

Our reference: DOC10/18136 LIC07/518-05
Contact: Chris Burton, 02 6022 0609

The Manager
Major Assessment Unit
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Attention: Ann-Maree Carruthers

Dear Mr Ritchie

Re Application to modify development consent - Cargill Australia Limited

I refer to the electronic mail received from the Department of Planning (DoP) on 28 April 2010 requesting an assessment by the Department of Environment, Climate Change and Water (DECCW) of additional information provided by Cargill Australia Limited in relation to an application to modify development consent DA No 220-07-2002-I as a result of a proposed upgrade to the effluent treatment system at their Bomen plant.

We have reviewed the additional information provided in the Addendum to the Statement of Environmental Effects and we can advise that we have no objection to the proposed modification. We have provided at Attachment 'A' for your consideration our comments on the additional information submitted, together with our recommended conditions of approval, should the Department support the modification.

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

Yours sincerely



BRIAN WILD *29 April 2010*
Head, Albury Unit
Environment Protection and Regulation

The Department of Environment and Climate Change NSW is now known as the Department of Environment, Climate Change and Water



ATTACHMENT 'A'

Effluent Irrigation - Addendum to Statement of Environmental Effects - Sections 1.3 and 3.3

The additional information provided indicates that the water quality from the upgraded effluent system will be different to that presented in the 1997 Environmental Impact Statement. The key difference is an increase in the concentration of nutrients. These nutrients can be utilised through suitable irrigation practices. Dot points 1 to 5 in section 3.3 of the addendum address our concerns in regard to effluent management at the facility.

The Department of Planning should note that the current Environment Protection Licence #2262 - available online at DECCW's Public Register at <http://www.environment.nsw.gov.au/prpoeo/licences/L2262.pdf> - contains several conditions relating to the retention of a utilisation area, effluent application and management, and the monitoring of effluent quality and various soil parameters.

DECCW considers wastewater to be a resource available for utilisation, rather than a waste requiring disposal. Effluent irrigation is encouraged by DECCW when it is safe and practicable to do so and where it provides the best environmental outcome. Wastewater should be managed such that the nutrients, organic matter and water are effectively used, and the wastewater must be applied so that the agricultural suitability of the irrigation area is maintained or improved, and not degraded.

DECCW has published environmental guidelines titled "*Use of Effluent by Irrigation*" that provide information on best management practices related to the management of effluent by irrigation. These guidelines should be used to design and operate effluent irrigation systems to reduce risks to the environment, public health and agricultural productivity.

Based on the information currently available we have no objection to the proposal by Cargill Australia Limited. In relation to the proposed modification, should the application be approved we recommend the following conditions form part of the modification in relation to the proposal to irrigate effluent.

Proposed Condition

The effluent irrigation management module of the approved Operational Environmental Management Plan (OEMP) is to be reviewed and updated. The revised module will describe the best practice effluent management which will be implemented to achieve the environmental performance objectives described in DEC's *Environmental Guidelines Use of Effluent by Irrigation* - available online at <http://www.environment.nsw.gov.au/resources/water/effguide.pdf>. The revision shall include but not necessarily be limited to:

1. description of the proposed irrigation system and associated infrastructure, location of utilisation areas etc;
2. measures to manage and/or mitigate the risk of soil degradation, erosion and the accumulation of nutrients & salts in the utilisation areas;
3. details of the crop cycling and management in the utilisation areas;
4. specification of standards and performance measures for each of the relevant
5. components of the irrigation system and effluent treatment system;
6. details of a suitable soil moisture monitoring system to ensure that effluent is not irrigated during periods when soil is at or near field capacity to minimise the risk of deep drainage of nutrients;
7. details of the frequency of analysis of wastewater, groundwater, soil and dry matter produce in order to ensure that adequate information is available each year to determine an annual nutrient and salt balance for the site and details of the trigger levels for nitrogen and phosphorus in the soil;

8. description of what measures would be implemented to ensure that the proposed system complies with the specified criteria during operations;
9. detailed description of what contingency measures would be implemented for irrigation practices on site and the treatment of effluent, such as the impacts of adverse weather conditions or the failure of the effluent treatment ponds to maintain biological conditions;
10. description of how the effectiveness of actions and measures would be monitored over time; and
11. documented procedures to ensure compliance.

Justification

To address the potential impacts associated with the change in quality of the effluent from the facility and ensure best practice effluent management to achieve the environmental performance objectives described in DEC's *Environmental Guidelines Use of Effluent by Irrigation*. Revision of the irrigation of effluent module in the OEMP would only be required in the event that irrigation was to be undertaken at the facility.

Odour - Addendum to SEE section 4 and Appendix D

We have undertaken an assessment of the odour modelling outlined in section 4 of the Addendum to the Statement of Environmental Effects (SEE) as well as Appendix D provided in support of the SEE. In summary, we consider the assessment provided in Appendix D is not suitable to determine the magnitude of the reduction in odour impacts for the following reasons.

- Irrigation can be a significant source of odour if not carefully managed. The odour assessment provided states that odour from effluent irrigation has not been included in the assessment.
- The combustion of the anaerobic gases has the potential to produce significant odours if not managed appropriately. The odour assessment states that odour from flaring of the pond gases has not been included in the assessment as it was deemed to have negligible odour impacts.
- The modelling shows contours for each of the individual sources of odour, specifically biofilter, rendering plant, waste water treatment system and cattle lairage. The reasoning for plotting each of the odour sources separately was that they had noticeably different odour character. This approach is not supported. The cumulative odour contours should be provided for a more accurate prediction of the reduction in odour.

Whilst we expect that the project, if implemented and managed appropriately, should lead to a considerable reduction in odour generated from the site, the magnitude of this reduction cannot be assessed from the information provided. Given the proposed timeframe for the development, a comprehensive odour assessment may unduly delay the project. Additionally, it is unlikely that odour modelling prior to the proposed modification will provide a reliable assessment in terms of the net improvement. DECCW have a requirement in the Environment Protection Licence for a comprehensive odour survey and assessment following the implementation of the proposed works to determine any residual odour impacts and to demonstrate compliance. If the proposed works do not adequately address the odour impacts from the facility, then additional control measures will be required.

In relation to the proposed modification, should the application be approved we recommend the following conditions form part of the modification.

Proposed Condition

In the event that offensive odours are generated from the flaring of the anaerobic pond gases then additional emission controls will be required.

Justification

We note that the gases (including reduced sulphides) produced from the anaerobic ponds will be flared. Although the SEE states that monitoring for sulphides will occur and an auto-ignition temperature minimum of 760°C maintained, it is uncertain whether significant off-site odours will be produced. We understand that a scrubbing unit (to remove sulphides) will be provided for a subsequent stage (co-generation of power) that has not been applied for at this point. Cargill advised DECCW in a meeting on 27 April 2010 that if offensive odours are produced from the flaring of the pond gases then additional control devices would be installed.

Proposed Condition

In the event that offensive odours are generated from the irrigation of effluent then irrigation must cease and alternative disposal methods must be implemented.

Justification

Previous irrigation operations at the facility resulted in significant odour impacts at the neighbouring residential properties. Alternate disposal methods need to be maintained in the event that offensive odours are generated through the irrigation of effluent.