

August 10, 2017

To Whom It May Concern

**Re: Assessment of Odour Emissions from
Proposed New LPG Depot in Kooragang NSW**

As a Chartered Professional Engineer and member of the Institution of Engineers, Australia, who has been working in the Gas Industry in Australia for the past 32 years, I can confirm the following:

- LPG is required by legislation in Australia, to be odourised prior to storage and use, as a fuel, on private and public property, for public safety reasons.
- LPG in its natural state is colourless and odourless. An odourant is added to the gas to enable detection down to 0.5 % gas in air by volume. The dosage required in Australia, to achieve this level of safety is 25 grams of Ethyl Mercaptan per tonne of LPG (1000kg).
- This level of dosing is consistent with international Occupational Health and Safety (OHS) guidelines, as safe, and adequate, to provide sensory detection of LPG presence, by the public.

It is expected that during LPG transfer activities at the proposed LPG Depot in Kooragang NSW, there could be "gas odour" smell. However, consistent with similar activities around Australia, this odour is usually a low level emission. Also, it is less prevalent in areas near to the open water ways, or near the sea, due to dispersion trends in these areas.

In my professional career, I have been involved in plume dispersion studies and stack height designs on equipment such as the large gas boilers at St George Hospital, in Kogarah NSW. I have also been involved in the design, installation and commissioning of after burners for processes ranging from odour and emissions from coffee roasting, blood drying, crematorium operation, chicken waste incineration and biogas recovery systems. I am quite familiar with noxious emissions including odour measurement protocols and odour mitigating processes.

I have seen the details of the proposed Elgas LPG Depot at Kooragang NSW, and based on this and my familiarity with these installations, I am convinced that the construction of this facility and nature of the intended business, as outlined, and especially at this location, will not pose any odour emission issues to the general public.

Yours sincerely

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