

24 November 2014

Cassiar Gold Corp.
China Minerals Mining Corporation
Suite 1100 – 1111 Melville Street
Vancouver, BC V6E 3V6

Attn: Ms. Patricia Fong

**Re: Cassiar Gold Mine
Independent Third Party Review of Dam Safety Inspection**

Dear Ms. Fong:

1. INTRODUCTION

This letter presents the observations and conclusions of a third party review of the dam safety inspection (DSI) of the Cassiar Gold Mine. The review was carried out in accordance with your e-mail authorization of 14 November, 2014. The third party review was mandated by the British Columbia Ministry of Energy and Mines, Chief Inspector's Orders, dated August 18, 2014, which stipulated that a DSI be carried out to cover all dam structures for all tailings storage facilities in British Columbia, and that the DSI must be reviewed by an independent qualified engineer from a firm that has not been associated with the tailings dam. The Independent Third Party Review must include a review of the dam consequence classification.

The DSI of the Cassiar tailings dam was carried out by Tetra Tech EBA, dated 21 November 2014. This third party review is based on that DSI, and the most recent previous Dam Safety Inspection that was carried out by Knight Piésold (2009). No site visit was made for the third party review.

2. BACKGROUND

Cassiar Gold Mine (formerly Table Mountain Gold Mine) is located about two kilometres southwest of Jade City, BC adjacent to the Stewart Cassiar Highway. It last operated in 1997 and has been in care and maintenance since then.

There are two tailings storage facilities at the site (TSF1 and TSF2). Slurry tailing was contained within generally rectangular earthfill embankments.

TSF1 was the original tailings facility for the Table Mountain Mine, formally known as Erickson Gold Mine. This facility was developed to its final configuration in 1987 and the design and construction were certified by R.C. Dick, P.Eng. TSF1 is essentially a ring dyke forming a circular enclosure.

TSF2 was designed and constructed in three phases, with design and specifications provided by Knight

Piésold. Phase 1 was constructed in October and November, 1993 to an elevation of 942.5 m. Phase 2 was raised in March and April, 1996 to at an approximate elevation of 943.5m. Phase 3 of TSF2 was constructed in September and October, 1997. Knight Piésold inspected all three phases and certified for discharge of tailings. Very little tailing was deposited into TSF2 Phase 3, as the mine has been inactive since the raise was completed.

The site is presently in care and maintenance mode. No regular monitoring or water sampling is being carried out.

3. 2014 DAM SAFETY INSPECTION

Richard Trimble and Justin Pigage of Tetra Tech EBA visited the site on October 28, 2014 to undertake the Dam Safety Inspection. According to photographs in the DSI, the site was snow covered at the time of the visit.

Significant findings of the 2014 DSI included:

- There was a small volume of ponded water within TSF1 hydraulically connected to a small riprap lined spillway at the east end of the facility. There was minimal flow, estimated < 2 L/s, flowing at the time of the inspection.
- There was an incomplete culvert installation at the south end of TSF1 which served no useful water management function as it was “a couple metres” higher than the existing spillway.
- An oversteep section was noted on the west side of TSF1, next to the road to the mine. It was recommended to flatten or stabilize the slope with a toe berm if TSF 1 is to be used for water impoundment in future.
- Woody vegetation was noted on the crest of TSF1 dam
- The TSF2 dams appeared to be in good condition, with no distress noted. The tailings surface was dry at the time of the site visit.
- Significant pine tree growth was noted on one section of the berm, with some trees up to 100 mm diameter.
- An existing 300 mm diameter outlet pipe in Phase 2 of TSF2 was noted to be undersized.

Knight Piésold (2009) proposed a classification of the Cassiar TSF dams of “LOW” in terms of Consequence of Failure according to the Canadian Dam Association (2007), based on the following:

- The dams have low heights (<5 metres) and store no water.
- The tailings depth is approximately 8 to 10 metres due to the excavation of embankment fill from within the basin.
- The tailings are well consolidated and not liquefiable.

- There would be no fatalities resulting from failure and minor to moderate environmental damage, mostly restricted to the owner's property.

Recommendations of the 2014 DSI included:

1. The emergency spillway at the south end of TSF1 is incomplete and the culvert materials are on site. It looks as though construction was started and then abandoned. The elevation of TSF1 base at this corner (976 m) is about two metres above the limits of ponded water (and the invert of the spillway at 974 m) so will likely not see water in the current operating condition. As noted in the 2009 inspection, this should be closed off and repaired during closure and reclamation activities.
2. Assuming that the tailings storage facilities will be used again in the future, remove woody vegetation on the crests and the top 3 m of sideslopes on both TSF1 and TSF2, ensuring that the roots are pulled out with heavy equipment. Re-compact the surface after root removal to fill in the depressions. Roots are potential conduits for uncontrolled seepage, and vegetation growth generally inhibits visual inspection. Some earthfill and compaction may be required for some of the larger trees, particularly on TSF2.
3. As suggested by Knight Piesold, the existing ~300 mm outlet pipe in Phase 2 of TSF2 is too small to be of any use for water management and should be removed prior to future operation or abandonment. If future operation is planned, a properly designed spillway should be constructed in undisturbed ground in the south abutment.
4. If future operation is planned, Phase 3 of TSF2 will also require a properly designed emergency spillway, or discharge back to Phase 2 using a combined spillway.
5. It is understood that water quality testing on the discharge from TSF1 has been completed, but this information was not provided to Tetra Tech EBA for review.

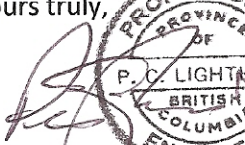

4. CONCLUSIONS AND RECOMMENDATIONS OF 3RD PARTY REVIEW

- 4.1 The 2014 DSI appears to provide a good summary of the status of the Cassiar Mine TSF1 and TSF2, and to have addressed the key issues as per the Ministry of Energy and Mines Guidelines for Annual Dam Safety Inspection Reports. Recommendations provided in the 2014 DSI are considered appropriate and should be followed.
- 4.2 The CDA consequence category of Low appears to be appropriate for these small TSF facilities. The embankments are low, and any failure would be mainly contained within the owner's property with no significant impacts.
- 4.3 The embankments as described by Tetra Tech EBA are apparently in adequate condition.
- 4.4 Future dam safety inspections could be carried out at a reduced frequency of about 3 years while the property remains in care and maintenance mode. This suggestion should be discussed with the Ministry of Energy and Mines for their approval.

5. CLOSURE

Thank you for the opportunity to undertake this 3rd party review of the Cassiar Gold Mine tailings dam DSI. I would be pleased to provide any additional information or clarification you may require.

Yours truly,


ember 24, 2014
Peter C. Lighthall, P. Eng.
Consulting Geotechnical Engineer

REFERENCES

British Columbia Ministry of Energy and Mines, August 2013. Guidelines for Annual Dam Safety Inspection Reports.

Canadian Dam Association, 2007. Dam Safety Guidelines.

Canadian Dam Association, 2014. Mining Dams Technical Bulletin.

Knight Piésold (2009). Hawthorne Gold Inc., Table Mountain Mine Tailings Storage Facilities 2009 Site Inspection and Annual Report, December 18, 2009

Tetra Tech EBA Inc., 2014c. Report on Dam Safety Inspection. Tailings Storage Facility – Cassiar Gold Mine, November 21, 2014.