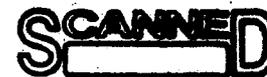


LEGISLATIVE COUNCIL
Question On Notice



Tuesday, 12 June 2018

1399. Hon Robin Chapple to the Parliamentary Secretary representing the Minister for Health

I refer to emails sent to the Minister on 26 February 2018 and 19 March 2018 and/or letters of those dates from a community group, the Cockburn Pollution Stoppers, and I ask:

(a) regarding the correspondence for 26 February 2018:

(i) did the documents refer to tests conducted at the National Measurement Institute on 12 dust samples collected in the suburb of Beeliar;

(ii) did copies of these test results accompany the email and/or letter;

(iii) did the test results of all 12 dust samples identify the presence of the same elements as Portland cement and quicklime produced or processed by Cockburn Cement Limited at its lime/cement factory in Munster (factory); and

(iv) did the test results of all 12 dust samples identify the presence of chromium and sulphur;

(b) regarding the correspondence for the 12 March 2018, did the documents refer to potential heavy metal contamination in the suburbs of Beeliar, Yangebup, Munster and Coogee and the potential source of these toxins;

(c) is the Minister aware that the presence of chromium and sulphur, in particular, confirms the 12 dust samples probably contain Portland cement and/or quicklime produced or processed at the factory;

(d) is the Minister aware that in the test results dated 20 February, four dust samples also tested for the presence of the heavy metals arsenic, lead, chromium, mercury and cadmium;

(e) if yes to (d), will the Minister provide detailed information of which samples contained which heavy metals and what was the detected quantity of each heavy metal in each sample in milligrams per kilogram;

(f) is the Minister aware that one of the samples from Beeliar contained a lead level higher than dust samples collected in the industrial area of Shijiazhaung, one of the most polluted cities in China;

(g) is the Minister aware that one of the samples from Beeliar contained a cadmium level higher than dust samples collected in the industrial area of Shijiazhaung;

(h) is the Minister aware that the department has refused to investigate heavy metal contamination in Beeliar and nearby suburbs;

(i) is the Minister aware the reason why the department made that decision is because it chose to apply health investigation levels for metals in soils rather than the relevant standards for airborne exposure levels, notwithstanding the fact that the dust samples which were tested were not collected from soil but from hard exterior surfaces like garden furniture, motor vehicles, children's play equipment and the like upon which airborne dust settles every day and is regularly cleaned away;

(j) will the Minister instruct the department to investigate heavy metal contamination in Beeliar and nearby suburbs;

(k) if no to (j), why not; and

(l) if yes to (j), will the Minister detail the following:

(i) what actions, in particular, the department will take and when;

- (ii) will a copy of the department's report to the Minister be made available to Cockburn Pollution Stoppers or to the general public;
- (iii) if yes to (ii), when and how; and
- (iv) if no to (ii), why not?

Answer

I am advised that:

- (a)(i) Mr Greg Hocking's covering letter referred to 12 dust samples.
- (ii) The Environmental Health Directorate received one page of results with no laboratory or date identification. There were also two laboratory reports from National Measurement Institute (NMI) dated 3 July 2017 (samples received by NMI on 26 June 2017) and 22 January 2018 (samples received by NMI on 15 January 2018). NMI subsequently confirmed that the one page of results were those received by NMI on 20 June 2017).
- (iii) The elements are consistent with, but not exclusive to, Cockburn Cement Limited (CCL) emissions. These elements are also found in ambient air more generally from road traffic pollution, industrial emissions from light industry in surrounding areas and emissions from the Kwinana Industry Strip which impact the air-shed.
- (iv) Yes.

(b) Correspondence dated 26 February 2018 referred to Beeliar and Yangebup and referred to CCL as the potential source. No correspondence was dated 12 March 2018.

(c) The elements identified in the results are typical of elements found in kiln dust. The most important industrial sources of chromium in the air are those related to metal fabrication, ore refining, and chemical processing, cement production, and paint manufacturing in that order. Industries that use natural gas also produce emissions containing Sulphur.

(d) Yes, refer to table below in (e).

(e)

Sample ID	arsenic	cadmium	chromium	lead	mercury
	mg/kg				
N18/00401 JB1	16	6	65	52	0.34
N18/00402 JH1	4.9	Not tested	38	14	0.81
N18/00402 JM1	12	Not tested	59	26	Not tested
N18/00402 SB2	10	Not tested	43	190	Not tested

(f) No information was provided to the Department of Health (DOH) on the lead pollution concentration or unit of measurement from Shijiazhaung in order to make a valid comparison.

(g) No information was provided to the DOH on the cadmium pollution concentration or unit of measurement from Shijiazhaung in order to make a valid comparison.

(h) The results provided by Mr Hocking, and results from previous investigations undertaken leading up to the Parliamentary Inquiry into CCL, and during the highest levels of emissions were not indicative of heavy metal contamination occurring in the areas. The most recent quarterly air emissions report obtained from the Department of Water and Environmental Regulation (DWER) (Report Number R004608 Compliance year 2017 by Etkimo) shows all metals and gaseous emissions were compliant with DWER guidelines.

(i) The DOH used the appropriate health investigation level for the samples collected. The results were consistent with previous results collected by the DWER in April 2010. A health investigation level (HIL) is derived to be protective of health under the majority of circumstances including a person being exposed to an amount of dust everyday over an average lifetime of 70 years (averaged from childhood to adulthood). The dust that falls out onto surfaces contains large particles too big to be absorbed into the lungs. Airborne exposure levels are only applied to measurements of invisible respirable dust particles suspended in air.

(j) No.

(k) The analytical findings to date are not indicative of heavy metal contamination in Beeliar and nearby suburbs. The DWER undertook a study in 2015 investigating CCL stack emissions and potential ground impacts of odours and air compounds. The study confirmed that odour impacts can occur under certain meteorological conditions. The DWER subsequently recommended changes to the CCL licence designed to reduce or eliminate potential impacts; DOH is advised that these changes cannot be implemented while the licence remains under appeal.

(l) Not applicable – refer (j).

A handwritten signature in black ink, appearing to be the initials 'A.P.' or similar, located in the lower right quadrant of the page.