15 September 2017

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ToxFree Australia Pty Ltd
40 Christie Street
St Marys
NSW

Attention: Jesse Brown

Dear Jesse

Toxfree AAN Plant - Air Quality Impact Assessment
Additional Information Request

Thank you for forwarding the correspondence received from NSW EPA regarding the Air Quality Impact Assessment (AQIA) prepared by SLR for the proposed Acid-Alkali Neutralisation (AAN) Plant at your St Marys site (Report No 610.16735-R02', dated 12 June 2017).

We note that EPA has provided two recommendations based on their review of the AQIA:

1. *The proponent provide information to demonstrate compliance with the Clean Air Regulation. This could include:*

    a. Emission guarantees or manufacturers specifications to demonstrate compliance with the Clean Air Regulation;

    b. The nomination of an emission limit, that the emission controls will achieve, and will meet the Clean Air Regulation;

2 *Revise the Air Quality Impact Assessment to demonstrate that the proposal can be designed and operated to comply with the ground level concentrations for chlorine at or beyond the site boundary, based on a proposed concentration limit.*

Item 1 is to be addressed by Toxfree.

In relation to Item 2, the maximum allowable mass emission limit to ensure compliance with the 1-hour average criterion for chlorine at the site boundary is given on page 29 as 0.04 g/s (0.15 kg/hr). Downwind concentrations are proportional to the mass emission rate, hence this limit was derived by scaling the modelled emission rate by the ratio of the assessment criterion divided by the maximum predicted off-site concentration, as follows:

Emission rate limit = *0.543 g/s modelled x (50 µg/m^3 limit) / (665 µg/m^3 predicted)*

= *0.041 g/s*

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To convert this mass emission rate into a concentration, it needs to be divided by the stack gas flowrate, as follows:

Normalised flowrate = *velocity (m/s) x cross-sectional area (m^2) x 273 (K)/stack temp (K)*
= *10 m/s x pi x (0.065 m / 2)^2 x 273/333*
= *0.027 Nm^3/s*

Concentration limit = *0.041 g/s / 0.027 Nm^3/s*
= *1.50 g/m^3*

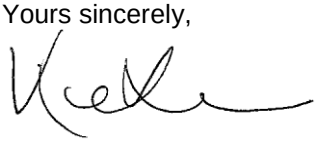
Thus the in-stack concentration equivalent to the maximum allowable emission rate of 0.041 g/s would be 1.5 g/m^3, or 1,500 mg/Nm^3.

A summary of the stack emission data for the discharge point is provided below.

- Stack height 15 m
- Stack diameter 0.065 m
- Gas velocity 10 m
- Gas temperature 60°C
- Maximum allowable Cl_2 mass emission rate 0.041 g/s
- Maximum allowable Cl_2 concentration 1,500 mg/Nm^3
- Maximum estimated SO_2 mass emission rate 0.245 g/s
- Maximum estimated SO_2 concentration 9.0 g/Nm^3

We trust the above information provides the data required to complete the DA assessment process.

Yours sincerely,



KIRSTEN LAWRENCE
Principal – Air Quality