

DATE: 1 NOVEMBER 2016

OUR REF: 16_115

CAROL MULLER

DEPARTMENT OF ENVIRONMENT AND HERITAGE PROTECTION

445 FLINDERS STREET

TOWNSVILLE CITY QLD 4810

RE: REPORT ON COMPLETION OF INTERIM EARTHWORKS - TEP MAN17020

Dear Carol,

I refer to the amended Transitional Environmental Program (TEP) MAN17020 approved by the Department of Environment and Heritage Protection (EHP) and issued to the Mt Windsor Joint Venture partners of Thalanga Copper Mines Pty Ltd (MWJV) on 19 October 2016. As part of the amended TEP, the MWJV committed to the installation of interim earthworks measures by 1 November 2016 to treat or capture all water on site and prevent a release to Environmental Authority (EA) monitoring location SW6.

Northern Resource Consultants (NRC) have prepared this letter on behalf of the MWJV to satisfy the reporting requirements as per the commitments contained in Table 4 of the approved TEP, which indicates that a report will be provided to EHP by 15 November 2016 for the completion of TEP action 1.1.

Details of works undertaken – TEP action 1.1

The MWJV engaged GA Services (an earthworks contractor) to undertake the required earthworks at the Highway Reward Site under TEP action 1.1. Earthworks were carried out on site from 28 October and were completed by 1 November 2016. To ensure compliance with the TEP and general environmental obligations, NRC supervised earthworks contractors for the duration of the works.

As per the letter sent to EHP on 6 October 2016, the earthworks involved the diversion of the main drain to the historic tailings facility, which will act as an interim evaporative basin and which is expected to store and evaporate water for a maximum of 24 months. This was achieved by breaching the historic tailings dam wall and installing a bund to prevent the flow of water off site towards SW6. The location of the breach in the wall was lined with lime rock, which will act as a treatment mechanism to neutralise the pH in water runoff from the site to the interim evaporative basin.

The addition of lime to treat water is a widely-used practice within the mining industry to neutralise pH and improve water quality for release and to decrease environmental impacts. When compared with neutral natural waters, acidic water can contain significantly higher concentrations of a number of trace elements such as zinc, copper, arsenic and cadmium. Neutralising acidic waters results in precipitation of most of these trace elements including copper. Limestone (CaCO_3) is readily soluble and is found in the environment naturally. Its high solubility ensures that it quickly reacts with water upon contact and raises the pH value.

The eastern wall of the historic tailings dam had been previously breached. As part of the interim works, GA Services reinstated the wall to ensure no runoff from the evaporative basin could be released to the receiving environment. Figure 1 shows a conceptual representation of the works completed by 1 November 2016.



Figure 1: Representation of earthworks completed by 1 November 2016.

These works are expected to ensure water quality limits at SW6 will be achieved, as there should be no potentially contaminated water flowing to this EA monitoring location. Any water present at SW6 will be monitored in accordance with the EA. Given that there will be no drainage towards SW6, should any exceedances continue at this EA monitoring location the MWJV will investigate potential causes. If required, remediation can be undertaken through the removal of potentially contaminated sediments, which may have accumulated at the location from previous drainage from the site towards SW6.

Attachment A of this letter includes a series of photographs that show the completion of TEP interim works as per action 1 of Table 4, including the stockpile of lime for use in additional works.

Should you have any questions or concerns regarding the content of this letter please feel free to contact Marty Costello of Northern Resource Consultants on (07) 4772 6500.

Sincerely,

Marty Costello

Principal Environmental Scientist

For and on behalf of the Mount Windsor Joint Venture

Attachment A - Photographs of Completed Works



Figure 2: Completion of breach and lime rock armouring from main drainage to historic tailings storage.



Figure 3: Completion of bund installation to prevent water release offsite towards SW6.



Figure 4: Completion of earthworks to re-instate bund on eastern perimeter of historic tailings storage.



Figure 5: Lime stockpiles on site for use in additional earthworks.

