

BORE WATER, CONTAMINATION

398. Hon Jim Scott to the Parliamentary Secretary representing the Minister for Health

I refer to a report in *The West Australian* of Saturday, January 19 2002 concerning bore water contaminated with sulphuric acid in the Balcatta area and another report in *The West Australian* of Saturday, February 2 2002 on the same issue which reports the presence of arsenic and heavy metals in bore water -

- (1) What action has the Department taken to contain the source of the contamination?
- (2) What is the source of the -
 - (a) acid contamination;
 - (b) arsenic contamination; and
 - (c) heavy metal contamination?
- (3) How widespread is the contamination?
- (4) What contaminants were found in the groundwater and at what levels were each contaminant?
- (5) How many residents are affected by contaminated water?
- (6) Is the water still contaminated?
- (7) If so, what remedial action is being taken?

Hon LJILJANNA RAVLICH replied:

1. The source of heavy metal groundwater samples has not been identified. The Department of Health is working with the Department of Environment and Water Catchment Protection to investigate possible sources, including the likelihood of natural deposits. It is not possible to prevent heavy metals from leaching into the water when the source has not been identified.
2.
 - (a) High water acidity in some groundwater bores is a likely result of acid sulphate soils. Sulphides in the peat are oxidised to sulphuric acid upon exposure to the air with the acid then entering the groundwater.
 - (b) The source of arsenic in bore water samples is not known, but possibly the result of past land use practices.
 - (c) Similarly, the source of metals in groundwater samples is not known.
3. Testing of over 700 bores in the Stirling area indicates that bores affected by acidic water with a pH below 5.5 is restricted to areas on Jones and Telford Streets, and an area West-Southwest of the Spoonbill wetland system.
4. Forty-six predominantly acidic bore water samples have been analysed for a range of water parameters including metals. Using the Australian Drinking Water Guidelines (NHMRC/ARMCANZ, 1996) for reference, the following substance were found in groundwater bores at levels above the recommended drinking water levels:

Arsenic
Drinking Water Guideline (mg/L): 0.007
Range Detected (mg/L): <0.001 – 0.8
No. of Bores above Health Guideline: 23

Lead
Drinking Water Guideline (mg/L): 0.01
Range Detected (mg/L): <0.0005 – 0.054
No. of Bores above Health Guideline: 6

Nickel
Drinking Water Guideline (mg/L): 0.02
Range Detected (mg/L): <0.001 – 0.13
No. of Bores above Health Guideline: 5

Sulphur expressed as SO4
Drinking Water Guideline (mg/L): 500

Range Detected (mg/L): 44 – 4 430

No. of Bores above Health Guideline:16

5. Of more than 700 groundwater bores assessed 37 have been identified with acidic water below a pH of 5.5.
6. Yes.
7. The Department of Environment, Water and Catchment Protection, as the agency responsible for assessing issues of groundwater pollution, will consider possible remedial options to ameliorate the acidic groundwater problem.