Submission No 79

INQUIRY INTO CURRENT AND POTENTIAL IMPACTS OF GOLD, SILVER, LEAD AND ZINC MINING ON HUMAN HEALTH, LAND, AIR AND WATER QUALITY IN NEW SOUTH WALES

Organisation: Running Stream Water Users Association

Date Received: 5 September 2023

Submission to the Parliamentary inquiry into current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales

Running Stream Water Users Association (RSWUA) was formed 30 years ago when the first coal mine threat in our area appeared. Just over a decade ago, three more exploration licences were granted. Running Stream is a vibrant agricultural community which relies on rain water as well as the water from hundreds of local springs. Our organisation was set up to protect our precious water for future generations. RSWUA therefore takes a keen interest in the processes involved from the granting of exploration licence through to mine approval. We have watched other communities battling to preserve their livelihoods, their health, their community and their ability to pass on to future generations truly sustainable ways of living. Water is our most precious resource and must be protected as a first priority, above jobs and the economy. High-value agricultural land must be protected as a second priority – without agriculture there is no society – and only a small proportion of Australia's land mass is high-value agricultural land.

Australia has a history of economic development through mining but as our economy has matured and developed there are now competing industries. In many cases these will deliver long-term benefits, compared to short-term mining profits, but this is given no weight because of the blinkered mindset.

We are making this submission to express our concern about the planned Bowden lead and zinc mine in the Mudgee Region of the NSW Central Tablelands that threatens to do irreparable damage to public health and the environment in our region. We are also extremely concerned about the Cadia gold mine near Orange.

The lack of government response to the problems recently publicised in the media about the Cadia mine is shocking. It has taken local citizens at Cadia to test their blood and drinking water to find elevated levels of minerals from the mine to see any action taken. This leaves us with grave concerns our community will face similar problems to Cadia residents if the Mudgee Region mine goes ahead.

Like the Orange area, the Mudgee area is an extremely valuable and productive agricultural part of New South Wales. Food, clean water and an unpolluted environment are the basics of life, yet mines have been allowed to operate as if these things were of no importance.

Below we list our specific concerns related to the terms of reference of the inquiry.

1. That Portfolio Committee No. 2 inquire into and report on current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales, in particular:
(a) the impact on the health of local residents and mine workers, including through biomagnification and bioaccumulation

If the Mudgee Region lead mine goes ahead, there is a high risk of lead poisoning to humans and wildlife in Mudgee Region: in Mudgee, Gulgong, Rylstone, Kandos and the smaller localities such Running Stream and Ilford. This is a region of incredible biodiversity and rich agricultural land. It is a significant wine-producing region, and livestock, olives and other crops are produced here for human consumption across the state.

Lead and other toxic chemicals released by mining activities bioaccumulate in livestock and food crops and then bioaccumulate in humans and other animals who consume these animals and plants. There is no safe level of lead in our bodies. Even very low levels can have lifelong deleterious effects. Lead is particularly dangerous for children, and can lead to permanent physical damage and disability.

There is ample evidence of the lifelong negative health, intellectual and sociobehavioural effects associated with childhood blood lead levels (BLLs) above 10 µg/dL and further 'evidence of adverse effects occurring at 5–10µg/dL, and even at levels as low as 2µg/ dL.8-11. In 2008, Queensland Health reported that Mount Isa children aged 1–4years had a mean BLL of 5 µg/dL, with 37% having levels >6µg/dL and 11.3% having levels >10µg/dL' ('Recognising and responding to the obvious: the source of lead pollution at Mount Isa and the likely health impacts', Niels C Munksgaard, Mark P Taylor and Alana Mackay. *Medical Journal of Australia*, Volume 193, Number 3, 2 August 2010.)

Residents fear that the situation with regard to routine high lead exposure experienced by residents, and in particular, children, at Mt Isa will be repeated in the Mudgee region. But Mt Isa is not situated in the middle of highly significant agricultural land that produces many thousands of tons of food for the people of the state. Nor is it a highly populated rural area, with many flourishing towns, as is the Mudgee region (Mudgee population is approx. 12,500, Gulgong approx. 2500, Lue, Kandos and Rylstone approx. 2400, plus the many individuals and families living in outlying rural areas; so at least 17,400 people could potentially be directly affected by toxic pollution from this mine). Lead pollution and poisoning from other toxic materials from the proposed mine will have a much greater negative impact in this region than around Mt Isa, as troubling as that lead pollution is for Mt Isa residents. Yet lead and other toxins potentially poisoning 17,400 people – not to mention native animals and livestock, and high-value food crops – is held to be of negligible importance against the amount of money the Mudgee region lead mine could potentially produce for its owners.

The planned Mudgee Region lead mine will rely on water from the site to tamp down the 130 kilotons of disturbed lead. In our drought-prone region, there is not enough water available for this purpose, and high winds (which we experience regularly) will carry lead particles through the air to our bodies, land, animals and agriculture.

(b) the impact on catchments and waterways, affecting both surface and groundwater destined for local and town water supplies, including rainwater tanks, and on aquatic biodiversity

In relation to the Mudgee Region mine, there is an unacceptable risk of water contamination from acid mine drainage. There has been a total disregard by the mine proponents and the DPE of local opposition to the mine and a disregard of expert opinion in relation to the very numerous problems associated with situating a lead mine within 2 km of a town, and primary school. Despite the very clear problems – such as the lack of water within the Mudgee Region, the faulty tailings dam specifications, and the issue of lead dust associated with a mine to be built within 2 km of a town which itself sits within rich and diverse agricultural land – no serious conditions were put on the approval of this mine.

The operators of the planned mine predict that 1.6 megalitres of toxic chemicals will leach into the groundwater system each day. Lawsons Creek, which feeds the Cudgegong River and provides the drinking water for Gulgong, will be contaminated forever. We understand there is no remediation plan for this contamination. And there is currently no plan for alternative drinking water for those affected residents. There are approximately 2,500 residents living within the town of Gulgong, and many others outside the town boundaries who also rely on water from the river.

The lead mine at Mudgee Region proposes to use roughly 5 megalitres of water (two Olympic-sized swimming pools) every day. This amount of water is often unavailable in our drought-prone region. Bowdens' mining activities will result in a loss of flow from 10.9% of the Lawson Creek. This will have a significant impact on all those who rely on this critical water source.

The planned tailings dam will hold approximately 30 million tons of potentially acid-forming tailings, including most of the 43,700 tonnes of chemicals used in ore processing. Many of these chemicals are highly toxic, including sodium cyanide, arsenic, caustic soda, copper sulphate and zinc sulphate.

The dam will be built over a major geological fault line above the water table at the headwaters of Lawson Creek, which flows into the Cudgegong River at Mudgee. It is proposed to have a footprint of 112.5 hectares, across uneven ground. If the dam is compromised in any way – as was the case with the tailings storage dam at Cadia mine – these toxins will contaminate the environment for centuries to come. We understand there is no remediation plan for this contamination.

Not only does water draining through the mine area potentially threaten local groundwater, creeks and rivers, contamination of rainwater and the landscape from toxic lead dust is a threat to human health and life, and that of all other animals and vegetation in the immediate area.

In relation to Cadia mine, toxic material from the mine has already polluted drinking water and affected the health of residents in the area. The breached tailings storage facility at Cadia is an environmental disaster, and chemicals spilled into the surrounding landscape will poison it for centuries into the future.

(c) the impact on land and soil, crops and livestock, including through biomagnification and bioaccumulation

As noted above, in response to point 1(b) of the inquiry, the tailings storage dam at the proposed Mudgee Region lead mine will be built over a major geological fault line above the water table at the headwaters of Lawson Creek, which flows into the Cudgegong River at Mudgee. If the dam is compromised in any way, which could easily occur due to an extreme weather event, these toxins will contaminate the environment for centuries to come.

Near Cadia, residents are already concerned that dust from the mine site and leaking water from the breached tailings storage facility has polluted land and soil, crops and livestock.

(d) the adequacy of the response and any compliance action taken by the regulatory authorities in response to complaints and concerns from communities affected by mining activities

The majority of responses from individuals to the Mudgee Region lead mine DA opposed the mine because of its ill-considered and unsatisfactory plans for storage of toxic by-products, its excessive demand for water in an environment that is often drought-affected and where water is precious and used for human consumption, for the livestock and agriculture on which the people of New South Wales depend for food (and possible pollution of water that currently sustains several large local towns).

Despite the huge negative response to the proposed mine, and the very high possibility of mining activities contaminating air and water, and using more water than is sustainable in a dry environment, the mine was approved. This would appear to reflect a failure by the regulatory authorities to listen to the people who will be directly affected by the mine, or to think about the health of people throughout the state, who consume agriculture produce from this highly productive area.

We are concerned that the NSW Government's assessment:

- fails to identify and assess impacts to key Endangered Ecological Communities in relation to the *EPBC Act 1999* (Cth), in particular the Montane Peatlands and Swamps EEC
- fails to adequately identify and assess impacts to flora and fauna in the broader region, including the east coast of NSW

- fails to adequately assess impacts to Koalas in the area associated with removal of 139.59 ha of known Core Koala Habitat, and the removal of 182.27 ha of important Regent Honeyeater habitat ,including Box Gum Woodland
- fails to assess the social impact associated with routine blood lead level testing of local community and in particular primary school children, or of elevated blood lead levels.

There has been a failure by the NSW Government to meet the assessment requirements under the Bilateral Agreement EPBC 2018/8372.

Recent media coverage of the problem of airborne pollution at Cadia reveals that the response from regulatory authorities has been inadequate, if not downright negligent, and certainly displays an incredible lack of concern for the health and wellbeing of local residents (human and animal), and the landscape they live on.

(e) the effectiveness of the current regulatory framework in terms of monitoring, compliance, risk management and harm reduction from mining activities

Events at Cadia recently exposed in the media reveal the extent to which the current regulatory framework has failed to monitor mining company compliance. The current framework, in which mining entities are supposed to 'self-monitor' simply does not work. Mining needs to be monitored by a government agency that has real power to enforce compliance, such as the ability to immediately force a shutdown of operations and the application of significant fines, that are set at a meaningful amount for multinational companies that are raking in billions of dollars every year.

It is not only people's physical health that has been damaged but the lack of action from authorities that are supposed to protect the rights of people in this state has grave effects on individuals' mental health. When people have had their physical health damaged, and have had their livelihoods wrecked by mining, yet have been unable to obtain legal redress, there are suicides, family violence and a myriad of other mental health damages.

(f) the effectiveness of current decommissioning and rehabilitation practices in safeguarding human health and the environment

Recent media reports by the *Sydney Morning Herald* on the Sunny Corner mining toxic tailings dump illustrate the ineffectiveness of current mine decommissioning and rehabilitation practices. Decommissioning and rehabilitation of coal mining operations in our local area have also been inadequate at best and non-existent at worst. Mining companies appear to be able to simply walk away from the toxic mess and environmental destruction they have wrought. There is a general lack of confidence in the regulatory authorities' ability to enforce any kind of remediation or proper and safe decommissioning practices on mine owners.

(g) the effectiveness of New South Wales Government agencies to regulate and improve outcomes including: (i) the measurement, reporting and public awareness (ii) the provision of various protective materials (iii) the ability to ensure the health of at-risk groups (iv) the suitability of work health and safety regulations, and (v) the capacity to respond within existing resources (vi) the adequacy of existing work, health and safety standards for workers

To date, New South Wales Government agencies have been unable to properly regulate mining activities in the state. Events at Cadia illustrate the lack of care in relation to point (i) in measuring, reporting or alerting the public to problems with mining activity. In this case, members of the public had to undertake their own testing and themselves brought the problems to the notice of the so-called regulatory authorities, whose response so far has been far from adequate.

In relation to point (vi), existing WHS standards for mine workers allow 12-hour shifts, which are then bracketed by long commutes to and from home for many miners living in the regional areas in which mines usually operate. Long hours followed by long commutes are dangerous for the miners

themselves, as well as others on the road. Workers in Australia campaigned for years for an 8-hour working day, for good reason: to protect and maintain physical, mental and social health and wellbeing. Twelve-hour shifts also play havoc with the social fabric. Parents do not spend enough time with their children, cannot volunteer for community events such as school sports or services like the RFS or P&F associations. Fly-in/fly-out workers provide no benefit to the communities in towns where they work, and this type of work actually has long-term negative social impacts both on workers' families left far away from their place of work, and on the communities where they spend their work lives.

(h) whether the regulatory framework for heavy metals and critical minerals mining is fit for purpose and able to ensure that the positive and negative impacts of heavy metals and critical minerals mining on local communities, economies (including job creation) and the environment are appropriately balanced

To date it does not appear that the regulatory framework is fit for purpose. There is insufficient regulation to protect human life, animals and the environment, to protect water resources, and prevent air and water pollution. We may need some mining activity to produce minerals required for modern life, but the balance between the need for these minerals and the rights of humans, animals and the protection of our environment is tipped too far towards mining and massive profits for the few individuals who own the multinational mining companies. Currently there is too much emphasis on mining at the expense of environmental protection, and care for local communities and the environment. Minerals mining activities generally provide negligible amounts of employment, especially employment for local residents.

In the case of Cadia gold mine and the Mudgee Region lead mine, the production of these minerals has a greater negative impact on local communities and the environment than any positive impact in terms of the economy and job creation. Both mines are in the middle of highly productive agricultural land, which produces a large percentage of the food required by residents of New South Wales and other parts of Australia. There is huge economic benefit from that, not to mention that clean water and food are the very stuff of life, without which none of us can exist. Currently, water quality and food security are not valued by governments in the way that they should be, and the hugely negative impact of heavy metal and 'critical mineral' mining on communities and the environment appear to be ignored or minimised by regulatory authorities and the NSW Government. In the case of Cadia in particular, one wonders why gold could even be a 'critical mineral' when there are huge stockpiles of gold in every significant world capital. Why does the world need more gold when much of the gold that humans have already dug from the ground simply sits unused and hoarded in bank vaults?

Currently, the regulatory framework is not fit for purpose. It does not ensure an appropriate balance between heavy metals and critical minerals mining and local communities, economies and the environment. We implore the members of this inquiry to recommend a complete overhaul of the current system, so that the rights and needs of humans, animals and the environment (all of which are long-term and need to be supported into the future) are held to be more important than the short-term financial gains of mining to the very few who profit greatly from it.

We value the opportunity to make this submission. We hope that the NSW Government listens to what people are saying and works to curtail the unacceptable state of mining and mining 'remediation' that exists today.

Sincerely,
Fiona Sim, Vice-president
Running Stream Water Users Association

References

1. ‘Recognising and responding to the obvious: the source of lead pollution at Mount Isa and the likely health impacts’, Niels C Munksgaard, Mark P Taylor and Alana Mackay. *Medical Journal of Australia*, Volume 193, Number 3, 2 August 2010.
2. Cadia mine: There have been many media articles on this mine over the past few months, including in the *Sydney Morning Herald*, *The Guardian*, and on ABC TV’s *7.30 Report*.
3. Sunny Corner mining toxic tailings: *Sydney Morning Herald and Melbourne Age documentary: https://www.youtube.com/watch?v=GL9hr5fClGo&t=3s; SMH article: https://www.smh.com.au/environment/sustainability/sunny-corner-mine-was-abandoned-a-century-ago-it-s-still-a-toxic-deadly-mess-20230704-p5dlkf.html*