

Ms Kristina Chrichton
Committee Clerk
Standing Committee on Environment and Public Affairs
Ground Floor, 18-32 Parliament Place
West Perth WA 6005

By email: env@parliament.wa.gov.au

Dear Chair and Committee Members,

Inquiry into Cockburn Cement Limited

I make this submission to your Inquiry as a resident of Beeliar and as one of an informal group of like-minded residents called Cockburn Pollution Stoppers (CPS) who live near the Cockburn Cement Limited (CCL) lime/cement factory (Factory) in the adjoining suburb of Munster. We are suffering in numerous ways from the activities at the Factory.

In 2010 an Inquiry was conducted into the Factory by the Committee and 23 recommendations were made to begin to resolve health and amenity issues caused by its toxic gas and particulate emissions. Following that inquiry, CCL installed 'baghouse' filters on kilns 5 and 6 and in 2015 kilns 3 and 4 were closed when CCL stopped making its own Portland cement (and began importing it in 'clinker' form for further processing at the Factory).

These changes reduced emissions of large particulates ($\approx 10 \mu\text{m}$) and toxic gases but small (and more health-damaging) particulates ($\leq 2.5 \mu\text{m}$) were not reduced and a broad range of toxic gas and heavy metal emissions from burning coal were not thereby abated. Residents living near the Factory have continued to complain about health and amenity impacts, the Factory being the most complained about of all facilities licensed under the *Environmental Protection Act, 1986* (EP Act) in recent years. About 20,000 adults and children now live within 3 kilometres of the Factory's kiln stacks.

The Departments responsible for licensing and regulation of polluters and for public health have not carried out the spirit and intent of five of the Inquiry's recommendations, the principal one being the conduct of a '*comprehensive, rigorous and peer-reviewed health study*' of local residents to assess the actual and potential health impacts of exposure to emissions from the Factory. Consequently, residents and their children have been exposed to toxic gas, heavy metal and particulate emissions for another 10 years which they believe are continuing to have adverse impacts upon their suburban lifestyles but, even more importantly, upon their health and the health of another generation of children.

The principal source of toxic pollution at the Factory is the burning of coal (estimated at $\approx 250,000$ tonnes annually) and windblown coal dust from the large stockpile on site. The Factory is the only facility licensed under the EP Act in the Perth metropolitan area which is permitted to burn coal, CCL having obtained a licence variation in 2006 which allowed it to modify its gas-fueled kiln 6 to burn coal.

It is incontrovertible (from world-wide scientific and medical research) that coal burning power stations and factories have adverse health impacts on people living nearby which result from exposure to large quantities of toxic gases, large carbon particulates and ultrafine ($\leq 2.5 \mu\text{m}$) particulates bearing concentrated heavy metals (which occur naturally in coal). Although large carbon particulates can lodge in the nose, throat and lungs where respiratory symptoms can be triggered, ultrafine particulates are particularly insidious as they can pass from the lungs into the bloodstream and deposit heavy metals in various organs causing long-term serious diseases such as various cancers. The quantity of coal burnt at the Factory and its proximity to residential suburbs poses a health risk which is unacceptable to the community.

Toxic pollutants escape from the Factory and enter the local community in two ways; namely, emissions from the kiln tower and 'fugitive' emissions, being windblown particulates from the Portland cement processing area, coal stockpile, lime kiln dust dumps and shell sand stockpile. Toxic gas emissions from the kiln tower include sulphur dioxide, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen chloride, hydrogen

fluoride, volatile organic compounds (VOCs), polycyclic hydrocarbons, dioxins, and furans, in addition to particulates and heavy metals. Particulate emissions from the kiln tower result from coal burning and, periodically, from kiln management practices which allow CCL's quicklime product to escape into the air and drift over resident's homes where it is deposited like a carpet of snow, always at night. All of these substances are associated with adverse impacts on human health.

CCL refuses to publicly disclose the range and quantities of many of its toxic pollutants (particularly VOCs) and it chooses to 'model' (i.e. predict) the quantities of many of these toxins produced at the Factory rather than use scientific instruments which measure actual toxic gas levels emitted from the kiln stack and the levels present near the ground at its boundary fence. There is evidence that CCL takes a 'cavalier' attitude to the accurate measurement and reporting of the Factory's toxic pollution. For its part, the Department responsible has been content to allow CCL to self-regulate as to the monitoring and measurement of its toxic pollution outputs. The local community believes that this Department ought to have been monitoring toxic gas emissions by scientific instruments to independently assess the actual pollution levels as they enter the community. Consequently, there is a lack of independent, verifiable measurements and other data as to the actual quantities of toxic gases (especially VOCs) and particulates which have escaped from the Factory over the years and entered the community.

By 2016, when the local community could not get effective action from the Departments responsible for pollution control and public health, concerned residents began arranging for tests to be undertaken to obtain independent data on particulate ('dust') fallouts by obtaining laboratory tests on black, light-grey and white dust deposits falling on the exteriors of their homes. The results of these 'dust' tests identified the same elements contained in CCL's quicklime and Portland cement products are also found in particulates which are continually being deposited on exterior surfaces of residents' homes (including many toxic heavy metals found in coal). Tests in 2018 confirmed the presence of many of these metals in the coal, Portland cement 'clinker' dust, lime kiln dust (kiln waste) and waste water at the Factory. In 2019 and 2020, concern about possible inhalation or ingestion of these heavy metals by local children led to hair sample tests being conducted. Of the 11 local children tested, all were found to have been exposed to the same heavy metals as those in found in materials and CCL's products at the Factory. Our community is concerned that they and their children may well suffer the onset of serious diseases now and in the future as a result of exposure to toxic gases and particulates emitted from the Factory.

Rather than wait for long-term health investigations and studies to be undertaken to prove adverse health outcomes have resulted from this continuing exposure, the 'precautionary principle' and the 'polluter pays' principle enshrined in the EP Act should be applied and preventive measures taken immediately to prevent any more adverse health effects upon the community living near the Factory.

The measures set out in the Petition (and several other measures) directly address the causes of gas and particulate emissions at the Factory and will result in an effective and substantial abatement of its toxic air pollution, thereby remedying the health and amenity issues caused by allowing a heavy industry polluter to operate in a densely populated area of WA's capital city.


CCL has access to an alternative less-polluting fuel (cheap, plentiful, local natural gas) which is used by all other heavy industry polluters operating in the Perth metropolitan area. Indeed, it uses 5-10% natural gas in its lime kilns at the Factory. There is no need for CCL to incur any capital expenditure to burn only natural gas in its two lime kilns.

The foregoing statements can, I believe, be established by way of a more detailed submission with supporting documents. This is the link to my more detailed submission and supporting documents:
<https://pollutionstoppers.org/latest-news/submission-to-standing-committee-on-environment-and-public-affairs/>

The material is password protected. The password is:

I thank the Committee for the opportunity to make this submission.

Yours sincerely

 Greg Hocking
25 May 2020