



Gladstone Conservation Council Inc.

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14th March 2015

LNG Flare in Gladstone

To:

Jonathan (Jon) PC Black
Director-General
Department of Environment and Heritage Protection

Jon,

Thank you for your letter dated 17th February 2015 and thank you for showing me how to access EPPG00711513 online via the Petroleum and gas, and mining environmental authorities register.

And thank you for acknowledging the voluminous nature of the EIS. At this point I must correct you in that my assessment of non-conformance with the EIS did include Chapter 12 of Volume 5, including activities at the LNG facility on Curtis Island, I in fact quote details of the flaring from that part of the EIS. My analysis is based on Volumes 1,2,5,7 and 11, including their supplementary components, to the extent that they are accessible to the public.

Thank you also for clarifying the fact that “commissioning” is not covered in the EIS, viz:

“The EIS presented scenarios representative of the anticipated worst-case emissions including non-normal operating conditions; however this did not include commissioning.”

This of course represents a fatal omission of the EIS.

My expectation is that something as basic as plant start-up would be part of an EIS and interpreted that to be covered under “non-normal” operation in the EIS. A word search of all the documents in Volumes 1,2,5,7 and 11, including their supplementary components, showed that “commissioning” is dealt with 607 times in 114 documents. I focussed my attention on the 229 instances where “commissioning” is dealt with in 56 documents of Volume 5, particularly where start-up and commissioning is mentioned in Chapter 12 and the appendixes of Volume 5.

Quite frankly, weasel wording sprang to my mind when I read “the EA is not inconsistent with information contained in the EIS.....”



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Air quality under Permit EPPG00711513

I am absolutely horrified that you have reduced the flaring we see currently from the LNG facilities on Cutis Island from a regulatory perspective to condition (1B) on the basis of the semantics between “commissioning” and “start-up”.

It is unacceptable to limit the department’s response to *“request information from QCLNG in relation to best practice standards, combustion efficiency, gas composition and complaint (sic) data to investigate this matter further and ensure that impacts to the Gladstone region are being managed”* against condition (1B).

A full review of their emissions is warranted, including a reassessment of the thresholds set by the department in light of the glaring omissions of substantial amounts of flaring not dealt with in the EIS.

A full review is warranted of the emissions indicated in the EIS compared to actual real cumulative emissions from ALL activities irrespective of semantic definition.

A full review of the impact of these omissions on the impacts declared in the EIS and the cascading consequences of the gross underestimation of these omissions of for example to air quality modelling that led to approvals.

Common decency would suggest this to be a minimum response.



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Air quality thresholds

The difference between 24hr exposure limits and permanent background exposure.

So egregious is you're glossing over of this topic that I simply paste your words below to avoid misrepresentation:

Regarding your concerns about particulate matter emissions, both the air quality objective within the *Environmental Protection (Air) Policy 2008* and the World Health Organisation's guideline set a maximum PM₁₀ 24 hour average of 50 µg/m³. The Queensland Government's air monitoring confirms that PM₁₀ is well below the 50 µg/m³ (24-hour average). Air monitoring results are published on the department's website, with information being updated hourly. The data can be accessed at <<http://www.ehp.qld.gov.au/air/data/search.php>>.

...and my submission below:

A rudimentary look at their modelling should raise some serious concerns with the department.



I reproduce one of their PM₁₀ concentration contour maps and draw your attention to the overall level of around 29 µg/m³, based on measurements at the Targinie Stupkin Lane monitoring station.

This may not appear too bad when we set ourselves an air quality objective for health and wellbeing of 50 µg/m³, but we know from advice from the WHO that there is no safe level of exposure to PM₁₀ and that the current recommended background exposure level is 20 µg/m³.

<http://www.who.int/mediacentre/factsheets/fs313/en/>

Figure 24 Scenario 1 - Predicted maximum 24-hour average ground-level concentrations of PM₁₀ for the QCLNG plant during normal operations, with background

In light of this, you do the community a disservice expressing the department's

lack of concern in relation to health impacts resulting from the flare emissions. We certainly do not want to add to the pollution burden when we already suffer PM₁₀ above WHO recommended levels. And the fact that people do not send their complaints to the department but to GCC has more to do with the lack of response they have come to expect from the department than anything else. There is a smell of old locomotives about and that most definitely should have your attention because if you smell it, there may be aromatics involved.



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...and the WHO guidelines from <http://www.who.int/mediacentre/factsheets/fs313/en/>

Small particulate pollution have health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed. Therefore, the WHO 2005 guideline limits aimed to achieve the lowest concentrations of PM possible.

Guideline values

PM_{2.5}

10 µg/m³ annual mean

25 µg/m³ 24-hour mean

PM₁₀

20 µg/m³ annual mean

50 µg/m³ 24-hour mean

What I want you to be clear about is that the models in the QCLNG EIS reflect a **background** level of around 29 µg/m³, based on measurements at the Targinie Stupkin Lane monitoring station. That background is 9 µg/m³, or 45% above the WHO's guideline value of 20 µg/m³ for the annual mean. This information informed the government when they approved the project, i.e. it is the **basis** of the decision.

Refer to Figure 24 which I took from the actual EIS and understand that the PM₁₀ emissions from the black smoke cannot be reflected in this modelling because zero emissions were assumed on the basis that the stacks would be smokeless. Clearly they are not smokeless and as such any modelling will underestimate the true impact and may well have shifted the position of the decision makers on air quality.

In a classic misdirection manoeuvre you divert attention away from the issue by conflating 24hr exposure thresholds with annual mean thresholds.

You reflect to us in your letter of 22nd of January 2015 that *"The department has been investigating the matter and air quality monitoring in the Gladstone region"*.

I appreciate you referring me to <http://www.ehp.qld.gov.au/air/data/search.php>, but of course that tells me nothing about the analysis and synthesis you and your department went through to arrive at a position that *"Based on this monitoring, the department does not have specific concerns in relation to health impacts resulting from the flare emissions at this time."*

Is it too onerous to ask that you share the details of the department's investigation?



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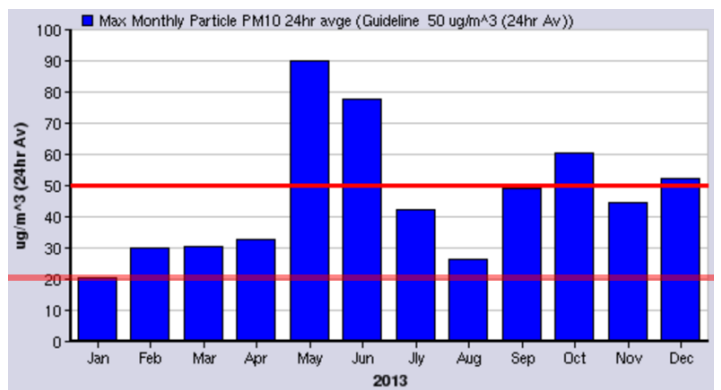
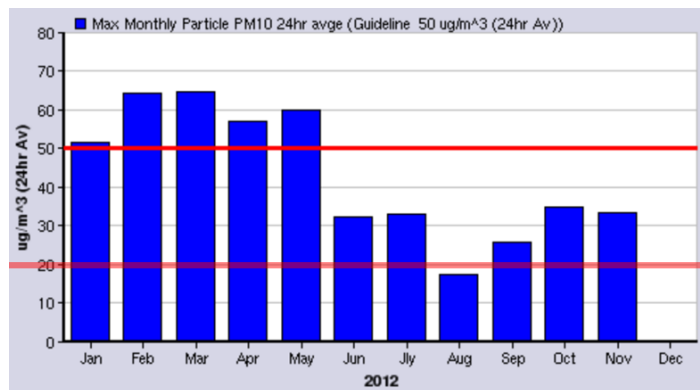
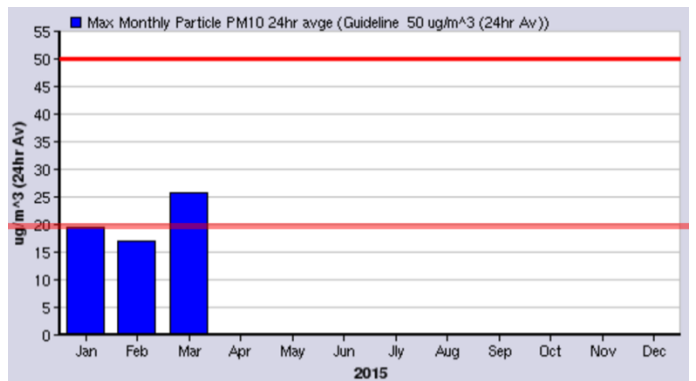
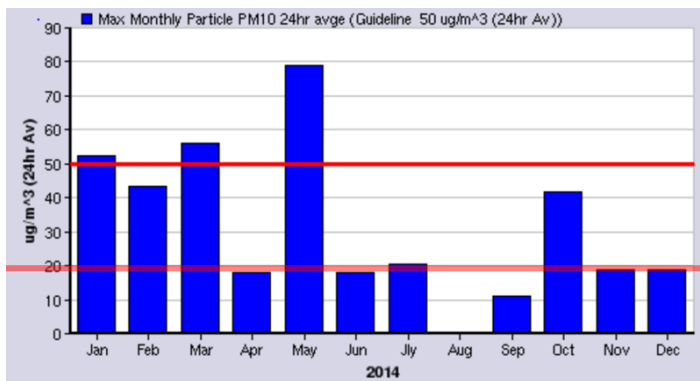
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What the data clearly confirms is that PM₁₀ levels at Targinie breach the WHO threshold of 20 µg/m³ for the annual mean and in the last three years even breached the PM₁₀ 24hr exposure limit of 50 µg/m³ at least 35% of the time.



I would suggest that the department reconsider its position of not having concerns in relation to health impacts resulting from the flare emissions.

Sincerely,

Jan Arens

President – Gladstone Conservation Council

14th March 2015