



Coastwatchers

Eurobodalla's environment group

SUBMISSION TO THE NSW DEPARTMENT OF PLANNING AND
ENVIRONMENT

DARGUES REEF MINE – MODIFICATION 3 (10_0054 MOD3)

RESPONSE TO PROPONENT'S RESPONSE
TO AUGUST 2015 SUBMISSIONS

**Proponent: Big Island Mining Pty Ltd,
Majors Creek NSW**

3 January 2016

Coastwatchers Association Inc.,
PO Box 521,
Batemans Bay NSW 2536

1. COASTWATCHERS ASSOCIATION INC.

The Coastwatchers Association Inc. is an incorporated association based at Batemans Bay NSW. It represents community members in the NSW South Coast region of NSW, who have concerns about local environmental issues. The Association has successfully represented its members for 30 years.

The Association opposed the 2010 Development Application to develop the Dargues Reef mine by Big Island Mining Pty. Ltd., then a subsidiary of Cortona Resources Limited. In August 2015 the Association opposed the 'Modification 3' application by the same proponent, Big Island Mining, which was then a subsidiary of Unity Mining Pty Ltd. In turn Unity Mining Pty Ltd has recently entered into a Scheme of Arrangement with Diversified Minerals Pty Ltd, (already a significant shareholder) for Diversified Minerals to acquire all remaining Unity shares. Finalisation of this Arrangement is expected in April 2016.

This submission is the Coastwatchers response to the proponent's response to the August 2015 public submissions. The Coastwatchers continues to maintain its **OPPOSITION** to the project.

2. MODIFICATION 3

2.1 Original Modification (July 2015)

The proponent's 'Modification 3' application to the NSW Department of Planning fundamentally changed the original 2010 development approval of the project. As a result these changes, environmental risks were significantly increased. These significant changes included:

- a. The proposed introduction of on-site cyanide processing operations, creating transport, storage and handling risks, as well as environmental issues associated with the resulting contaminated concentrate of heavy metals, sludge and toxic liquid waste in the tailings dam.
- b. The size, nature and purpose of the proposed tailings dam was proposed to be changed. The size to increase by 78% from 9ha to 16ha.
- c. The disturbance area of the project to increase by 41% from 33.1 ha to 46.8 ha which included the creation of a new waste rock emplacement of approximately 6 ha.
- d. An increase in resource extraction by 33% from 1.2 to 1.6 million tonnes, over the life of the mine.
- e. A new transport crossing over Spring Creek for heavy vehicles, a new contaminated concentrate pipeline, and a new paste/fill pipeline, all of which increased environmental risks.

2.2 Amended Modification (November 2015)

In its response to public submissions in November 2015, the proponent further amended its Modification 3 proposals (another example of the moving goal posts issue). The changes are:

- a. To withdraw the use of cyanide on site, instead undertaking the final processing off-site (at Parkes NSW). This removes the need for transport, storage, use and disposal of cyanide on site, and the use of the tailings dam for the placement of cyanide leached concentrate.
- b. Maintain the size of the tailings dam at 9ha, rather than increase the size to the proposed 16 ha,
- c. Increase the life of the mine from 31 August 2018 to 31 December 2024 (inconsistencies in document)
- d. To seek formal approval to increase the size of the project site following the purchase of the 'Slings' property (approval not originally sought in Mod 3).
- e. To seek formal approval for construction and use of the Eastern Rock Emplacement (approval not originally sought in Mod 3).
- f. A "minor" increase in the total resources to be extracted. This needs clarification as it appears from the submission that the total extraction of ore over the life of the mine, remains at 1.6 million tonnes, as no new figures have been provided.
- g. The word "capacity" has been deleted and substituted with "permeability" in the standards defined in the Victorian 2004 DPI document entitled "Management of Tailings Storage Facilities". The proponent states this makes the freeboard standards consistent with those of the Dams Safety Committee of NSW. Because of the narrow time frame and Christmas close down, Coastwatchers have been unable to consult experts to confirm the implications, if any, of this proposed change.
- h. The transportation of the flotation concentrate from the mine site will be to a maximum of 30,000 tonnes per annum. The proponent's submission is inconsistent. In one part it states there will be up to 4 loads per day leaving the mine site, which amounts to 8 movements including the return trips, and in another part it states there will be up to 4 loads per hour, which would result in 112 total movements per day. A significant difference for Braidwood residents and road users between Majors Creek and Parkes.
- i. Because of the changes to the original Modification 3, aspects which were proposed to be removed by the proponent, had the original Mod 3 proceeded, are now to be retained. They include the construction and use of the already approved processing plant, concentrate loading facility, tailings storage facility, and transport

from the site to the Kings Highway using semi-trailers.

3. WEATHER STATISTICS

In its August submission, the Association questioned the accuracy of the rainfall and evaporation data used by Unity both in 2015 **AND ALSO** in the original DA in 2010. This data is critical as it forms the basis for the design and operation of the already approved tailings dam and the proposed expansion of that dam. Unity has agreed to rework the rainfall data because of the errors and the non-use of Majors Creek data. These re-workings need to be publicised for independent assessment.

The Association acknowledges the advice from the Bureau of Meteorology, that the BOM evaporation data for Braidwood was impacted by sheltering. The evaporation data needs to be reviewed by Unity and its consultants, and they need to provide that data publically, together with the methodology followed in determining their estimates, so that independent assessments can be made.

The response by Unity that this issue of data “is no longer relevant”, simply because the expansion of the tailings dam has been withdrawn, is wrong and unacceptable. The original 2010 DA contained the same faulty data, so the matter is “highly relevant”. The NSW Government has a public interest responsibility to ensure that Unity revisits all the original weather data, both rainfall and evaporation, so that the tailings dam is structurally and operationally correct and will not spill.

The consultant’s indicate they will rework the data, but it appears there will be no opportunity in the planning process for future public scrutiny of the data and results. No one wants a repeat of what happened in 2010 when the data was not publically available, and the NSW Government failed in its responsibility to identify the mistakes. The fact that a mistake occurred in 2010, and the NSW Government approved that mistake, is no justification not to revisit the original DA and reassess the original approval. If this does not happen, then the NSW Government will put itself in the position where it will have to bear legal responsibility for any adverse outcomes with the tailings dam.

4. INCONSISTENCIES IN PROPONENTS SUBMISSION

As pointed out above there are a number of inconsistencies identified in 2.2 above.

- (i) In the proponents documents it refers to the life of the mine being extended to 31 August 2022 and/or 31 December 2024. It appears the latter is correct.
- (ii) In the proponents documents it refers to a “minor” increase in the total resources to be extracted. Yet the 1.6 million tonnes figure in the original Modification 3 is still used. So what is the new “minor increase”?
- (iii) In the proponents documents it refers to both 4 truck trips passing through Braidwood an hour and alternatively 4 truck trips a day. The implications are immense for Braidwood residents, with either 8 movements (round trip) a day or 112 movements a day.

5. DENIAL OF FUNDAMENTAL PROBLEM

The principal concern of the Coastwatchers Association with the Dargues Reef mine is the integrity of the tailings dam. The Association continues to have on-going concerns that the dam could suffer catastrophic failure because of any range of possible events, from intense rainfall, poor design, poor construction, poor operation, or even a wombat. Miners claim they are immune from such incidents, but major known accidents of failures continue worldwide at the rate of 1-2 per annum. No miner is immune. Unity has already demonstrated that its tailings dam designs were based on poor data and the design aspects will need reworking. In addition, its earthworks construction record at Dargues is appalling leading to government fines. This engenders no public confidence.

The fact that there is a Spillway provided for in the design of the tailings dam, indicates by logic that the dam is expected to spill. Why have a spillway if it is impossible for the dam to spill? Unity is still to address the issue of how it will dispose of the excess water, when an event arises. It certainly will not pour it down the mineshaft as the company said, and destroy millions of dollars worth of equipment. There is only one answer, which they will not acknowledge, and that is to pour the excess into Spring Creek and the Deua Water Catchment. When a crisis arises as demonstrated at Timbarra Gold Mine at Tenterfield NSW in 2001, by the time emergency crews arrived on site with trees blocking the roads and no power, the tailings dam was empty.

The removal of cyanide does not impact in any way on these concerns. It simply removes one of the short-term toxic impacts on the environment, particularly in the immediate downstream area. As the Association pointed out in earlier submissions to the State and Commonwealth Governments, cyanide breaks down rapidly in the raw state, except when combined with heavy metals. The real danger of dam failure is the release of massive silt deposits, toxic water, heavy metals and the toxic xanthates, the flotation agents used in the tailings dam. None of these are even acknowledged by Unity. They are a company in total denial of reality.

The denial by Unity that they could never have a tailings dam failure is baseless. In the past 18 months, while this Modification 3 application was being prepared and considered, two major tailings dam failures occurred in the Americas.

The recent failure of the tailings dam in Brazil (November 2015) owned by Samarco, a jointly owned company of BHP and Vale, demonstrates the staggering damage, which can occur with a tailings dam failure. An estimated 20 people died, the village of Buento Rodrigues was wiped out, and the contents of the failed dam flowed 650 km to the Atlantic Ocean, killing everything in its path. It is still killing the marine life in the ocean. Yet BHP claims it contained no toxic material. Just lies and spin! But by comparison to Unity, at least BHP and Vale can meet the expected compensation approaching a billion \$US. Unity in the same position would no doubt go into administration the next day.

Similarly with the Mount Polley mine in Canada in August 2014, there was a failure in that tailings dam, which resulted in massive environmental damage. This disaster began with a breach of the Mount Polley copper and gold mine tailings dam because of poor operation. This released water and slurry initially into Polley

Lake and subsequently into other lakes and rivers, reaching the once pristine Quesnel Lake, the cleanest deepwater lake in the world. Mine safety experts have called the spill one of the largest environmental disasters in modern Canadian history.

The tragic consequence of Unity's denial is that they and the NSW Government have never required or carried out a detailed Environmental Impact Assessment of the likely damage to the environment between Major's Creek and the NSW coastline, in the event of a catastrophic tailings dam failure at the Dargues Reef mine. Unlike Victorian requirements, NSW does not require a lower catchment structure, to accommodate a tailings dam failure.

As a result of this non-consideration of this critical issue, there have been no Emergency Plans put in place to handle such a crisis. The water supply to the Eurobodalla Shire would be ruined and the community is still waiting to hear what alternate water supply arrangements could be put in place by the NSW Government. Those living along the Araluen and Deua Rivers could face the same consequences as the Brazilian village of Buento Rodrigues. The NSW Government cannot join Unity and sit back denying the issue, and then think about when it happens. It will be far too late, and alternate water supplies may take years to plan and construct.

In the event of a catastrophic tailings dam failure at the Dargues Reef mine, two things will likely happen. First, the company owning and operating the mine at the time will go into administration. Second, the NSW Government will find itself bearing all clean-up costs plus, legal responsibility for avoiding having this matter considered as part of the development process for this mine at each stage of the development process. Denial of a foreseeable event is no legal defense.

6. CONCLUSION

The integrity of the Tailings Dam is fundamental to the future of the Dargues Reef Mine and the downstream communities and environment. While it is too early to be concerned about the construction and operational details, the planning for the tailings dam has to be completely redone using accurate weather data, and clearly identifying the assumptions used. Then Unity has to publically demonstrate how the tailings dam will react under foreseeable stresses. The Association has no confidence in leaving this to be addressed by the proponent and NSW Government in "the future" or behind closed doors. They both failed in 2010 and are heading down the same path in 2015.

Before this matter goes to the NSW Planning and Assessment Commission, the NSW Government must insist on the proponent publically furnishing its revised workings to demonstrate that the Tailings Dam is of sound design and will not incur spillages.