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28 April 2011

Standing Committee on Environment and Public Affairs Legislative Council Parliament House PERTH WA 6000

Attention: Ms Telia Reilly

Dear Ms Reilly,

STANDING COMMITTEE OF ENVIRONMENT AND PUBLIC AFFAIRS TRANSCRIPT OF EVIDENCE

Thank you for sending me a copy of the transcript of evidence that I gave at a public hearing of the Standing Committee of Environment and Public Affairs on 11 April 2011.

I have made some corrections to typographical errors contained in the uncorrected copy of the transcript, as per your instructions.

On reading the transcript, I note that some of my statements could benefit from a little clarification, and I would like to take this opportunity to better explain myself.

On Page 2 of the transcript I try to explain the correlation between opacity and dust concentration in mg/m³, particularly in relation to the Continuous Emission Monitoring System (CEMS). I did address this matter in Point 4 of my written submission of 4 November 2010, and this perhaps provides a clearer explanation than I was able to give at the hearing. However, to clarify the point I was trying to make at the hearing:

Cockburn Cement has installed CEMS designed to continuously measure the particulate emissions from their stacks. These systems are based around opacity monitors which report the dust emissions as percentage opacity.

Opacity is an accepted unit of particulate measurement used in the US. However, Britain, Europe and Australia do not recognise opacity as a valid measure of reporting for particulate emissions. Instead, the CEMS system needs to be able to report in mass per unit volume (eg mg/m³), which is the recognised measure under the Australian National Measurement Act.

To achieve this, a correlation needs to be established between the opacity measured by the CEMS monitor and the dust concentration in mg/m³, as determined by a sufficient number of manual isokinetic tests conducted by a recognised test method for particulate such as USEPA Method 5. By this means a statistical correlation is established which can then be entered into the opacity meter's software. This will then enable the opacity monitor to accurately report to mg/m³ of particulate matter being emitted from the stack. This would need to be done on each stack that has a particulate CEMS system.

It is important that this correlation procedure is performed according to a standard method such as Performance Specification 11, produced by the USEPA. However, the CEMS code produced by the DEC does not reference any correlation procedure. This is a major deficiency in the code, which is applicable to all particulate CEMS systems in Western Australia, not just Cockburn Cement's.

Cockburn Cement reports particulate emissions results from their CEMS to the DEC in

mg/m³ but these results would have to be highly questionable because, to my

knowledge, no accurate correlation has been established between the opacity

measurement from the CEMS system, and the manually measured dust emission in

 mg/m^3 .

I would also like to clarify my response to the Hon Phil Edman's question about why

Cockburn Cement stopped using our services after 2003 (See top of Page 4). I was not

expecting this question, and so my answer was not quite correct. We did occasional work

for Cockburn Cement over a ten year period until 2003, though we never had a regular

contract with them. Around that time we put on a course in stack testing to their personnel,

to enable them to conduct their own monitoring programmes. It is my understanding that

they then chose to do their own testing in-house after that time. I am not sure what the

situation has been more recently, because in 2006 we downsized our business, and no

longer had the capacity to do heavy work such as Cockburn Cement's and ceased to have

any contact with them.

Thank you for the opportunity to present this information.

Yours faithfully,

KEITH JAMES

Director