

08 April 2015

Our Ref: WCCT020 – Lucky Star

Attention: To whom it may concern:

RE: ALLEGED STENCH EMANATING FROM LUCKY STAR, HARBOUR RD, HOUT BAY

This memorandum serves to acknowledge receipt of your complaint lodged with this office covering the period March to current. Your complaint has been logged on the SAP C3 system.

In response to the aforementioned complaint, the Air Quality Management team have conducted inspections and investigations into the source, cause and nature of the odour complaints and the following information is at hand.

Complaint investigation:

I can confirm that the Lucky Star fish meal factory has been processing fish during the month of March. At the time of our recent visits to the area yesterday, there was minimal fishmeal odour in the harbour and surrounding area. Below is a transcript of our recent investigations:

23/03/15 @ 11:30 – 13:45

- Visited the areas where the complaints are originating from
- We identified a very unpleasant, concentrated fish meal processing smell in the Hangberg area only
- Sent Dan Jaftha of Lucky Star an e-mail informing him

27/03/15 @ 11:00 – 13:30

- Visited the areas where the complaints are originating from
- Identified a rancid smell from Marlin to Flora Crescent
- Interviews with residents revealed that the smell is evident especially at night from 21:00
- Dan Jaftha said that they conducted their own survey in the area but didn't smell anything out of the ordinary

31/03/15 @ 11:00 – 13:30

- No smell identified
- Visited a complainant at 8 Clyde Street who complained about the fish stench, burning eyes, sinuses and throat.
- Met with the City's Water and Sanitation staff (Damian) at the pump station in the vicinity of the Fish on the Rocks restaurant who revealed that they suspect that fish from Lucky Star was dumped into the sewer line. At times their mobile monitor used to test for occupational safety levels of H₂S indicates high levels of. They said they will report it to their line manager for further action. We are awaiting further feedback with regards to H₂S levels being monitored in the pump station serving the Lucky Star Facility. In response to the fish dumping in the sewer allegation, Lucky Star have refuted this claim saying that they would not dump valuable process fish. Also, the fish in question had scales which are unlike the unscaled pelagic fish processed at the facility. At this stage, the matter is under investigation by the Water and

Sanitation Department who have been requested to send us a log of the H₂S levels measured in the pump station serving the Lucky Star facility.

The odours experienced by the Air Quality Management officials during the course of their investigations were not severe in their opinion and even non-detected on some days. However, it is worth noting that the threshold for the detection of odours from fish rendering plants is way below any health effects.

The Provincial Air Quality Monitoring station located at the Sentinel Primary School is situated approximately 250 metres away from the Lucky Star fish meal factory in Hangberg Heights just above the factory and monitors the ambient air for Hydrogen Sulphide(H₂S) levels. The mean (average) hourly levels measured at the station are within recognised health related guidelines (see discussion in the following section).

Ambient air quality guidelines and the Lucky Star Atmospheric Emission Licence:

Since taking over the Atmospheric Emission Licensing function from the Department of Environmental Affairs in 2010 and as a result of odour complaints received, the City's Air Quality Management (AQM) unit has conducted many investigations into the operational activities at Lucky Star. Joint inspections were carried out in conjunction with the Department of Environmental Affairs & Development Planning (DEADP): Air Quality Management unit, with the most recent Atmospheric Emissions Licence (AEL) compliance inspection being conducted in March 2014. At the time it was determined that the operations were generally in compliance with the AEL conditions. As a result of the complaints received, the DEADP installed a monitoring station at the Sentinel Primary school. The hourly average results prove compliance with World Health Organisation (WHO) ambient air quality guidelines for H₂S.

No national ambient air quality standards or guidelines have been determined or set for Hydrogen Sulphide. Below is a multi-sourced guideline for various averaging periods extracted from a Health Risk Assessment conducted for the West Coast Fishing Industry:

Table 1.3.1: Summary of guideline concentrations for acute exposure to H₂S in ambient air.

| Guideline concentration µg/m ³ | Averaging time | Health endpoint | Reference |
|--|----------------|--------------------------|------------|
| 150 | 24-hour | Eye irritation in humans | WHO 2000 |
| 139 | 30-minute | Respiratory effects | NDEQ 1997 |
| 42 | 1-hour | Headache, nausea | OEHHA 1999 |

Regarding the emission limits from the Lucky Star stacks and the ambient air quality guidelines for Hydrogen Sulphide, the following is relevant:

Lucky Star operates a Category 10 Animal Matter Processing facility as per the Listing Notice No 893 of 22 November 2013.

The arrangement stipulates that best practise measures intended to minimise and avoid offensive odours must be implemented by all installations. These measures must be documented, reported and implemented to the satisfaction of the Licensing Authority.

In terms of Section 35 of the National Environmental Management: Air Quality Act (NEMAQA), The Minister or Member of the Executive Council (MEC) may prescribe measures for the control of offensive odours. Neither the Minister nor any MEC has chosen to do so. Section 35 also requires that occupiers of premises must take reasonable steps to control the emission of offensive odours.

It is the opinion of the Air Quality Management unit through the many inspections and investigations and meetings with the staff and management of the factory that Lucky Star continues to take all reasonable measures to control the emission of offensive odours. A technical review of the 9 fish meal

plants in the country has shown that the Lucky Star premises is the most technically advanced in terms of emission and odour control. This however does not mean that odours are not detectable, problematic or of nuisance value to certain sectors in the community. One also needs to consider that the facility is in very close proximity to residential areas.

The following already implemented and planned improvements and modifications at the plant are included for your perusal.

Plant improvements and modifications:

Lucky Star has implemented various interventions to control odours and reduce fugitive emissions as follows:

1. Product management and housekeeping measures
2. Refrigerated fish receiving sumps to limit product spoilage prior to processing.
3. Indirect steam cookers are used
4. Emissions from cookers are condensed in a large capacity condensing system
5. Emissions are then scrubbed in a seawater scrubber before being scrubbed in a Chemical scrubbing system
6. Non-condensable gases are combusted in the boilers before being discharged to atmosphere
7. The bagging plant is fitted with dust bag filters
8. Implementation of best available technology (BAT)
9. A pilot study is currently in operation at their St Helena Bay facility involving a new chemical scrubbing agent. Last week we were informed that it was proven to be successful although technical problems were experienced with the setting of the automated control and tolerance levels. However should the latter be corrected it will be implemented at the Hout Bay Plant too. Unfortunately the problems at St Helena Bay plant may hamper the timelines associated with the installation in Hout Bay.
10. A stakeholder meeting with the Hout Bay community was held on 15 August 2014.
11. Preparing a NEMAQA application to trial and test the impact of adding an eco-friendly deodorising agent to the chemical scrubber which targets Hydrogen Sulphide thereby minimising its odour impact.
12. Replacing the Sodium Chloride agent used in the water scrubber with Chlorine Dioxide which appears to have more efficient deodorising potential.

Local climatic conditions and its effect on the dispersion of odours:

It is worth mentioning that odour dispersion is influenced by local topography and climatic conditions. This means that on certain days of the year the dispersion potential of the "Hout Bay valley" is negatively impacted by low level inversion conditions, even though this is not the norm. Land and sea breezes and temperature fluctuations also play a role in the dispersion of odours.

Legislative framework to deal with nuisance odours from a listed activity - discussion and way forward:

With regard to nuisance conditions and the applicability of using by-laws to deal with nuisance odours from a listed activity, please note the following:

1. The same authority that issues a facility with an AEL to operate a listed activity that generates malodours and for which there are no emission limits specified in the Listing Notice, cannot on the one hand licence the premises in terms of the NEMAQA and on the other hand prosecute them for nuisance odours in terms of a by-law. Should any prosecution be entertained, this would need to be conducted in terms of the NEMAQA. Fines of up to R5 million or imprisonment not exceeding 5 years are applicable. As there are no emission limit contraventions of the Air Quality Act, and Lucky Star are in compliance with the conditions of authorisation in their AEL, we are not in the position to prosecute Lucky Star.
2. The complainants have the right to embark on civil litigation, but the courts will probably apply the test of reasonableness to any action. The Air Quality Management unit is of the view that the factory has technically done all that is reasonably practical to control odours and this has been verified by the third parties mentioned above.
3. There appear to be only two options available to the City as the Licensing Authority.

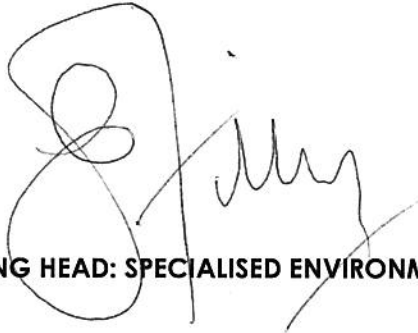
- a. Either the factory is permitted to operate and the odours must be tolerated by the broader community – many of whom have only recently purchased properties in Hout Bay, or
- b. A decision is taken to review and withdraw their emission licence - but in this regard Lucky Star also has rights and any actions against them will need to be compliant with the Promotion of Administrative Justice Act.

Conclusion:

The Air Quality Management unit team will thus continue to vigilantly monitor the factory for compliance with the legislation and permit conditions and where and when new technology becomes available; we will require thorough investigation of the feasibility of its application to the Lucky Star plant.

In order to properly facilitate the investigation process, please provide us with the following information when lodging a complaint:

1. Date the odour was detected
2. Starting and ending time of the odour nuisance
3. Brief description of the nature of your complaint
4. How does the nuisance affect you?
5. Climatic conditions (wind direction, speed etc)



For ACTING HEAD: SPECIALISED ENVIRONMENTAL HEALTH SERVICES