

Australia: NSW Environmental Protection Agency covers up lead poisoning in Broken Hill children

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The New South Wales (NSW) Environmental Protection Agency (EPA) deliberately suppressed for almost four years a study showing lead poisoning of children in Broken Hill as a result of nearby mining operations.

The cover-up was unearthed by a Mudgee farmer who is currently campaigning against a proposed mine near her town. She discovered, including through Freedom of Information requests, internal EPA emails showing that the study's release was delayed to protect the mining corporations.

One of the emails, according to the Australian Broadcasting Corporation's (ABC) "7:30," expressed concern the study's recommendations would be "unpalatable to the mining companies." Others, sent in 2023, said the 2018–2019 study had not been published due to "discomfort among the mining companies" over "what might be expected of them," and stated that "they would prefer we didn't publish it."

The study was finally published in October 2023. An email from August of that year pointed to the EPA trying to slip the report into the public domain without attracting public or media attention. It said: "When we say 'release' [the study], we mean quietly load it onto the LeadSmart website and not tell anyone."

The study was conducted by Professor Mark Taylor, then at the Department of Earth and Environmental Sciences at Macquarie University. Titled, "The Environmental Lead Risks at Broken Hill, New South Wales, Australia: Sources, Exposures and Forward Solutions," it exposed widespread elevated blood lead levels in Broken Hill children.

The study examined the blood of children across the predominantly working-class town, which has a population of just over 17,500 people. 24,000 blood samples taken from children under 5 years old were examined, along with 10,000 soil samples from almost 2,000 Broken Hill properties and 186 household samples of indoor and ceiling dust.

The 150-year-old "Line of Lode" underground mine, containing silver, lead and zinc, cuts a swathe through Broken Hill. Towering over the town is a mound of mining "slag"—a by-product of lead production. This slag heap releases toxic dust over the town on an ongoing basis.

Children are particularly susceptible to ingestion of the dust, in part due to their play activities on the ground where the dust settles. Their bodies are also more prone to absorption of lead than adults, and their developing brains more sensitive to its harmful effects.

The study found that 49 percent of non-Indigenous and 76 percent of Indigenous children under the age of five who were tested had blood lead readings above the Australian "intervention guideline" of 5 micrograms per decilitre ($\mu\text{g}/\text{dL}$), itself higher than the US Centres for Disease Control guideline of $3.5\mu\text{g}/\text{dL}$. Children living in other regions, who are not exposed to significant lead in the environment, have on average just $1\mu\text{g}/\text{dL}$.

Professor Taylor's study found only around 30 percent of children in Broken Hill were "able to keep their blood Pb [lead] at or below $5\mu\text{g}/\text{dL}$ in the first three years of their life."

Children who lived closest to the Line of Lode, as well as Aboriginal children, "have a higher likelihood of presenting with elevated blood Pb." The majority of children with blood Pb above $5\mu\text{g}/\text{dL}$, however, "neither reside in the high-risk area or are Aboriginal."

That is, the study found that *all* children in Broken Hill under the age of three, regardless of their proximity to the mine, faced a high risk of elevated lead levels in their blood.

The report noted other possible contributing factors, including naturally occurring lead in soil, and the historical use of lead paint, but emphasised that the main source of the lead poisoning was from previous and ongoing mining operations. It referred to another study, covering the years 1990–2015, which "showed that over a 25-year period blood Pb responds with near unit elasticity to ore production."

In other words, the amount of lead detected in children's blood was directly proportional to the number of tonnes of lead ore produced by the mine.

Lead poisoning can lead to developmental issues in children including delayed growth, learning and speech difficulties, and symptoms associated with attention-deficit/hyperactivity disorder (ADHD). According to the US Agency for Toxic Substances and Disease Registry, some neurological effects of lead exposure in children "may be irreversible."

In adults, lead poisoning can lead to kidney damage, reproductive problems including miscarriage, stillbirth and low sperm count, cardiovascular risk and anaemia. The World Health Organisation stated in 2018 that "there is no known level of Pb exposure that is considered to be safe."

Once ingested, lead is not completely expelled by the body and accumulates in teeth and bones in adults. It can be released into the bloodstream from these reservoirs through breakages and other bone or tooth trauma, as well as osteoporosis. In children, it accumulates in the brain, liver and kidneys, with less containment in the bones and teeth because they are still in the developmental growth stage.

The first account of lead poisoning in Broken Hill was published in 1892, only seven years after the mine opened. But it wasn't until almost a hundred years later, in 1991, that child blood lead and contamination of air, soil and dust were first screened. That means that generations of workers and their families suffered the effects of lead poisoning over that 100-year period despite the high presence of lead being known by authorities and mining companies.

The EPA's cover-up of Taylor's study was aimed at protecting the vast profits of mining corporations and avoiding the necessity for the state government to implement even the limited mitigation measures called for by the report.

The study recommended that infants, now tested at 6 months old, be first tested at 3 months; that families at risk be relocated away from the mine; that well-sealed housing be built to replace old houses; and for a formal "trigger value"—a reading level that prompts reporting to the Resources Regulator NSW and other government bodies—to be placed on lead levels in dust. It also called for soil remediation in parks, schools, day care centres, kindergartens and residences.

Other recommendations include providing high efficiency particulate (HEPA) air filters in each home to mitigate at least some of the dust, and access to portable soil and dust testing units for residents.

The reality is that, even now that the report has belatedly been brought to the surface, the state government is unlikely to implement most or all of its recommendations. This has been demonstrated with one report, inquiry or royal

commission after another calling for reforms to improve worker safety, human health, or environmental protections, in the mining industry and more broadly.

The poisoning of Broken Hill children is far from the only example of mining companies and government agencies working together to cover up safety issues.

Earlier this month, the *Sydney Morning Herald* revealed documents including a previously unreleased NSW Health report showing that more than 7,000 people in the state's Far West recorded blood lead levels over the reporting threshold between 2010 and 2019.

While only 2,000 of these records showed an occupation, 77 percent of those that did worked in the mining industry. One mining contractor recorded a blood lead level of 80.9 μ g/dL—16 times the reportable limit.

The documents also included correspondence from a public health officer in the region who wrote, according to the *Herald*, that "most mines insisted they send lead notification letters to the companies, rather than the workers themselves, 'due to fear and anxiety caused if we send out letters directly to employees.'"

That is, the mining companies are seeking to cover up the lead poisoning of workers, not just from the broader public, but even from the affected workers themselves.

This, like the decades-long poisoning of children in Broken Hill, is a stark expression of the nature of the capitalist system, in which rapacious profits are pursued without care or consideration for the health and lives of workers and their families.

The subordination of human health and the environment to the interests of the corporate elite is only possible because of the complicity of the state authorities, including the EPA and NSW Health, acting in accordance with the pro-business agenda of governments, Labor and Liberal-National alike.



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