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First name: Pam

Last name: Lemke

Organization:

Title:

Comments: Based on my review of the materials provided and independent research, I have the following concerns about South32's plan of operations and proposed expansion into approximately 500 acres of the Coronado National Forest.

Traffic Impacts on Community Health & Safety: I understand the USFS did not have a traffic report when this draft was prepared; however, at a meeting with the town of Patagonia in 2023, South32 estimated they would have approximately 180 trucks traveling from the mine to the freeway daily. I'm concerned that 180 trucks carrying hazardous materials through the Patagonia Mountains to Highway 82 will put the environment and our communities at unnecessary risk unless modified. Per your materials, this proposed road construction and the resulting traffic increase the risk of fire and car accidents, potentially increasing the burden on our emergency responders. Like many rural communities, Santa Cruz County response times to 911 calls and transportation to facilities able to provide an appropriate level of care often lag behind what is considered optimal. This can result in increased morbidity and mortality. The county has one twenty-bed hospital and no ICU beds. The existing plan must be modified so that Highway 82 remains relatively safe for community members needing to drive this route to and from their homes for work, shopping, and recreation. The addition of passing lanes along segments of Highway 82, lowering the speed limit, altering the roadway through the mountains to the freeway, or some combination of the three should be considered. Mine-related traffic could be staggered or occur at night when commuter traffic is minimal, but the plan "as is" will surely put county residents and South32 employees at risk for harm when an accident occurs. I understand it's not the USFS's responsibility to increase the availability of first responders and expand our local medical facilities. However, passing on the construction cost of adequate facilities to an already underserved county with limited funds is an environmental injustice. I am a retired advanced practice nurse and volunteer with the Medical Reserve Corp of Southern Arizona. I am uploading Santa Cruz County's Hazard Mitigation Plan for your review when modifying the existing EIS regarding traffic, fire, and emergency response.

Traffic Impacts on Recreation: The proposed road and the increase in mining-related traffic will affect people in the region's ability to hike, mountain bike, and visit Lake Patagonia State Park. I enjoy kayaking at Lake Patagonia in the early morning, sometimes as often as once a week during the warmer months. Patagonia Lake State Park is the only state park between Tucson and the border where hiking, fishing, kayaking, and camping are available. I spoke with park staff by telephone on May 22, 2024, and the number of day visitors during the week at the park is somewhere between 200-500, depending on the season. The park had 995-day visitors on a recent weekend day in May and indicated they expected those numbers to increase throughout the summer. They have 100 camping options if you include cabins, and reservations are needed to secure a spot. Adding 180 trucks a day to the road needed to access the park will certainly impact people's ability to safely travel to and from the park. Day use by people who live here will likely decrease dramatically, and the park is one of the safest, family-friendly places to recreate in the area during the hot summer months when children are out of school and families plan vacations.

High Voltage Wires & Fire Risk: I object to the current proposal to place high-voltage power lines above ground. This places the forest/mine site and the surrounding communities at too high a risk for fire. The damage from the three most catastrophic fires in United States history- the Panhandle Fire in Texas (2024), the Lahaina Fire on Maui (2023), and the Camp Fire in Paradise, California (2018)- were all caused by high voltage wires igniting. The large number of lives lost and the extensive property damage might have been averted had the wires been underground. The Arizona Department of Forestry and Wildfire Management website shows the mine and surrounding mountains are at extreme or very high risk for fire. This is rugged territory, and fighting a fire here would require a lot of USFS resources and collaborating agencies. In addition, the mine will have materials

on site that, if released into the air or water during a fire, could have devastating, long-term consequences, polluting the environment and affecting the health of local communities. Climate change and increasing wildfires in the United States have resulted in many homeowners facing increased insurance rates or losing their coverage. Allstate recently raised the rates for several people I know in Rio Rico from \$700 a year to over \$2000 a year because they said they now lived in an area designated as high risk for fire. A May 2024 article in the New York Times addresses homeowners' growing expenses and limited options when insurance companies lose money insuring them. Arizona is one of the states where insurance companies lost money insuring homeowners in 2023.

Dry Stack Tailings Modifications Needed: Dry stack tailings use less water, are more costly to employ than tailing ponds and are generally considered more sustainable. However, this technology has risks, and accidents have occurred. The current plan to house the tailings outside without additional protection from windstorms and summer monsoons

puts the environment and our communities at risk for exposure to air-borne pollutants and the leakage of hazardous chemicals into the ground and surface water. I'm uploading a document from Save The Boundary Waters, published in 2019, that discusses four mines in North America with dry stack tailings that lead to significant water pollution (see item #5 on the document). When approving a 2018 dam safety permit for a mining project in Minnesota, the Department of Natural Resources noted, "If dry stack material becomes wet - but isn't fully submerged in a tailings pond - it can leach heavy metals that can wash into nearby soil and water. The agency also said dry stack tailings can create a toxic dust that also poses environmental risks." I am providing the following links for your review and consideration.

<https://www.minnpost.com/environment/2019/07/twin-metals-changes-its-plan-to-deal-with-mine-waste-to-a-strategy-lauded-by-some-environmentalists/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7970857/>

I urge the USFS to require some enclosure for the tailings to protect them from the spring and summer weather we can expect in Southern Arizona. I am also asking the USFS to require more water testing at more locations than at a single location every ninety days so that if a polluting event occurs, we can take steps immediately to halt the damage.

Impact on Water Quality, Quantity, and Groundwater: I am not a hydrologist, and I do not have command of the concepts or language to speak fluently about the water concerns this mine poses. I am a concerned citizen who has been attending public meetings with hydrologists and water management professionals. We are in a drought. Some residents of Sonoita are experiencing declining well production, which their water company attributes to dropping groundwater levels. The cost of drilling deeper wells is being passed on to customers. As a Santa Cruz County resident, my water quality already suffers from unhealthy levels of PFAS per the recently established, enforceable guidelines by the EPA. Please see this April 2024 announcement from ADEQ about PFAS Santa Cruz County water: EPA announces PFAS Drinking Water Standards.

I am a Friends of the Santa Cruz River member and volunteer with the River Watchers. We monitor five sections of the San Cruz River on a monthly basis and submit data to ADEQ and USGS. Levels of E. Coli often exceed safe standards due to raw sewage being discharged into the river when it is in Mexico. Please see this March 2024 article in the Nogales International: February effluent spill showed signs of contamination in Santa Cruz River. American Rivers named the Santa Cruz River the fourth most endangered river in the United States. A coalition of environmental groups and community stakeholders is currently appealing to the Secretary of the Interior to designate the Santa Cruz River an Urban Wildlife Refuge. This is an imperiled ecosystem. All of the hard work local environmental and citizen groups are doing to improve the health of our watershed will likely be compromised by the presence of this mine.

A comprehensive groundwater assessment before proceeding with the mine's plan of operation is essential. Your information on this project raises the possibility that pumping high volumes of treated groundwater into an ephemeral waterway may increase the evaporation rate of water meant to recharge the aquifer. The county's last comprehensive groundwater assessment was completed many years ago. The people, plants, and animals living here have a right to expect the water being discharged from the mine, flowing through the areas where they live, and recharging the aquifer they depend on to be free of pollutants. Given the high volume of water to be discharged on a daily basis, I think it's important for the health and safety of both the public and the ecosystem to monitor the water with more frequency and at more locations than once every ninety days at a single location. Given the global safety record of South32, this is vital. I would like to see the USFS consider collaborating with one of the citizen groups monitoring different parts of the watershed, given that ADEQ uses some of its data.

Manganese Exposure and Public Safety Concerns: Given that South32 plans to mine for manganese for sixty years, it seems prudent to adopt the most conservative, safe exposure levels of this known neurotoxin. Dr. Racette is considered a world expert and has authored many research papers on manganese toxicity. During a presentation to South32's community advisory panel in January of this year, Dr. Racette indicated OSHA standards for manganese exposure were generally considered to be too high in the scientific community. He recommended using the AGIS levels for occupational exposure. The American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) for manganese is 0.02 mg/m³ for respirable particulate matter and 0.2 mg/m³ for inhalable fraction over an 8-hour work shift. Here is the reference for your review:

References: Racette BA, Nelson G, Dlamini WW, Prathibha P, Turner JR, Ushe M, Checkoway H, Sheppard L, Nielsen SS. Severity of parkinsonism associated with environmental manganese exposure. *Environ Health*. 2021 Mar 15;20(1):27. doi: 10.1186/s12940-021-00712-3. PMID: 33722243; PMCID: PMC7962371 1. Airton C. Martins Jr., Priscila Gubert, Gustavo R. Villas Boas, Marina Meirelles Paes, Abel Santamaría, Eunsook Lee, Alexey A. Tinkov, Aaron B. Bowman & Michael Aschner (2020) Manganese-induced neurodegenerative diseases and possible therapeutic approaches, *Expert Review of Neurotherapeutics*, 20:11, 1109- 1121, DOI: 10.1080/14737175.2020.1807330

It should also be noted that formula-fed babies may be at increased risk of manganese toxicity, leading to adverse neurodevelopmental outcomes even when the manganese levels in tap water do not exceed safe levels for adults and older children. This is due to the increased manganese in some formulas. These infants need to be provided with bottled water. See this journal article: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6830775/>

In Closing: The Hermosa mine and South 32 received unique federal support as the only hard rock mine included in Fast41. This federal support was given in advance of the environmental review because the aim of Fast41 is to reduce permitting times. That is no excuse to forgo robust environmental analysis and human rights due diligence. The Forest Service should follow the UN Guiding Principles (UNGPs) on due diligence to meet due diligence standards. Given the demographics of Santa Cruz County, a failure to do so will be considered an act of environmental injustice.

I hereby incorporate the comments submitted by Sky Island Alliance, the Center for Biological Diversity, and other conservation organizations.

Thank you for your consideration of these comments.
Pam Lemke MS, CNM, RN (retired)