

## Appendix 3

Analysis of L313/60 as applicable to Thatchers (Myrtle Farm) Ltd.

### General BAT Conclusions

*BAT1. Environmental management system:*

The intension, as contracted to external consultant, is to implement an EMS certified to ISO 14,001:2015 by an accredited certification body. It is expected that these works will be completed by end of 2021.

In addition, as part of the EMS:

- noise and odour management plans are to be established in accordance with BAT13, 14 and BAT15.
- inventory of water, energy and raw materials consumption as well as of waste water and waste gas streams, to BAT2
- an energy efficiency management plan, to BAT6a

*BAT3. Monitoring related to waste water streams*

Discharges of waste water through the existing effluent treatment works are currently continuously monitored for flowrate, temperature, pH, suspended solids, dissolved oxygen and turbidity at set points within the process.

Discharges of surface water to the rhynes have existing continuous monitoring for flow rate; plus daily pH sampling. Investigations ongoing regarding viability of continuous COD monitoring equipment, alongside pH / turbidity continuous monitoring as alternative through correlation.

Additional monitoring regime to be established in accordance with BAT4.

*BAT6 & BAT33. Energy efficiency*

Section (a) to be formalised from existing SECR programme into the developing EMS.

From techniques listed in section (b) the following are already in place:

- burner regulation and control;
- heat recovery
- lighting
- Insulation
- Leak management.

Investigation ongoing into preheating steam boilers feedwater, solar energy including solar thermal, motors / pumps and variable speed drives.

Only a single pasteuriser operated on site, limited in operations regarding waste water rather than product.

Liquid sugars used, meeting hydraulic methodology.

#### *BAT7. Water efficiency*

Approximately 50% of water consumption is retained in final product.

Projects are ongoing regarding improving water use efficiency in cleaning process, and the installation of rainwater harvesting. These are to be managed by the developing environmental management system

#### *BAT8. Harmful substances*

Food hygiene requirements considered as priority, and any such requirements are considered fully. Further analysis of chemical inventory underway under the developing environmental management system; noting existing COSHH register.

#### *BAT9. Ozone depleting and fluorinated gases*

Process chillers utilise ammonia as refrigerant rather than fluorinated gases. Domestic scale units use standard blend fluorinated gases

#### *BAT10. Resource efficiency*

Residues (namely pomace) are used as animal feed, and there is limited use of waste water for irrigation.

Previous investigations have suggested that COD in effluent is too low for efficient anaerobic digestion.

#### *BAT11 & 12. Emissions to water*

Appropriate buffer storage is confirmed to be installed across the site, including provision for surface water of approx 1800m<sup>3</sup>

Effluent lagoons provide spare capacity approximately equal to minimum 2 weeks production outputs.

Neutralisation by dosing of alkalis is established, with aerobic lagoons in place to reduce COD and BOD; alongside sedimentation tanks.

#### *BAT15. Odour*

Applicable due to historic incidents of odour related complaints

Existing corrective actions appear to be effective in managing fugitive odours, with no reoccurring incidents.

Existing odour management plan to be integrated within the developing environmental management system.