APPENDIX M9

STABILITY OF TSF EMBANKMENT 2008

ANGAS PROCESSING FACILITY

MISCELLANEOUS PURPOSES LICENSE APPLICATION 2019/0826

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Our Ref: 105032.02-005r1.doc

25 August 2008

Terramin Australia Limited
Level 22 Westpac House
91 King William Street
ADELAIDE SA 5000

Attention: John Burgess

Dear John,

RE: ANGAS ZINC MINE TAILINGS STORAGE FACILITY
STABILITY OF EMBANKMENT

1 INTRODUCTION

This letter has been prepared in response to your email of 22 August 2008 and attached information.

The essential question is the likely effect on stability of the dam, of rainfall runoff which is ponding at locations near the toe of the recently completed tailings dam.

2 INVESTIGATION & DESIGN

The Angus Tailings Storage Facility (TSF) was designed by Australian Tailings Consultants, and the design is fully documented in our design report: "Tailings Storage Facility, Detailed Design, Angas Zinc Mine, Strathalbyn, SA; Ref 105032R06 Rev 2, December 2006".

Issues of embankment stability are covered in Section 9 of this report and we highlight the following:

1) The strength values for the embankment and foundation materials which were used in the analysis are based on tests carried out on saturated samples.

2) The design included a specific check on the case where the embankment and foundation were both fully saturated (assumed to be a result of a major leak in the lining).

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3 MONITORING RESULTS

A total of six monitoring bores (standpipe piezometers) have been installed in the completed TSF embankment. These are all dry, indicating there is no build-up of elevated water pressure in the embankment.

In addition, there are four groundwater monitoring bores (TSF A, B, C & D) located near the toe of the embankment. The depth to the water table is being measured by Terramin at intervals of 2 weeks. The most recent measurements show that the aquifer level is at a depth of 6.3 m below ground level at the toe of the dam.

This indicates that the surface water near the toe is ponding on near surface, low permeability clay soils, but that the foundations are not fully saturated.

5 DISCUSSION

To summarise:

1) The design was based on strengths derived from testing of saturated materials.

2) A design check was made for the case of a fully saturated embankment and foundations.

3) Embankment monitoring results indicate that there is no water table in the embankment.

4) The groundwater level is at least 6m below the surface at the toe of the embankment.

We conclude that the surface water does not constitute a threat to the structural integrity of the tailings dam embankment.

Please contact us if you require further information in this matter.

Yours faithfully,

KEITH SEDDON
AUSTRALIAN TAILINGS CONSULTANTS