

The following information was received from Ian Gildenhuys from Environmental Health, City of Cape Town. The questions are in response to those submitted by Fresh Air for Hout Bay at a meeting with the Mayoral Committee Member for Health in June 2015, and these answers were received via email on 31 July 2015.



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Meeting feedback:

The meeting of the 6th of May between City Air Quality Staff and Lucky Star centred around the need for the AEL review and amendment to the AEL operating conditions to address continuous in-stack H₂S monitoring amongst others. We further requested updated stack emissions monitoring to be conducted. I am unfortunately not able to give you more details on the future plans. The meeting of the 25th of June did not take place. It was rescheduled to the 6th of August 2015.

Your query re National emission limits refers:

In this regard I am assuming you are referring to point source emission limits from the plant? This being the case, the following is relevant. There are no National emission limits for this category of industry.

Hydrogen Sulphide (H₂S) emission limits have been set for other Industries such as the Coke and Coal Gasification industry where an existing plant limit of H₂S has been established, but these have no bearing on Animal Matter processing. The limits for Coke production for existing plant is 10 Mg/NM³. This is considerably higher than Lucky stars emissions.

Point source emission limits have also been established for declared “Controlled Emitters” – The small boilers regulations. But these only come into effect in 2018.

Emission limit formulating process:

This process was undertaken by the National DEA with inputs from a number of external stakeholders. As I understand the process the DEA reviewed emission limits imposed by a number of authorities around the world. They then set our own standards based on a number of factors including health and ecosystem impacts, available technology etc. In some cases our standards are stricter than elsewhere and in others they are more lenient.

SC 16 Report:

The chemical scrubber makes use of Sodium Hyperchlorite as an oxidising agent. Some evidence suggests that Chlorine dioxide may be more effective as an oxidising agent. A plant in Namibia uses this technology. Lucky Star are testing its use at one of their plants up the

West Coast. If determined to be superior to Sodium Hyperchlorite, it will be employed at the Hout Bay. This will be made a revised AEL condition.

The inline monitoring of H₂S involves placing sensors in the stacks that emit H₂S as a component of the emissions stream. The information will then be fed to a data logger that can be monitored by the plant operator. This will enable improved dosing of the chemical scrubber to keep a better handle on the H₂S emissions. It will also enable a comparison between H₂S emissions from the factory vs H₂S emissions measured at the ambient air quality monitoring station. This is important as there are other sources of H₂S in the area, including natural marine processes, sewerage pump stations and the waste water treatment plant. Lucky Star have purchased the equipment and are busy ironing out the application at the other plant up the West Coast. This technology will then be deployed in time for next year's fishing season. This will also be made an AEL condition.

Discrepancies in complaints registers:

I think it is fair to say that as the Unit responsible, we are aware of the level of complaints being received. Yes, there may be some discrepancies in absolute numbers but by and large we have a good understanding of community sentiment. These discrepancies arise where we as a unit receive a complaint directly from a member of the community but then possibly did not pass it on the Lucky Star for capture on their register. The other possibility is that a complaint is logged but the complainant has failed to provide all the relevant information i.e. their physical address and contact details etc. so proper investigation in terms of assessing impact is not possible.

Health Implications:

Health Risk Assessment – The report states that the objections were based on the premise that a Health Risk Assessment had not been carried out.

The City is undertaking due diligence with regard to the development of specific sites for low cost housing.

With regard to Cllr Van Minnen's alleged statement, I can confirm that the monitoring she was referring to was revised In-stack monitoring which we requested to be conducted by Lucky Star. These results will be used to reassess air dispersion modelling to assess impacts on the proposed housing sites.

Ambient Readings for H₂S:

No ambient RSA air quality standards have been declared for H₂S

Ambient measurements are of all H₂S sources in an area, including marine sources, sewerage pump stations and the factory.

These measurements are conducted by an independent company – SGS who are contracted to the Western Cape Government to run their monitoring station. The methods used conform to US EPA standards and equipment also meets the specified standards.

H₂S emission limits in AEL: We will be looking at setting the H₂S emission limit to 5mg/Nm³ when we review the licence prior to the commencement of the new fishing season in February 2016 – this is a guideline value established by DEA following a Fishing Industry Health Risk Assessment conducted by DEA. Previous monitoring results from Lucky Star suggested that their H₂S emission rates were lower than this level eg 3.1 mg/NM³.

Way Forward Questions:

- The license will be reviewed and re-issued before the commencement of the 2016 fishing season.
- Lucky star's AEL currently permits 4 boilers to be used at any one time. We will regulate them down to two boilers in use at any one time. The boilers not only serve to provide process energy/heat, they also serve to incinerate off-gas and thus assist with combustion of odorous compounds. But the main issue relates to decreasing the SO2 emissions which would negatively impact any closely sited low cost housing.
- Monitoring process: The revised AEL will require quarterly reports submission. We are thinking of making it a licence condition to establish a Community environmental liaison forum where these results would be reported.

The additional documentation request needs to follow the PAIA route.

Kind regards

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