

APPENDIX L4

EROSION ON THE SITE POST CLOSURE (LETTER)

ANGAS PROCESSING FACILITY

MISCELLANEOUS PURPOSES LICENSE APPLICATION

2019/0826



ABN | 67 062 576 238

Unit 7 / 202-208 Glen Osmond Road | Fullarton SA 5063

20 November 2014

Matthew Daniel
Environment & Community Superintendent
Terramin Angas Zinc Mine
Callington Rd
Strathalbyn SA 5255

Project No. 42657847

Dear Matthew,

Erosion on the site Terramin Angas Zinc Mine - Post Closure

Further to recent discussion regarding the erosion of the surface material on the site post closure, URS provides the following summary of the future erosion management.

1 REFERENCE MATERIAL

The comments made in this letter are based on the information and/or conclusions in the following reports and also the site inspections undertaken during the capping investigation in 2013.

“Geotechnical Assessment of the Box Cutting” 23rd March 2012 by Parsons Brinckerhoff (PB) – *reference 1*
“Geotechnical Investigations for TSF Capping” 19th November 2013 by URS – *reference 2*
“Soil and Construction” (Blue Book) March 2014 by Landcom, New South Wales Government - *reference 3*
“Landscape Function Analysis –Procedures for monitoring and assessing landscapes” February 2005 by CSIRO – *reference 4*

2 EXISTING EROSION ON THE SITE

As observed in the site inspections undertaken in 2013, there is significant erosion on a number of the mainly non vegetated batters across the site like the box cut area. These batters have no vegetation and the current slope of the box cut is approximately 1 to 1.3.

The batters within the box cut have been assessed (see *reference 1* above) and are considered “stable against a deep seated failure at the time inspection, further erosion and small scale slip surface failures may cause instability problems in the future”.

The downstream batter on the TSF is well vegetated and or mulched and only has minor localised erosion. These batters are currently at 1 to 2 on the TSF.

3 EROSION MANAGEMENT INCLUDE IN THE CLOSURE LANDFORM

The closure design for the site is based on the following guidelines that consider erosion management measures:



- Batters across the site will be flatted to a maximum of 1 in 3, often significantly flatter as the TSF wall and the box cut are the major source of the capping material (*reference 2*);
- Batter lengths to be less than 80 metres (*reference 3*)
- Batters will be vegetated with locally sourced grasses and plants
- Regular maintenance of the vegetation and surface soils during the establishment period (*reference 4*)

4 SUMMARY

Based on the design guidelines and ongoing maintenance set out above, this should establish an area of low erosion potential. The site may experience minor localised erosion at times, no different to the surrounding local landscape in the long term.

Yours sincerely
URS Australia Pty Ltd

Andrew Piggin
Principal Civil Engineer

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