

Mr Bryan Baker
Assessment Officer
Environment Heritage and the Arts
Dept of NRETAS

Cc Mr Matt Darcey

Subject: Redbank EIS Supplement, Further Information Request

Dear Bryan,

Please accept this letter of response regarding the request for further information on the Redbank EIS Supplement as the final response and summary of responses provided.

The following is a list of the information supplied;

- A current Hydrogeology Report has been submitted and copies provided to DRDPIFR and DEWHA.
- A letter of explanation regarding environmental offset plans and associated draft Management Plans or Impact Assessment and Monitoring Proposals for the 4 EPBC Act listed species was provided to DEWHA (cced to you). These were sent after a teleconference with the DEWHA Assessment Officers at which we presented our plans and explained the approach we were taking.
- The following page and associated spreadsheet provides a response from our metallurgist and project geologist regarding the request for further information about potentially “non-acidic environmentally significant concentrations of dissolved salts or metals”.
- In addition to these documents supplied I offer the following 4 comments;
 1. The proposed locations of certain new EMB’s has been provided but most will be determined after further geophysical work and geological interpretations early this dry season. This will be aided by the results of the pit water treatment and reduction program as the pit water level has not yet reduced to the level at which significant information can be determined. (due to the lengthy WDL process delaying the start date)
 2. The site evaporation tests failed as staff were reallocated to more urgent site management, maintenance and water treatment tasks.
 3. Seepage rates from the TSF have not been able to be determined and plans to establish systems to understand this are progressing. Part of our desire to prevent further contamination of this facility is due to the yet unknown nature of the seepage. Discussions with the project geologist and hydrogeologist to determine the most effective way of determining this are underway.

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4. By overburden facility we presume you mean the existing WRD. Seepage quality has been reported on - as it appears to be the main source of sulphidic and acid producing material on site – or at least one part of it is. Seepage rates have not been determined and are not planned to be investigated as this material will be required to be moved and either treated or managed elsewhere.

No further documents or comments are intended to be supplied in response to the information request.

I hope that this information is sufficient for you to finalise the assessment of this proposal.

Thanks and yours faithfully



Ray Hall
Principal
VDM Consulting - EcOz

Wednesday, 10 March 2010

“Mine drainage does not have to be acidic to contain environmentally significant concentrations of dissolved metals or salts. The test results of oxide waste rock from the proposed oxide pits are to also indicate the potential and proposed management (if potential exists) for neutral drainage of minerals and salts.”

Oxidation by its very nature effectively changes the rock to its most neutral and non-reactive state, as all the chemical processes that are able to occur have taken place at the point of complete oxidation. The lack of any evidence of sulphur as identified by the 2500 xrf samples suggests that complete oxidation has occurred.

The ability for neutral waters to mobilise metals is extremely low. However, under certain extreme conditions residual cations and salts (if present) can possibly be mobilised if things like groundwater or soaking runoff are introduced to the material.

The historic mining activities at Redbank pit resulted in the deposition of oxide waste material from open pit mining and underground adit constructions that cover an area of approximately 3 hectares. This historic mining resulted in only the highest grades of ore being sorted and removed from site, leaving a significant amount of material that would today be described as ore. These historical activities lie within 300 and 500 metres upstream of Redbank Creek within an obvious ephemeral drainage channel.

If we examine the water quality data from samples collected from Redbank Creek and compare them with the major off site reference sample site (7 Mile creek) (please see associated spreadsheet entitled “comparable data from reference sites) we can see that the common metals in the region, Copper and Aluminium regularly breach the ANZECC guideline limits in Redbank Creek more so than 7 Mile Creek. These exceedances are minimal and peak at 6 times the limit and always remain within the acceptable human drinking water guidelines.

The major potential issues regarding this topic are the cations, anions and sulfate levels and they can be seen to be in the highest concentrations in 7 Mile Creek and exceeding those in Redbank Creek.

Redbank have committed to ongoing laboratory testing of areas within and surrounding the orebodies prior to mining to ensure that there is no widespread or isolated potential for acid generating material to be placed within the waste dumps. These laboratory tests will also now include metals leaching potential with distilled water at pH between 6.5 and 7.0 as well as the standard pH 2.0 acid tests. Full laboratory analysis of the results including major anions and cations will be recorded and used to ensure we are aware of the potential for contaminants resulting from neutral drainage and if required we can determine management actions prior to the disturbance of the material.