

EES - Fingerboards Submission

Friday, 16 July, 2021
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BACKGROUND

- AgSci background
- Managed & developed farm property for 43 years
- Landcare involvement - hydrological study to understand Salinisation from the Rocklands Toolondo Channel
- Facilitated Telangatuk Black Range Landcare Group 10 year plan
- Chair Kanagulk LG
- Appointed to CALP Board and 3 successive CMA Boards on the GHCMA being awarded a long service award
- Community member Douglas-Iluka Mine Environment Review Committee
- Currently Councillor of HRCC

I am speaking as the Chair of the KLG. The KLG is not anti-mining, nor am I as we must mine to obtain mineral resources for our industry and society. The issue is how you mine.

Do you mine environmentally sensitively or do we pass the cost onto the surrounding community, the environment and future generations.

There is no such thing as sustainable mining, it is extractive by nature, once dug up it is removed forever. It cannot be by its nature sustainable.

The experience I bring is having been living in the community which had the first open cut dry mineral sands mine in western Victoria, the Douglas mine. I have been involved since the development of the EES in 2001, the start of mining in 2004 to the cessation of mining in 2012. As yet the mine site has not been restored.

I respect that you the Panel might believe that if approved this EES will protect the community and the environment. Please don't take offence at what I have to say, but rather take this opportunity to listen to someone who has first hand experience and try to understand the brokenness of departmental mining regulation.

Firstly, regulation is shared between government departments and authorities. These include DJPR (formerly DEDJTR) - earth resources, DHHS - radiation, EPA, DELWP which has been AWOL, and that there is a one government approach policy, where one department will not criticise or stand up against blatant errors of another department. Indeed there was whole scale paralysis or inaction when the EES was not followed.

There should be just one Authority to oversee mining, currently, it would be frustrating for a proposed miner, but much worse for the community and environment that just falls between the cracks.

For the Douglas Iluka mine, we had what appeared to be a sound EES that proposed world's best practice mining, a moving 1.5km footprint and progressive rehabilitation with radioactive material 'being dispersed as it naturally occurred and buried at depth', being the bottom of the pits. Dust was to be suppressed with water and polymers. The hydrological studies had to show that there was no risk of leachate to the Glenelg River.

Radiation risk to the community was to be reduced as material would be buried deeper, and land form would be restored as near 'as practicable to original landform'.

It sounded like mining Utopia, a win win scenario.

However, what happened in reality was that Work Plans, and Radiation Management Plans were progressively varied to allow the direct opposite of what was proposed by the Panel managing the Environment Effects process. The EES was not worth the paper it was written on! Please listen and let me explain how this happened.

Work Plan Variations allowed the mine to open up second pits to allow blending of ore for more efficient mineral separation, the tails returned to the base of pits would not support machinery to cover and restore pits. When mining ceased in 2012 nothing had been restored. Instead of the promised progressive rehabilitation, the whole 14.5km of pits were open, in 2021 they are still not fully restored and Pit 23 will not be restored until 2025, 14 years after mining ceased. This is not world's best practice. The footprint just got bigger.

Indeed it was a current Kalbar contractor who worked for Iluka that explained to me 'It is the principle of cost deferral'.

Kalbar is an exploration company, not a mining company. They are just like Basin Minerals who was the exploration company that Iluka Resources purchased the Douglas project from. Kalbar, just like Basin Minerals, has made a lot of promises, but it is likely they will not be the company doing the mining. There has been several staff come across from Basin Minerals and Iluka Resources, 'Is the culture the same?'. Where the whole ambition is to get an EES up, sell, and take no responsibility to ensure an EES is followed. Mining companies are shameless in the promises they make, knowing full well that as soon as they sell, none of the 'promises' or guarantees are binding on the purchase.

We were told our radiation risk would be less after mining. We got the opposite. For example, radon measurements peaked at 14 Bq/m³ prior to mining, regularly during mining they measured greater than 30 Bq/m³, and down hill from Pit 23 one peaked at 200 Bq/m³ for a quarter. This equates to about 6 x the annual public dose rate of radiation in just one quarter. This measurement was taken in Red Tailed Black Cockatoo habitat in Red Hill scrub, which is an endangered species. The environment is supposed to have the same protection as the public of only being exposed to 1 mSv per annum. The DHHS has failed to deliver on their promise pre-mining that we would be exposed to less radiation.

Pit 23 has had its management responsibility forcibly transferred to the Horsham Rural City Council through the ruling of the VCAT case. However, HRCC has no staff trained or qualified staff, or indeed any understanding of radioactive waste management. Under DHHS advice, HRCC has signed off on 1,000 Bq/m³ of radon gas monitored before any investigation is undertaken. This on an annual basis is over 33 times the public dose rate for radiation. Mine workers are kept safe as they have limited exposure. However, the environment and local community are put at a much higher risk. To this date, we believe that this VCAT ruling was illegal and breaches state, federal and international laws and treaty obligations. We have also been informed that the Radiation Act has been amended to accept that transfer of ownership disposes of the radiation risk. In this case, it is gross negligence to put the Kanagulk community at risk for the Millenia.

Radiation levels on Pit 19 after rehabilitation were well above levels prior to mining. Indeed hot spots had to be excavated with 70,000 m³ material being transferred to Pit 23 to be buried deeper. Then DHHS doubled the allowable radiation levels so that Pit 23 could be signed off. This broke one of the first principles of radiation management as stated in the International Commission for Radiation Protection (ICRP) guides of which Australia has signed international conventions. The principle being that you do not create 'greater net risk' where possible. Shifting the goal posts on

radiation management plans so you can achieve sign off, is completely unethical and negligent. It leaves a negative legacy forever.

A covenant was then placed on 120ha so nobody could ever build a house on Pit 19 because of the radiation risk. However, it grows food of unknown status for the Australian market. I believe DHHS, once again, has failed to deliver on its pre-mining promises and its national and international obligations. Can we risk this happening at Glenaldow, the Fingerboards Project.

How did this happen? Without performing any proper risk assessment DHHS signed off on a 2009 Variation that allowed Iluka to start the concentrated dumping of tails and in particular monazite. Materials were not placed radiologically as they naturally occurred, but pits such as Pit 19 was filled to become a hill 5/6m higher than the natural landform. The 2009 Variation was mostly focused on Pit 23 that allowed radioactive tails to be brought in - firstly from a nearby mine Echo, then all the waste from the Ouyen Mines (4 x the Douglas Mine) and from Ceduna off the Nullarbor in South Australia. This went against the recommendation of the DHHS radiation officer in their report to VCAT that tails should not be transferred between water catchments which is also an ARPANSA and international standard.

This dumping from other mines was allowed without risk management, limited baseline data, and indeed after the cessation of mining, Iluka was still adding more radon gas monitors and more monitoring bores to attempt to monitor leachate. I believe Pit 23 was established in clear breach of the ARPANSA guide for the 'Disposal of Milling & Mining of Waste from Uranium and Mineral Sands Mining', and the 'Near Surface Disposal of Radioactive Waste'.

For example, Pit 23 has a very porous base into which there is access to the water table in the southern end. It is in the highest rainfall zone of any Iluka mine. It is in a farming community that uses local groundwater for stock and there was no risk assessment prior to dumping. Iluka refuses to acknowledge the aquifers in the area that potentially provide preferential flow paths for leachate. Yet when searching for groundwater to supply their separation plant, they rapidly identified exactly where aquifers existed in the Strathlyn bore field. Why was this methodology not used to assess potential risk of leachate migration. Rather the methodology is to use the average bore material to measure potential for particle migration. They have refused to measure the leachate properties in the bottom of the pit to assess risk. Monitoring bores are not logically placed.

At an ERC meeting when I described it as a 'Mr Magoo' monitoring, DHHS took offence. They never attended another ERC meeting and still have refused to answer, 'What is the risk of cropping or grazing on mining tail pits, and selling grain or meat into the market?'. This question was formally asked in writing to the ERC over 4 years ago, and DHHS have refused to act! Does the Health Department have any obligation to protect the health of Victorians, or is it only their job to just facilitate mining of radioactive substances without regard to the impact on those affected?

And indeed the monitoring of bore BW47 rapidly rose in radium 226 and 228 to twice the external investigation level established in the Radiation Management Plan prior to mining. DHHS refused to investigate and claimed it was just natural background radiation.

I have no faith in the DHHS radiation section to effectively protect communities and the environment from the risk of radiation from the activities of mineral sand mining. Kalbar will be stating that the risk is being shipped off in the heavy mineral concentrate in containers with the fine tails returned to the mining pit, however these slimes or cake will contain fine grain monazite and uranium that cannot be gravitationally separated, plus the colloidal material has absorbed millions of years of radiological decay that has been released from the thorium and uranium. This material is where the risk exists, especially when this fine material can become airborne. It is also more likely to migrate with water flow than the coarse grained mine material.

Dust suppression was not possible from the Iluka site, yet at the EES we were told it would be thoroughly managed with the use of water and polymers. On several occasions the Arapiles Fire Tower reported smoke columns which was just the dust.

The tailings storage facility was one of the biggest risk areas where dust blew off the plateau, then once over the Glenelg River valleys. The wind speed slowed dropping suspended dust over farms and houses up to 5 to 6kms away, spouts and roofs were covered in red dust, local surface dust is grey loam. The local Kanagulk geomorphology is similar to the proposed Finger Boards mine, where there is a plateau overlooking the river valley. Strong westerlies and south westerlies will deposit dust over the Lindenow Flats that has been blown out of the tails and/or the exposed ore body. The issue with the tails was that they were pumped to approximately 120 acres, the wet slimes are slow to dry, so even after 4 years they would not support a vehicle to establish vegetation. The top dries, blows and rills just like a beach, the coarse grain material remains, the fines become airborne and migrate off the mine site.

Particulate pollution will be an issue with the Fingerboards proposal, as it was at Douglas. Despite being on the Glenelg Hopkins Catchment Management Authority Board and the community member on the Douglas Environment Review Committee for many years, we were never told about the PM10 pollution. However, listening to the ABC radio late one night, an ANU professor talking about mining pollution stated that the 3401 postcode was put on the national register for pollution because of the PM10 being measured coming from the Douglas mine. Can you risk this with the Lindenow Flats being such a productive vegetable food bowl?

Hydrologically, at Douglas, there was supposed to be no risk of leachate migration to the Glenelg River for the EES to be approved. Basin Minerals engaged a consultant to undertake hydrological studies to investigate what risk there would be. This risk was claimed not to exist as there was a southern granite basement ridge that stopped groundwater travelling south. The community from generations of local knowledge knew this was not the case. Iluka had the original report peer-reviewed two more times at the communities request at the ERC. We even had a pre-mining SKM hydrological report into the salinisation from the Rocklands-Toolondo which showed opposite sub surface hydrological potentiometry.

Also a GHGMA report into groundwater intrusions and salinisation of the Wannon and Glenelg rivers identified a major groundwater intrusion that travelled from beside the mine site heading south.

A member of our landcare group went back to the original report and examined each bore log to the study and discovered the supposed granite ridge was in fact 2m lower and the deeply incised valleys had been leap frogged, and that the bores across Lake Kanagulk had a groundwater flow direction directly opposite to Iluka's study to the south.

Whilst as a Director of the GHGMA, a leading Victorian consultant bidding for the "Stressed Rivers Project" stated in dot point 8 on a summary page, 'When you have a multi-criteria problem we will give you the outcome you want'!

The International Commission for Radiation Protection clearly states that mining companies should not be allowed to monitor their own activities because of the conflict of interest, likewise their own pre mining studies are also conflicted. From my experience the payees pay the piper to get the tune they want.

To make this process fair, the community should be granted a substantial sum of money to have a realistic opportunity to review all of Kalbar environmental studies.

Environmental Review Committees are supposed to be able to 'review' work plans to ensure they follow the EES and that they are sound. However, there is a major problem in that from my experience the mining company simply informs the community of what they intend to do or have already done.

ERC's are supposed to have independent Chairs. Our ERC's Chair and Secretary as one, was directly paid for services by Iluka, and they clearly displayed a master-servant relationship. This

meant that the community was by-and-large ignored; for example, the request to establish the risk of growing food on mining tails. Also an approved motion to write to ARPANSA to confirm what radiological standards to the public and the environment are allowed to be exposed to, was never written, then the Chair/Secretary became a three day week employee of Iluka.

Likewise, an earlier Chair resigned after the ERC voted a no-confidence motion in him because of his pro-mining bias, he also was a contractor of buses to the mine, a direct conflict.

ERC's are not an effective forum for communities to be listened to, to have their perspective heard.

I have serious concerns with Earth Resources' ability to oversee their work plans. For example, at the Douglas mine pit, initially was only supposed to have tails placed in the bottom of the pit. It became a hill, with material spilling down to the Glenelg River in a 30mm rain event over 30 hours (light rain). The Inspector determined the spill occurred because of an unusual weather event. 30mm over 30 hours is simply a normal winter cold front event.

Likewise the KLG requested an audit into Pit 19 as it was not being managed in line with the Work Plan, that is, a plateau became a hill of tails. The local Mine Inspector investigated her own work and report their was no issue. KLG took the issue to the Mining Warden, and he requested that there be 'an independent' audit. The local Mine Inspector in conjunction with the Inspector from this region, the north east, then proceeded to audit their own work again, a direct conflict. This is clearly against the public service code of conduct and is simply a corrupt practice.

Noise has been a major issue at the Douglas and Echo mines, not the trucks. The Kalari trucks are new and quiet. Noise pollution came from the heavy earth moving equipment exhausts and reversing alarms. However, the worst noise came from the primary separation plant from a tumbling machine that broke down and separated rocky ore. We live 12km, as the crow flies, from the mine site, and on cold nights when there was an inversion layer, the plant was quite audible. People living near the mine site had to be moved away, even when double glazing failed to keep the noise down.

The destruction of the local roads was a serious issue. Weekly potholes would occur, 9" deep and a meter or so across. We personally blew a low profile tyre and split its rim, and were forced to put normal high profile tyres on our car to save wheel damage. Also another incident, I was so busy dodging pot holes one evening, I failed to see an escaped mob of sheep 100m ahead until it was too late, killing 5 sheep and doing \$4,500 damage to the car. The local roads were never designed to take so many B-Doubles with allowable extra axle loading. This simply did significant damage to our local roads. As mining companies do not pay rates, who will pick up the cost of this infrastructure. It needs to be Kalbar, or the mining company, not the local municipality.

The EPA also failed to take responsibility for the PM10 and dust events. They did not ensure the appropriate placement of monitors and bores. And indeed their supposed expert radiation consultant at the VCAT Hearing clearly did not understand the risk of radiation when he stated, 'that monazite is the equivalent to clean fill', when it is a prescribed radioactive material under the Act. He came to this wrong conclusion as Iluka Resources sent washed monazite to Lucas Heights in Sydney to test the leachate that would come out of their sample; it had just been washed. Monazite is very stable with a 4.5 billion year half life, so the short time between washing would yield very little radioactive material. From the international papers I have read it is time and volume that creates risk. We have both here at Kanagulk. The EPA did nothing to alert the community about the content of dust in relation to heavy metal contaminates.

If you approve this EES, how will you ensure that it is respected and upheld? My experience is that an EES is not worth the paper it is written on.

I believe no more mineral sand mines should be approved until there is an Enquiry into Victoria's first dry open cut mineral sands mine so that the same mistakes are not repeated at the communities expense.

I have noticed in reading some of Kalbar's documents, the words 'it is expected' appears many times. This means that undertakings are best guesses. The community deserves certainty with actions and timelines. 'It is expected' is not good enough to get a proposed mine approved.

Compensation for many farmers was inadequate. For example, one farmer was told, you will have your farm back in three years in better condition. He was paid compensation for productivity for five years. Thirteen years later has still not signed off on the rehabilitation, as there are serious slumping issues. Farmers need to be aware that they need serious penalty clauses in their contracts with mining companies, as mining companies by-and-large are unaccountable for their Work Plan Variations.

Before the Basin-Iluka experience I never understood 'gold fever'. Many people thought they were going to get rich from the mineral sands mine. The billions of dollars of profit evaporated out of our community to the shareholders, superannuation companies, banks, directors etc. The wages paid for driving machinery was only between \$23-25 an hour. We pay our farm workers more.

The 20-25 year mine was gone in 8 years, there was not a generation of mining at all. The secondary separation plant that was in Hamilton closed. Hamilton's main street has many empty shops that are whited out. It is becoming like a ghost town. When the mine was first proposed, token gifts were given to the footy club and netball club in Balmoral, this was just an attempt to divide and conquer the community.

I must also make comment about that Kalbar only detailed their proposals for pipelines and roads well into the EES hearings, after the Glenaladale and Lindenow communities have made their submissions.

This is not a level playing field, I respectfully request that the Panel give the community an opportunity to respond to the new plans and what impacts this may have on their lives, enterprises and the environment.