



DOC21/563579-13

Ms Katelyn Symington
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Dear Ms Symington

SSD-8304 – Liquid Waste Treatment Facility
DGL Group Limited (formerly Hydromet Corporation Pty Ltd) – Unanderra Plant

I refer to your email and attached Environmental Impact Statement (EIS) to the Environment Protection Authority (EPA) on 7 July 2021, inviting comments on the above development application. The application refers to the construction of a proposed new liquid waste treatment plant at the existing DGL Group Limited (DGL) Five Islands Road, Unanderra facility. The EPA regulates the activities at the premises through Environment Protection Licence (EPL) number 5874.

The EPA has undertaken a review of the EIS and provides comments in the attachment to this letter (**Attachment A**) to assist the Department of Planning, Industry and Environment in the assessment of the proposal. These comments relate to Air Quality. The EPA may also have further comments upon receipt and review of any requested information.

If you have questions regarding the above, please phone Matt Fuller on (02) 4224 4100.

Yours sincerely

03.08.2021

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ATTACHMENT A

AIR QUALITY

Additional Information Required Regarding the Emissions Inventory.

An annual quantity of 6,500tpa of Spent Pickle Liquor (SPL) and 2,000tpa of waste caustic is proposed to be received and treated through the LWTP. The SPL and caustic will be sourced from the aluminium extrusion and galvanizing industries. It is noted in Section 4.4.5 of the EIS (DOC21/563579-1) that '*SPL and waste caustic do not have any contaminants of concern, such as heavy metals*'. However, no data was provided to support this.

In section 4.4.3 of the EIS, it is stated that: '*the solidified material from the neutralisation process is composed of a mixture of iron hydroxide (Fe(OH)₂) and calcium sulphate (CaSO₄), commonly referred to as gypsum. The liquid component is a concentrated salt solution of calcium chloride*'. No data has been provided to support this and there is no discussion regarding the possibility that the solidified material contains any other hazardous materials or pollutants of concern.

The waste liquid being treated through the LWTP is sourced from metal processing and related industries, including the Battery Recycling Plant (BRP). It is therefore feasible that dissolved metals, including hazardous (Type 1 and Type 2) metals may be present in both solid and liquid (dissolved in solution) form in the waste liquid. As such, there is a risk these pollutants may be released to air via the kiln dryer. However, the potential for hazardous metals has not been assessed.

The AQIA has included an assessment of Mercury emissions from the premises, by assuming that emissions are 10% of the Protection of the Environment Operations (POEO) (Clean Air) Regulation emission limits. However, there is no justification for the assumed emission concentration. Further, there is no discussion as to why Mercury has been considered, and other hazardous metals have not been.

EPA considers more detailed characterisation of the potential air emissions from the kiln dryer is required. Adequate justification must be provided to support the pollutants assessed and the adopted emission rates.

EPA recommends the AQIA be revised to include characterisation of air emissions from the kiln dryer. Characterisation of the solid and liquid components of the pressed slurry material being processed through the rotary kiln dryer is required to support the adopted emissions inventory used in the assessment.

Adopted Control Efficiency for the Cyclone is Unjustified

In Section 6.2.3.2 of the AQIA it is stated that the cyclone, which will be used to control emissions from the kiln dryer, is assumed to meet at least 90% control efficiency of the POEO (Clean Air) Regulation limits for assessed pollutants.

Cyclones are predominantly used to control dust emissions. Whilst EPA recognises a 90% efficiency may be achievable for particles (noting overall efficiency will be determined based on the particle characteristics and flow rates), it is unlikely that a cyclone would achieve such high removal efficiencies for gaseous pollutants and aerosols, such as NO₂, H₂SO₄, Pb, Hg and HCl. The proponent should provide further justification regarding the adopted control efficiency and associated emission rates for these pollutants.

Whilst EPA may consider it reasonable for the project to assess emissions at the regulatory worst case (at the Clean Air Regulation limits), it is noted that a further 90% reduction in these emissions is proposed, which no longer represents regulatory worst case. Typically, it is recommended that sources are modelled at licence limits, or at concentrations that could be adopted as licence limits. EPA seeks confirmation that the pollutant concentrations assessed are at the proposed licence limits.

EPA recommends further justification for all pollutant emission concentrations adopted in the assessment be provided in a revised assessment. It should be confirmed that the

assessed emission rates are achievable and can be applied as emission limits in the site's environment protection licence.

Potential for Impacts Have Not Been Adequately Assessed

Table 7-3 presents the predicted dispersion modelling results at assessed residential receptor locations. The modelling predicts minor incremental impacts at these locations. However, impacts at the swim-school (McKeon's Swim Centre), located <200m from the site, on the adjacent corner lot (Corner of Marley Place and Five Island Rd Unanderra), were not explicitly provided. Due to the nature of the activities undertaken and materials handled at the DGL premises, EPA considers the swim-school should be recognised as a community sensitive receptor and tabulated impacts at this receptor be provided.

Furthermore, it is noted that Table 7-3 and associated Figure 7-9, lists the impact assessment criterion for lead as $0.5 \mu\text{g}/\text{m}^3$ at 1-hour average, rather than annual. Whilst it is likely a typographical error, and it is recognised that a 1-hour criterion presents a more conservative approach, for complete transparency it should be corrected in the revised assessment.

EPA recommends the AQIA be revised to;

- 1) Consider potential for ground level impacts at the swim-school (McKeon's Swim Centre) located on the corner of Marley Place and Five Island Rd, Unanderra.**
- 2) Address identified inconsistencies between the AQIA and Approved Methods for the Modelling and Assessment of Air Pollutants in NSW in regards to correct averaging periods for assessing impacts of lead emissions.**