Scientist speaks to WSWS about lead cover-up in Mount Isa

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The WSWS interviewed Professor Mark Taylor, the lead author of recently-published research on the link between mining and dangerously high lead levels in the Australian mining town of Mount Isa. Taylor, a professor in environmental science at Sydney's Macquarie University, is well known for his research into environmental contaminants at Mount Isa over the past decade.

Mark Church: What makes your team's research different from previous studies?

Mark Taylor: In this study we looked at lead isotopes, which are useful because you can use them to definitively fingerprint the source of lead. Lead isn't altered when it is smelted, so it retains its original lead isotopic composition. It has one stable isotope and three unstable isotopes. In this study we compared the ratios of the three unstable lead isotopes, 206, 207, 208, which is a typical approach in environmental studies.

Because the issue of environmental contamination relates to residents in the urban environment, we collected samples from around town. We specifically looked at the lead naturally occurring in soils below the surface at 10-20 cm and also in bedrock samples, collected from the urban area. We then compared it to surface soils (0-2 cm), property dust and aerosol particulates. The isotopic ratios of the sub-surface soils and rocks looked completely different to the surface soils, surface dusts and aerosol particulates, which were virtually indistinguishable from the ore body. Along with other research we have already produced, which looked at aerosol modelling, soil metal spatial distribution relative to the smelter and dust deposition across town, we were able to conclude without doubt that the source and cause of the contamination in Mount Isa comes from the smelter.

MC: Has this kind of study been done before elsewhere?

MT: People have done this in many other places—in Mexico, Port Pirie, Broken Hill, various places in America and in Sydney. The approach is commonplace. We would have done it before in Mount Isa but we didn't have access to the resources to pay for the analyses.

MC: Why hasn't Mount Isa Mines or the government done such a study earlier?

MT: I don't know. I'm still amazed. Along with my co-authors, we are the only people to have done journal peer-reviewed research into the lead impact in Mount Isa city. I suspect that it is because people don't want to go near it, or they are not interested. There has been more work done at Port Pirie and Broken Hill than at Mount Isa. It might have something to do with the remoteness of Mount Isa, as Port Pirie is only 200 kilometres from Adelaide and an easier location to reach.

The mine may have done this sort of work already and not published it. There was some research commissioned by the mine in 2000 that looked at lead isotopes in soils and sub-surface soils. This mine-commissioned study by Professor David Parry reported basically what we found in our peer-reviewed paper: the lead in the surface soils close to the mine was very similar to the ore body with respect to its lead isotopic composition. As in our study, the sub-surface soils at 10-20 cm were markedly different to the surface soils and were characteristic of the natural background lead signal. In addition, surface soils were more contaminated than soils at depth and soil lead increased as one got closer to the mine.

MC: What has been the response of the mining company and government to this latest research?

MT: The company has responded by changing its

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public opinion, saying the lead in and around the city is composed of “natural and industrial mineralisation”. The phrase “industrial mineralisation” is new to me. I don’t know what that means. They have not explained that phrase or its context. To me that sounds like an admission of some sort. In the past they have always said that the lead was naturally occurring, and I paraphrase: “that’s the reason why the mine is here and that explains why there is lead in the soil around Mount Isa.” But our study has shown that is not accurate and we have taken care to present the evidence and the facts, and not hearsay.

I supplied the last [Labor] state government with a significant body of information and I also offered to visit them but they never followed it up. I actually never received a reply. Most recently I sent my material to Andrew Cripps, the [current Queensland] mines minister, and I haven’t yet had a reply from him.

However, the assistant to the mines minister said she talked to Mr McGrady [Mount Isa mayor] and noted there was nothing new in the study. Apparently other newspaper reports at the time said Mr McGrady had not read it. That means the acting assistant minister had not read the report and was then making comments and taking advice from someone who had also not read it. That’s not a particularly robust approach to evaluating facts.

The Queensland government has also held the line that the soil is naturally mineralised with lead. However, if you read the 2008 lead management study, and read between the lines, it is pretty clear that the [Labor] government admitted that there is lead in the urban environment sourced from the mine, but it is couched in a very careful way. Publicly the government continues to talk about natural mineralisation.

I have offered to present the information to them or at a public forum in Mount Isa out of my own pocket. That’s because I believe this issue is important enough.

MC: Is there any aspect in particular you are trying to bring to light?

MT: Firstly, the truth. The current problem is that if you say that the lead is naturally occurring that means no one is responsible. If you can demonstrate that this is not a fact then you can begin to deal with the source of the problem. Until you accept the facts, industry and government can avoid having to do any clean-up. Also you can side-step any litigation. It’s a typical and convenient argument.

Secondly, I am motivated by making sure that people are informed with accurate information and that thirdly, the children are protected. I think it is important that the government protects those who can’t protect themselves, and that is the children. Unfortunately Mum and Dad have a conflict of interest, because in the main, their livelihoods are based around the mine staying open.

It is important that someone provides accurate information, so that residents and future residents can make informed decisions about the location they are living in. At the moment the community is being told a story which is not accurate.

MC: The “Living With Lead Campaign” in Mount Isa says that through proper hygiene you can manage the risk of lead toxicity. Do you agree with this approach?

MT: A major Cochrane Review last year looked at the efficacy of educational treatments/intervention to prevent children from being leaded. The conclusion from that meta-analysis of multiple studies was clear: educational advice doesn’t work. The reason is because people forget or cleaning is incomplete. You can’t remember to clean your outdoor areas, your toys and your air conditioning units all the time. Also, you can’t clean soil, which is a major source of dust. Why should we burden Mum and Dad with that responsibility? It would be easier to stop it at the source. If you don’t address the source of the contamination, you’re effectively asking the population of Mount Isa, 22,000 people, to be vigilant. In the alternate, you could just ask one person, i.e. the company, to stop emissions.

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