NSW GOVERNMENT | Department of Primary Industries

OUT16/33934

Ms Kate Masters
Industry Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

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Dear Ms Masters

Former Hydro Aluminium Smelter, Kurri Kurri – Demolition and Remediation (SSD 6666)
Comment on the Environmental Impact Statement

I refer to your email of 8 August 2016 to the Department of Primary Industries (DPI) in respect to the above matter. Comment has been sought from relevant divisions of DPI. Views were also sort from NSW Department of Industry - Lands that are now a division of the broader Department and no longer within NSW DPI.
Any further referrals to DPI can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

The Department has reviewed the application and accompanying Environmental Impact Statement, and in general the hydrogeological information and assessment could be improved. DPI provides the following recommendations:

- The proponent should provide an updated detailed report prepared by a suitably qualified hydrogeologist describing prior hydrogeological investigations and the hydrogeology. The report should enable an understanding of the three-dimensional conceptual geology and hydrogeology of the site and its vicinity including at all receptor locations.

- The proponent should provide details about any prior drilling on site including the groundwater monitoring wells. This would include their surveyed location, bore logs and bore construction details.

- The proponent should provide groundwater contour maps for any shallow or deep aquifers showing the groundwater table elevation and flow directions in the vicinity of the site.

- The proponent should provide a location map indicating all hydrological features in the vicinity of the site as well as showing potentially impacted users of water at all receptor locations. Water quality data to be provided for all water bodies and streams or wetlands.

- The proponent should provide information about any pumping tests conducted on site.

- The proponent should provide information about any groundwater modelling conducted for the site and independent reviews of any such modelling work.

- The proponent should prepare a map showing the locations of all groundwater dependent ecosystems in the vicinity of the site.

- The proponent should provide a detailed map of all areas that will be used for temporary stockpiling of contaminated soils or materials and detail the measures that will be taken to ensure contamination or leachate spread will not be occurring from these areas.

- The proponent should provide additional detailed information about the groundwater and surface water monitoring strategy, including post remediation, in a detailed Surface Water and Groundwater Monitoring Plan that has identified and detailed Trigger Action Response Bores and Criteria. Identify further downgradient borehole locations and drill and construct clustered wells. Drill additional suitably constructed bores at AEC sites and/or identify existing bores and implement monitoring to gauge the success of remediation works.

- The proponent should provide a clearer and legible version of Figure 3 – Smelter Layout Showing AEC and PAECs. Provide additional information about the methodology and justification used in selecting the sites described in the Key Legend as being the only potential or actual sites of contamination.

- Further detailed comment on additional information required with respect to the SEARs is provided at **Attachment A**.

DPI recommends a meeting be held between DPI Water, the proponent and their groundwater consultant and the EPA, to discuss relevant groundwater issues highlighted in this submission and to facilitate the development of an appropriate monitoring/management strategy for the site, before the revised information is prepared. Should a meeting be required a DPI Water Hydrogeologist will be made available.

Should you require further information please contact Brendan Mee, Water Regulation Officer on (02) 4904 2524 or Brendan.mee@dpi.nsw.gov.au.

Yours sincerely

Mitchell Isaacs
Director, Planning Policy & Assessment Advice
16 September 2016

Attachment A

Former Hydro Aluminium Smelter, Kurri Kurri – Demolition and Remediation (SSD 6666)
Comment on the Environmental Impact Statement
SEARs Requirements

SEARS Requirements	DPI Response
2. Waste Containment Cell	
● detail the long term monitoring program for the contaminant cell and should the contaminant cell show signs of failure how this will be appropriately managed including any emergency procedures;	Proponentshould provide further detail regarding existing and proposed monitoring program. Consultation with DPI Water and the EPA recommended.
9. Soil and Water including:	
● an assessment of the potential soil, groundwater and surface water and flooding impacts on all phases of the proposal;	Hydrogeological and hydrological detail is insufficient. Proponent should provide further detail regarding existing and proposed monitoring program. Consultation with DPI Water and the EPA recommended.
● detailed baseline groundwater and surface water data and modelling of the potential surface water and groundwater impacts of the proposal;	Hydrogeological and hydrological detail should be improved. Some baseline groundwater and surface water data was provided for certain areas in the vicinity of AECs but no independently reviewed modelling was provided for the entire site and its receptors. A fluoride plume was modelled however assumptions about the hydrogeological conceptual model were merely stated without justification.
● identification of any water licensing requirements or other approvals under the Water Act 1912 and/or the Water Management Act 2000;	Uncertainty about dams intercepting a water table and therefore functioning as an evaporative sink that would require licensing. Proponent to clarify
● details of water supply;	Satisfied.
● a detailed water balance (including quantity, quality and source(s)) for the development, outlining the measures to minimise water use and any potential for a sustainable water supply;	Further information should be provided about quantity and quality of water to be used. Analysis should be performed to estimate volumes of rainfall runoff, evapotranspiration and infiltration recharge.
● erosion, sediment, stormwater and wastewater management and controls during all phases of the proposal;	Satisfied.
● consideration of any watercourses and impacts on groundwater dependent ecosystems; and	Proponent should provide details about hydrology and nearby receptor GDE sites.
● wastewater predictions, and the measures that would be implemented to treat, reuse and/or dispose of this water.	Generally satisfied. More detail required regarding Trigger Action Response Plans for exceedances in treated water discharge into north dam.

End Attachment A