NSW GOVERNMENT | Environment, Climate Change & Water

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Our reference: LIC07/518-07 DOC11/28090
Contact: Chris Burton, 02 6022 0609

The Team Leader, Industry
Major Projects Assessment
Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Andrew Hartcher

Dear Ms Greenway

Re Cargill Beef Abattoir – Additional Irrigation Area (DA No.220-07-2002-i MOD 5)

I refer to your letter dated 9 June 2011 seeking a submission from the Office of Environment and Heritage (OEH) in relation to an additional wastewater irrigation area to be utilised for the disposal of effluent from the Cargill Australia Limited abattoir in Wagga Wagga.

We have reviewed the Environmental Assessment Report (EAR) dated May 2011 and are able to support the proposal subject to the implementation of the measures outlined in the EAR in conjunction with the Waste Water Irrigation Plan. If the modification is approved the Environment Protection Licence will need to be varied to include the additional irrigation area. The current licence conditions are sufficient to regulate the proposed activity and no additional conditions are proposed.

In reviewing the Environmental Assessment Report we have identified some areas that will require careful management to ensure the proposed irrigation is sustainable and does not impact on surface and groundwater systems. These are outlined in Attachment A. Our ongoing support for the application of effluent is contingent upon careful management of these issues.

We anticipate that implementation of the proposed new anaerobic ponds, biological nutrient removal system and the capacity to discharge to sewer will significantly reduce the loading of some parameters on the proposed effluent reuse area.

The Department of Environment, Climate Change and Water is now known as the Office of Environment and Heritage, Department of Premier and Cabinet

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If you have any further enquiries about this matter please contact Chris Burton by telephoning 02 6022 0609.

Yours sincerely

BRIAN WILD 21 June 2011
Head, Albury Unit
Environment Protection and Regulation
Office of Environment and Heritage
Department of Premier and Cabinet

ATTACHMENT A

Nutrients

The proposed irrigation area will be subject to flooding at an estimated return interval of 1 year in 5 that may result in temporary waterlogging of soils. The calculated nutrient balance is based on a healthy lucerne crop with nutrient removal through the harvesting of the pasture or crop. It should be noted that these nutrient balance calculations may need to be revised should waterlogging and salinity decrease the predicted crop yield. Under these conditions sub-optimal nutrient removal may occur.

OEH recommend that soil tests are undertaken after each irrigation season to determine the available nutrients. It will be important to ensure that nitrogen and phosphorus removal by the cropping system is carefully matched to the amount applied through the application of wastewater to prevent contamination of surface and/or groundwater.

Salinity

The wastewater to be irrigated has a high concentration of salt with an average conductivity of 2,922 microSiemens per centimetre (µS/cm). Wastewater salinity will need to be very carefully managed as effluent irrigation with high concentrations of salt has been demonstrated to reduce the pasture and/or crop yield. As outlined previously this can modify the underlying assumptions of nutrient removal. We understand that opportunities to reduce sources of salt from the effluent stream are being investigated, in particular the salt content of cleaning agents.

Water Balance

To ensure that the soils do not become saturated, we recommend that soil moisture should be monitored at a frequency adequate to inform irrigation scheduling and application rates in accordance with a waste water irrigation management plan.

Odour

The irrigation of wastewater must be undertaken such that the relevant Environment Protection Licence requirements for control of odour are complied with.