SOP\_0100) based on AS 2531 (1982).
- (5) AS 2531 (1982) have a limit of quantitation of approximately 0.02 Bq/L.