

Leslie A Epperson

I am gravely concerned about the implementation of the Copper World open pit mines near Tucson, AZ. Here are but a few of my concerns:

The proposed mine will create mounds of tailings dust hundreds of feet high near schools and residences. Studies around the world show that such tailings often contain toxics like lead and arsenic and blow typically 20 to 30 miles in dry and windy conditions like those near Tucson. Prevailing winds are from the west, but there are daily wind changes that will blow toxics from east to west, toward Green Valley, Sahuarita, Corona de Tucson, and all the housing developments southeast of Sahuarita. An example of dust in the air can be seen almost every morning from Green Valley, when vehicles on Santa Rita Road raise dust clouds that drift across the Santa Rita Experimental Range

Students at one school in particular, Copper Ridge Elementary (400 students and 50 staff), will be at risk from particulates that will drift into their area from the Copper World tailings piles 1 ¼ miles from the school grounds. Recent studies of tiny particulates from mines (dust and haze) show that there is virtually no safe level of exposure for young children – the smaller the particulates, the more likely children will inhale them deeply into their lungs. At the very least, Copper Ridge School (and other schools in Corona de Tucson and Vail) will need to monitor air quality, plan to constantly protect students during emergency alerts, cancel outdoor activities when necessary, train school nurses to deal with respiratory ailments, and possibly cancel classes when risks are high.

Copper World Mine will produce miniscule particulate matter less than 2.5 micrometers in diameter. Between the mountains and Sahuarita, this will be perceived as dust, inhalable particles, or haze. No one disputes this.

recent scientific studies show that is no safe "threshold" at which humans who encounter this dust will be safe. Adverse health effects will include:

- toxic effects from absorption of lead particulates into blood
- toxic effects from absorption of zinc and other heavy metals
- increasing respiratory symptoms, including the aggravation of asthma. Risks are highest for the elderly and young children.

Smaller, more difficult to control particles may actually be more dangerous because they can be inhaled more deeply into the lungs. The lifespan of the Copper World mine may be 44 years or longer. For people who live in the mine area, this will increase the likelihood of serious physical problems.

Source: Australian Government's National Pollutant Inventory, 2023, online at <https://www.npi.gov.au/npidata/action/load/summary-result/criteria/source-type/ALL/subthreshold-data/Yes/substance/92/substance-name/Particulate%20Matter%202.5%20um/destination/ALL>

When the Copper World mine operation is established, heavy haul trucks loaded

with harmful copper concentrates and possibly purified copper cathodes will almost indeed run constantly on the shortest route between the mine and the town of Sahuarita. Despite claims by Copper World that suppressed vehicle speeds and constant watering will keep down dust clouds on dirt roads; it is not realistic to think that Particulates will be contained in the trucks' boxes, or spillages will be prevented.

The proposed mine will drive away unique large animals in the northern Santa Rita Mountains – jaguar, mountain lion, bobcat, black bear, coati, ringtail, and more – because of toxic dust, emissions, noise, blasting, and nighttime light. These animals' sense of smell is documented at hundreds or even thousands of times more powerful than a human's. This part of the Sky Island mountain range has been their home for thousands of years, and in a relatively few years their habitat will be gone because of the haze of toxic particulates that will drift across their home range.

Residents of Pima County need to beware of the huge piles of leftover material in the proposed Copper World Mine's tailings. This waste material - perched on the mountains above Corona de Tucson and Vail - should not be considered "gravel" or even "crushed rock." Much of it will be sand and dust particles that could escape the tailings

piles or pipes and then spread toxins into the landscape between the Santa Rita Mountains and communities to the west, northwest, and north.

In any open pit mine operation, tailings must have safeguards to hold them in check, such as dams and liners. The Copper World Mine owners have already demonstrated a willingness to cut corners with necessary protections. Downstream residents, however, deserve current, even state-of-the-art safeguards for tailings piles that will be hundreds of feet deep.

Traces of metals such as lead, cadmium and zinc are especially dangerous when they become airborne or if they are flushed out of tailings and start to work their way down washes during storms. Green Valley, Sahuarita and Vail are all about 20 miles, as the crow flies, from the site of the proposed mine. It is quite possible that the foreign owners of the proposed Copper World Mine do not realize how strong our storms can be, in Southern Arizona.

Sources: Topics related to "Tailings Storage Facilities," in formal comments on the Draft Aquifer Protection Permit No.

P-513690 (APP) for the Copper World Project in Arizona (ADEQ, 2024) and the APP application submitted by Save the

Scenic Santa Ritas (SSSR) and the 13 other organizations and Tribal Nations on April 10, 2024: referencing material

submitted by Chambers, Lacher, Maest, Hart, Headley, and Pima County.