

# FINGERBOARDS MINERAL SANDS PROJECT

## SUPPLEMENTARY SUBMISION CONCERNING KALBAR'S INTRODUCTION OF CENTRIFUGES POST-EES

**Michelle Barnes – March 2021**

Dear Inquiry & Advisory Committee members,

I have many concerns about Kalbar's 11<sup>th</sup> hour introduction of centrifuges to be used in substitution of a tailings dam.

Firstly, why weren't Kalbar and their team of experts able to correctly calculate their water requirements after years of preparation of information to feed into the EES? They 'realised' after the EES had already been written (the document upon which we all based our submissions) that they'd need an EXTRA 2 GL water for their ill-conceived tailings dam. This huge miscalculation gives me no faith in Kalbar's ability to do anything, let alone operate a mine safely.

I have concerns that Kalbar are suggesting centrifuges as a means to use less water in tailings processing to get the project over the line. The requirement of 5 GL is obviously a preposterous amount to be removing annually from vital Mitchell River and aquifer water supplies for Bairnsdale and district, as well for other users in the wider Gippsland region who rely on aquifers affected by Kalbar's proposal. I am concerned that if Kalbar's proposal including centrifuges is approved, they may then down the track revert to using a tailings dam in the work plan, and there will be nothing anyone can do about it, and especially not the community on which this is being imposed. The reversion to a tailings dam is possible, as the centrifuges are unproven and potentially dangerous and unworkable. They have NEVER been used for mineral sands mining before. Surely this should be a major red flag to the IAC and Minister Wynne?

Concerns about operational aspects of these unproven centrifuges include but are not limited to the points raised below:

Kalbar haven't provided realistic noise impacts due to no tailings being inside during testing and the outlets being closed. The manufacturer's noise specifications have not been made available by Kalbar, so the community hasn't been duly informed about what sort of noise impacts 6 centrifuges will have on nearby receptors. This could potentially be very stressful for residents and local fauna, especially when multiple centrifuges are operating throughout the night. Noise is used as a weapon by the military for it's very well known impacts on human health. Constant, loud,

unwanted and intrusive noise is a form of torture. People who live just inside the 5km real estate disclosure zone will be stuck with properties they can't sell, and stuck being tortured by noise every night for 20 years. This could lead to severe mental health problems and even instances of suicide. This is not acceptable.

The Glenaladale area has highly mobile erosive soils. There have been no studies about the stability and safety of multiple vibrating centrifuges in this environment. Furthermore, what impacts will centrifuges have on erosion? There is nothing about this in the EES. Kalbar haven't modeled or specified how the treated tailings cake will behave once returned to the mine void. This unstructured sludge won't perform the same water filtering functions it did pre-mining. It may be so compacted that water will just pool on top of it, causing all sorts of problems in the landscape and preventing the site from ever genuinely being 'rehabilitated'. The idea of 'rehabilitation' after open-cut mining is a joke anyway – stratigraphy can never be replaced, aquifers that took millions of years to form in the Earth's geological story can never be rebuilt. Centrifuged tailings add a new level of uncertainty to this already untenable project. If it all falls on it's face after they've already dug the pits, Kalbar will walk away scott-free, leaving permanent problems for the landscape, the rivers, the aquifers, the Gippsland Lakes, and the community to endure. Please don't let this company in to our precious Mitchell River valley.

Kalbar's centrifuged tailings require a huge increase in flocculants compared to the previous tailings dam plan. Flocculants are toxic to fish, frogs and other aquatic life. The environmental impacts of this high level of flocculants, or their likelihood of leaching into waterways and aquifers haven't been assessed in the EES. We simply can't take this risk to our environment and water security. This mine surely can't be approved with centrifuges when the only thing providing information on it's operational details, risks, environmental impacts, and mitigation measures will be a post-EES Work Plan that Kalbar don't have to release for public scrutiny. That would be an absolute travesty of science and a total betrayal of the community and the EES process.

Flocculants leaching into the Mitchell River risk contaminating crops being grown 550 meters downstream in Victoria's Food Bowl on the Lindenow flats. We can't risk poisoning millions of Victorians who eat this food. We can't risk losing thousands of viable, long-term jobs in the horticultural industry when their markets crash due to contamination caused by Kalbar's narrow, low employment interests. We can't risk flocculants making their way into the Ramsar-listed Gippsland Lakes system.

No cost-benefit analysis of using centrifuges has been done by Kalbar, even though the figures say that treating tailings by this method costs at least double the amount needed for a conventional tailings dam. Tabled Document 194, Technical Note 14, (pg 3) openly states this fact. This could end up being a very expensive exercise for Kalbar if the untested centrifuges fail in this environment, and as mentioned, there is a palpable risk of the company abandoning the mine without rehabilitating it. There are just too many risks and unknowns about this mine. The centrifuges are a frightening example of Kalbar's constantly changing goal posts.

For centrifuges to be implemented, Kalbar's electricity requirements will increase from 9,000 kVA to 14,000 kVA, having a much larger greenhouse gas emission footprint contributing to climate change. This is obviously unaccounted for in the existing EES. Big questions arise about whether our regional electricity grids are able to safely accommodate this and what the impacts will be to other users including many thousands of households, essential services and businesses. Kalbar's power hungry, untested centrifuges are a potential threat to electricity security in the region. This is not acceptable.

Please consider legitimate community and scientific concerns when assessing this mine. Please don't approve Kalbar's proposal.

Sincerely,  
Michelle Barnes