

BEFORE THE CANTERBURY REGIONAL COUNCIL HEARINGS PANEL

In the matter of the Proposed Canterbury Regional Air Plan

Between Environment Canterbury

And Synlait Milk Limited

STATEMENT OF EVIDENCE OF LAURA JANE HULL

30 September 2015

Duncan Cotterill

Solicitors acting: Ewan Chapman / Shoshona
Galbreath
PO Box 827, Nelson 7040

Phone +64 3 546 6223
Fax +64 3 546 6033
shoshona.galbreath@duncancotterill.com

- 1 My full name is Laura Jane Hull. I am the Environmental Manager of Synlait Milk Limited. Prior to that I was engaged by Synlait Milk as an Environmental Consultant to assist with the resource consenting of their growth projects. I have worked with the company in this capacity since August 2013. For the six years prior to this I was employed by Canterbury Regional Council, as a consent planner, project manager and team leader.
- 2 I hold a Bachelor of Science degree (Geography) from the University of Canterbury.
- 3 I am based at the Dunsandel site and I am authorised to make this statement on behalf of Synlait.

Emissions monitoring & consent compliance

- 4 Synlait hold two resource consents to discharge to air. CRC084325 authorises discharges from the Stage 1 & 2 plant. CRC142611 was granted in 2013 to authorise Stage 3, as well as the existing plant authorised by the previous consent. It has an expiry date of 19 February 2049.
- 5 Generally both consents have similar conditions, with the only material difference being some extra requirements related to monitoring sulphur dioxide emissions from the boilers on the newer consent.
- 6 The emissions from the spray dryers and packing lines are negligible and are well managed through plant design. Undertaking routine repair and maintenance and monitoring the automated systems is sufficient to manage discharges within our consent limits. Differential pressure across the dryer bagfilters is automatically monitored and alarmed to the control rooms, and the socks are regularly inspected for signs of wear.
- 7 Odour from the wastewater treatment plant and irrigation systems is also negligible. Wastewater is irrigated within hours of passing through the treatment system, likewise DAF sludge is transported quite quickly off site to the pig farms we have partnered with to supply it as stockfood. There is no discharge of odour from the wastewater treatment plant over the property boundary. Wastewater is irrigated through centre pivot irrigators with low pressure nozzles which minimises potential for spray drift.
- 8 A more hands on approach is taken to manage boiler emissions. Considerable effort has been made to procure quality coal, is subject to a

coal supply agreement setting out the required specifications which include calorific value, sulphur content and coal sizing, among others.

- 9 Incoming coal is tested to determine compliance with these specifications. Coal sampling is also required as a condition of consent; our sampling regime fulfils both requirements.
- 10 A composite sample is made up from all deliveries and sent for analysis. Until this season samples were analysed on a monthly basis, however the new consent requires weekly sampling during the main production season of 1 September to 30 April. Results are analysed in relation to emission rates and boiler performance, and are reported to ECan in our Annual Environmental Report.
- 11 Annual stack testing is done by CRL Energy to measure total suspended particulate, sulphur dioxide and efflux velocity as required by the consent. The dryers and packing lines are tested as well as the boilers.
- 12 Stack tests are completed in December or January when the plant is at peak production. It generally takes at least two days to complete testing of all plant, working in with production scheduling so it is undertaken when the plants are running at least 75% MCR.
- 13 Stack testing provides very accurate results, however is cost prohibitive to do more than once a year. ECan raised concerns during processing of CRC142611 that annual stack testing cannot demonstrate compliance with hourly SO₂ emission rates during the rest of the year. However it was accepted there are few reliable methods to continuously monitor emissions. Industry advice was given that in-stack continuous meters were the only option, but were advised against as being cost prohibitive with high inaccuracy.
- 14 Alternatively a formula to calculate the SO₂ emission rate was agreed with ECan, using automated steam production data, measured coal sulphur content and the coal to steam ratio to establish burning rates. This is automated so the calculated hourly emission rate can be monitored and reported.
- 15 PM₁₀ emissions from the boilers are well below the consented limit of 50mg/m³. Particulate meters are fitted in each boiler stack to continuously

measure the emission rate, with the alarm set points being below the consent limit.

- 16 Differential pressure is monitored across the bag filters and displayed in the control room. There has never been a failure of the bag filters during the time Synlait has been operating. The bag filters are inspected and laboratory tested annually, and replaced generally every 3 years, based on condition.
- 17 In addition to these specific measures to manage our boiler emissions, numerous daily and weekly checks are undertaken on the plant and routine maintenance carried out to ensure the plant continues to operate at maximum performance for energy efficiency.
- 18 Synlait established a weather station in 2012, as required by the resource consent. The weather station is located on the neighbouring farm, approximately 2km to the east of the plant. Data is logged at 10 minute frequencies and daily data is telemetered to the Synlait automation system.
- 19 Only one complaint has been received relating to air discharges. In December 2012 there was a small fire in Dryer 1 which caused a neighbour to enquire about the odour. There have been no complaints related to normal operation under the resource consent. This was a very abnormal event.
- 20 Each year in September Synlait provide to ECan an Annual Environmental Report. This report includes all data required to be submitted to ECan under all resource consents held by Synlait, along with commentary on performance, continuous improvement initiatives and any compliance risks that may be anticipated. The data supplied for the air discharges is:

20.1 Coal records and sampling results

20.2 Summary of the annual stack testing results

20.3 Boiler servicing reports

20.4 Weather station data

20.5 Any complaints received.

- 21 Compliance monitoring visits have been undertaken on a mostly annual basis, although the most recent visit was in 2013. ECan compliance reports confirm we are operating within the conditions of our air discharge consent.
- 22 While our resource consent to discharge to air has a long duration, having security in the ability to renew the consent on appropriate terms is critically important to Synlait. Having been operating for only 8 years we haven't yet had to renew resource consents, although we are on our third round of resource consents for the progressive development of the site.