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Sent: Thursday, 23 July 2015 12:02 p.m.
To: Howard Alchin
Cc: Drewitt, Tess; brian.mills@beca.com
Subject: Caucasusing comments to Taha Hearing Commissioners

Howard

The Commissioners have asked Brian and myself to give consideration to the following matters –

1. The makeup of the contingency plan for the management of ammonia emissions during the drying out phase of Ouvea Premix following flooding of the site with particular reference to emissions beyond the site.
2. If the potential ammonia emissions resulting from the drying out phase of Ouvea Premix following flooding of the site should be further defined by additional testing and modelling.

Below is an agreed position on these matters.

1. Contingency Plan (no change)

In the comments submitted to the Commissioners on 16 July, I provided comments on the general nature of a contingency plan to manage ammonia gas following an event where material gets wet (including flooding). Our agreed suggestion is that the Commissioners, as a condition of consent, require the Applicant to submit a contingency plan, which could be incorporated into Section 4.3 of the proposed Flood Protection Plan. In addition to the post-flood tasks in the Flood Protection Plan, the contingency plan would include details regarding:

- Monitoring approach and frequency, including responsibilities, monitoring equipment and monitoring sites.
- Trigger points where response is required based on workplace exposure standards and 50% toxic endpoint
- Response plan for where indoor trigger points are met, including advising emergency services, ventilation and onsite evacuation
- Response plan for where outside trigger points are met, including communications with nearby residents to stay indoors or evacuate, and consideration of removing and/or drying material where safe to do so.

2. Further testing of ammonia gas discharges during drying out phase

In the HIRA Report, I assessed the potential ammonia gas discharges during the drying out phase following a flood. Mr Mills and I agree that the assumptions used in the HIRA report are conservative and the experiments used appear to align with the majority of the literature. Ammonia will be produced as the bags dry out and one paper, as identified by Mr Mills, indicates there could be a potential increase in the ammonia release rate after 100 hours. As part of preparing the Contingency Plan it was agreed that some further bottle testing should be undertaken with a selection of at least 3 different batches of Ouvea Premix (about 500g) in a jar with water to form a slurry and ammonia levels in the headspace tested over a longer interval, eg. approx. 48hrs, 96hrs, 144hrs, 192hrs and 240hrs. This is to check if there is an increase in emission rates beyond 50 hours and to factor this in to the Contingency Plan. It was agreed that further dispersion modelling is not required and this testing is another precautionary measure.

Regards

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