MINE WORKERS — EXPOSURE TO DIESEL FUMES

1122. Hon Robin Chapple to the Minister for Agriculture and Food representing the Minister for Mines and Petroleum:

I refer to the 'Diesel Particulate Study of Goldfields Mines' from *Resources Safety Matters*, Volume 2, Number 1, January 2014, pages 8–11 that may be found here: http://www.robinchapple.com/sites/default/files/RSM_Magazine_Jan14_Extract_0.pdf which outlines the finding that based on the time weighted average (TWA) exposure recorded on the day of sampling, 10 of 29 sites or 34 percent would have exceeded the accepted TWA exposure standard had workers been exposed to that environment for eight hours, and given that the International Agency for Research on Cancer (IARC) has publicised through the World Health Organisation (WHO) that an increased risk of death from lung cancer is found among underground miners exposed to diesel fumes, I ask:

(a) will the Department of Mines and Petroleum (DMP) enforce real-time ambient diesel particulate sampling of all underground mines in Western Australia to gauge ambient contaminant levels;

(b) if yes to (a), when and how;

(c) if no to (a), why not;

(d) if no to (a), and as there is currently no national exposure standard for diesel particulates, how will DMP assess and control diesel emissions to an acceptable standard;

(e) given that the lowest diesel particulate TWA and peak measurements were recorded at mine sites that had quality diesel emissions management plans, will DMP enforce the use of these plans for all mine sites;

(f) if yes to (e), when and how;

(g) if no to (e), why not;

(h) will DMP include direct personal exposure monitoring in future studies;

(i) if yes to (h), when and how;

(j) if no to (h), why not;

(k) given the sites that committed to fitting diesel particulate filters to all underground machinery had the lowest exposure data for both TWA and peak readings, will DMP enforce all mine sites fit diesel particulate filters, and other emission controls including an effective maintenance regime, low sulphur fuel, low ash engine oil, and a doubling of the frequency at which air filters were being replaced;

(l) if yes to (k), when and how;

(m) if no to (k), why not;

(n) will the Minister enforce an industry standard for conducting primary and secondary ventilation surveys and for reporting the measured data;

(o) if yes to (n), when and how;

(p) if no to (n), why not;

(q) will the Minister enforce an industry standard in the levels of experience, competence and authority of statutory appointed ventilation officers;

(r) if yes to (q), when and how;

(s) if no to (q), why not; and

(t) will the Minister table any future further sampling and studies of remaining underground mines in Western Australia?

Hon Ken Baston replied:

The Department of Mines and Petroleum has provided the following response:

(a) No

(b) Not Applicable

(c) Real time ambient monitoring is a useful tool to be utilised in determining effectiveness of particular control systems, but TWA based sampling quotas will continue to be required to determine personal exposure monitoring.

(d) The Department of Mines and Petroleum (DMP) has adopted the Australian Institute of Occupational Hygienists exposure limit recommendation of 0.1 mg/m3 as elemental carbon.

(e) Yes

(f) The DMP 2012 "Management of diesel emissions in Western Australian mining operations" guideline applies to all underground mines. DMP inspectors will continue to require that companies demonstrate they are developing and implementing an appropriate diesel emissions management plan.

(g) Not Applicable

(h) DMP will continue to require that companies carry out direct personal exposure monitoring in their CONTAM sampling quotas. The results will continue to be supplied upon request to bona fide researchers involved in related epidemiological studies.

(i) Answered by (h)

(j) Not Applicable

(k) Minimising employee exposure to diesel emissions can be achieved by a range of source, transmission and exposure controls. DMP can make recommendations to companies, but the ultimate responsibility for selecting the appropriate controls to manage the level of atmospheric contaminants in a mine rests with the principal employer.

(l) Not Applicable

(m) See answer to (k)

(n) The requirements for determining the adequacy of a mine ventilation system are detailed in the Mines Safety and Inspection Regulations 1995. This includes the requirement that ventilation plans for underground mines be updated at intervals not exceeding three months. The measured data is kept in the mine ventilation log book which is available to mines inspectors.

(o) See answer to (n)

(p) Not Applicable

(q) The qualifications and duties required of an underground ventilation officer are detailed in the Mines Safety and Inspection Regulations 1995. The training and competency required to undertake these duties must be demonstrated to the satisfaction of the manager or principal employer.

(r) See answer to (q)

(s) Not Applicable

(t) The Resources Safety Division of DMP intends to provide a further update to industry of studies for all underground mines, once sufficient time has elapsed to determine the effectiveness of implemented diesel emissions management plans.