



Our reference: SF16/21988, DOC17/362364

Manager Industry Assessment
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Susan Fox

Dear Sir/Madam

ToxFree Australia Pty Ltd 40 Christie Street St Marys
Modification of an Existing Activity - Acid Alkali Neutralisation Plant - MP06_0095 MOD3.

I refer to your correspondence dated 14 June 2017 and the attached document 'Acid Alkali Neutralisation Plant Air Quality Impact Assessment, Report No 610.16735-R02', dated 12 June 2017 prepared by SLR Global Environmental Solutions.

The EPA has reviewed the information provided and provides the following comments in relation to the proposed modification of the existing activity at 40 Christie Street St Marys NSW. The site holds an environment protection licence, No. 12628, issued by the EPA.

The EPA notes the assessment:

- Assesses discharges of sulphur dioxide (SO₂) and chlorine (Cl₂) from the process;
- Estimates emissions based on assumptions relating to the chemical reactions between the acid and alkaline solutions utilised as inputs into the process and an assumed control efficiency of the proposed wet scrubber of 99%;
- States that *"At the time of writing this report, the scrubber design has not been finalised, however based on the preliminary design estimated provided by Toxfree, it has been assumed for the purpose of this AQIA that the scrubber will operate at a minimum of 99%";*
- Predicts ground level concentrations for SO₂ and Cl₂ utilising the Calpuff dispersion model;
- Predicts ground level concentration for Chlorine above the impact assessment criteria beyond the site boundary. As per the Approved Methods for Modelling and Assessment of Air Pollutants in NSW, the impact assessment criteria apply at and beyond the site boundary;
- Does not predict ground level concentrations for SO₂ above the impact assessment criteria at receptors assessed;
- Does not provide a detailed demonstration that the proposal will meet the prescribed concentrations contained in the *Protection of the Environment Operations (Clean Air) Regulation 2010* (the Clean Air Regulation). Based on the estimated emission rates and discharge parameters presented in the assessment, the discharge concentration for

Chlorine maybe above the prescribed concentrations contained in the Clean Air Regulation; and

- Recommends *“that the chlorine gas released into atmosphere from the ANN process is subjected to additional treatment before or after wet scrubber treatment”*.

The EPA considers that:

- There is likely to be some conservativeness in the emission estimation, as it is assumed that complete reaction occurs between the process inputs, which may not necessarily happen in reality; and
- There is uncertainty with the proposal in complying with the Clean Air Regulation and the impact assessment criteria for chlorine.

The EPA advises that:

- Information is required to demonstrate that the proposal can be designed and operated to:
 - a. Comply with the prescribed concentrations contained in the Clean Air Regulation;
 - b. Comply with the impact assessment criteria for chlorine at or beyond the site boundary.

Based on the EPA's assessment of the information provided the EPA recommends:

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.

If you require further information regarding this matter, please contact Jeevan Jacob on 02 9995 5902.

Yours sincerely



Mark Carey
A/Head Hazardous Materials

2 July 2017