

## **Submission 752 Bairnsdale presentation Dr Joanna McCubbin**

Issues to be addressed:

1. Updated information
2. Climate Change
3. Geopolitical situation
4. Moral stance
5. Radiation
6. Centrifuges
7. COVID
8. Shutdowns.

### **Local News Updates / Corrections**

#### **Since my previous MFG Health expert presentation**

1. The EPA has installed particulate monitoring in Sale, Bairnsdale, Orbost and Mallacoota. There are similar monitoring stations around the regions usually at SES or CFA stations. This is an excellent first step, but there will need to be appropriately sited AQ monitoring on site. Otherwise there is no mechanism to notify locals to close windows etc. Similarly if dust from Kalbar increases particulates reaching Bairnsdale we are in real trouble! The fallout of dust (as well as its radionuclide component) will be all over the vegetables on the flats before it reaches Bairnsdale.

2. My Dad's lake has filled for the first time in decades following recent rains!

3. Morwell River.

During recent rains, the Morwell River flooded into the mine. It has been moved 7 times to allow for access to more coal and the various engineered "walls" that were built to accommodate this, have cracked 7 times. The most catastrophic was in about 2012 when it took 6 months of pumping water with all the entrained contaminants, out of the mine. EPA simply allowed the mine water that had sat on brown coal with all its chemical components, to be pumped into the river as the only practical method to clear it.. .....and in breaking news... this exact scenario has been approved to occur again!

Astronomical amounts of diesel was burnt to pump all this water.

For 6 months, farmers downstream had their flats underwater. When they finally got the land back the following summer, there was one property where about 30 cattle died after being put out on the abundant grass that resulted. Allegedly the lush new growth involved a toxic fungus. It is not clear whether this is cause and effect but may not have happened if the contaminated flooding had not occurred. ...and those same flats are now already underwater, from the riverine flooding, all over again!

The word among engineers and town planners, was that the original design was good but the execution used the cheapest materials which gave way under extremely wet weather conditions.

This has implications for all the many dams planned for this project, in soils which are by definition sandy and will need to be strong enough to withstand 200 or 300 ml rain events such as we experience in these parts.

## **1. Climate Change**

Shipping tonnes of ore to China instead of processing it in Australia, will burn a lot of fossil fuels just getting there..

I find it deeply disturbing that a company which justifies its project because we need their product for renewable energy, does not appear to have any plans to utilise renewables.

The change to centrifuges effectively doubles the carbon emissions from this project. They seem completely unapologetic about this.

If they really cared about building Australia's renewable Capabilities, surely they should at least be promising to buy only green power or preferably be deploying wind and solar on site, perhaps considering setting up floating solar on the many pondages, both to help power the project and to minimise the evaporation of their precious water supply.

If this kind of thinking is the straw that breaks the camel's back from a financial viability perspective, then the project needs to be stopped before any more harm is done.

I note that the latest update of water requirements shows the ground water requirement in a dry year using 1997 figures replacing pre 1975 averages, shows as much as 200 times as much ground water may be needed. In a climate changed world, serious consideration needs to be given to saying "No" to this project, purely on the basis of the massive amounts of water that this project takes from an already drying environment!

## **2. Geopolitical situation**

Sending thorium and uranium to China in the current trade climate is a little reminiscent of Pig Iron Bob shipping iron to Japan to be returned as bombs during WW II. It would seem remiss to pursue this project without checking that export permits would even be allowed. It would also seem better to secure local control of these supposedly essential materials for our own manufacturing. We have already seen the fragility of international supply chains in the COVID context

## **3.Moral stance**

Finally is it Ok to ship dangerous products to another country for dirty processing, putting at risk the wellbeing of their citizens if we are not prepared to do the same processing in a more closely regulated environment in Australia?

## **4. Radiation**

The experts all seem to agree that onsite measurement at commencement, is needed to verify all the assumptions. I would like to know what happens if the radiation levels measured are higher than predicted? If things go wrong beyond these hearings there seems no avenue for public involvement in any changes that occur after commencement. I would like to see unambiguous conditions around mandated disclosure, consultation, and remediation. Above all, there need to be clear, enforceable rulings about shutting down the operation at the outset if measurements are not as they seem from the modelling. No one is talking about the cancellation of this project, after approval if something goes seriously wrong. We as the community need to know how and when that might be done! It cannot be ignored as part of deciding whether or not this project should proceed.

## **5. Centrifuges:**

As already stated in my previous submission, the various component streams have become very confusing. The wet sludge being piped to the centrifuge will by definition involve pipes. These pipes will eventually become a waste stream of significance. The pipes in the oil industry develop a build up of radioactivity as radon decay products precipitate out and adhere to the inside of the pipes. As our case in the US fined Exxon over \$1 million dollars for inappropriate dumping of such pipes, so there is precedent.

## **6. FIFO and COVID.**

Will Kalbar be bringing in experts from overseas or interstate to live in the local community? What if one of them gets COVID in quarantine and brings it to Bairnsdale?

What provisions will Kalbar have in place for its workplace, given the recent outbreak in the Tanami desert involving FIFO workers. As noted previously Kalbar seemed to deem itself an essential service and had Melbourne contractors crossing the Lockdown "*Ring of Steel*" in 2020. This could easily have brought COVID to Bairnsdale.

This raises several questions:

Is this project essential?

Will Kalbar employees be exempt even when the community can not travel?

Will all employees be locals as touted by Kalbar in their original plans?

This is a real and present risk to our rural communities. Noting that the First Nations population of this region is higher than state average and we know that they are a group with a number of health and socio-economiconomic determinants that put them a greater risk.

## **7.Shutdowns**

Can this mine be shut down for brief periods, such as if there was a COVID outbreak or radiation or dust exceedence?

If it can, then why not ban work between 11pm and 7 am when local government noise by-laws apply. This would give respite to locals from noise and dust. It would also allow inspectors to visit and avoid nighttime exceedences of noise, dust, radiation etc when nobody is watching. I may have missed something, but I have not noticed are we all being swept along because is it simply what the mining industry thinks of as normal, because that is what it always does, when it mostly operates in remote areas with no local residents.