

THORIUM HAZARD

1187. Hon Lynn MacLaren to the Minister for Agriculture and Food representing the Minister for Mines and Petroleum:

- (1) I refer to the thorium hazard in welding and Alcoa red mud waste at Kwinana, Perth Motorplex, Pinjarra, Wagerup and Worsley and ask if the Minister is aware that welding rods containing up to two percent thorium dioxide (thoria) by weight have been used in Western Australia?
- (2) Are such welding rods still in use in Western Australia?
- (3) Have any measurements of body load of thorium been made in welders or others exposed to thorium contaminated dusts in Western Australia?
- (4) Is the Minister aware that thorium accumulates in the bodies of people exposed, especially in the lung, pulmonary lymph nodes, bones, liver, spleen, kidney and bones?
- (5) Have any autopsy studies been made of thorium and decay products in Western Australian workers versus the unexposed population?
- (6) Has any study been performed in Western Australia regarding the incidence of disease, including cancer, in welders or others exposed to thorium?
- (7) Is the Minister aware that thorium exposure is associated with higher incidence of hodgkins lymphoma, leukaemia, liver cancer, eye cancer, pancreatic cancer, respiratory and digestive tract cancers?
- (8) Can the Minister provide detailed analysis of radon and thoron emissions from the Perth Motorplex site and all red mud residue areas in the State, including areas treated with alkaloam?
- (9) When did Alcoa commence radon and thoron monitoring at its Western Australian facilities, including mines, refineries, railcars and port stockpiles and handling facilities, and what were the maximum concentrations of those radioactive gases detected?

Hon Ken Baston replied:

The Department of Mines and Petroleum advises:

- (1) The Department of Mines and Petroleum (DMP) has advised that under the *Mines Safety and Inspection Act 1994*, companies are not required to advise DMP of the composition of any welding rods they may use.
- (2) See answer to (1).
- (3)–(7) These questions should be asked of the Minister for Health.
- (8) There is no requirement under the Mines Safety and Inspection Act for alumina companies to report to DMP on radon and thoron emissions.

In regard to Alcoa of Australia Limited's (Alcoa's) materials, the WA bauxite ore from which alumina is extracted in the Bayer refining process contains traces of naturally occurring radionuclides, which are also found in rock and soils in general, and is therefore categorised as NORM (naturally occurring radioactive material). Alcoa has for more than 30 years conducted extensive studies on the department of these trace radionuclides during bauxite processing to ensure there are no radiological health risks for the workforce or for the general public.

- (9) See answer to (8).