Date submitted:10/12/24
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Comments:
I am a physician whose career has centered around prevention and treatment of chronic illness including toxin load and its impact on immune, neurologic and vascular functions. The most recent EIS of the Perpetua/Stibnite gold mining project does not address the specific concerns I presented previously centering around air and water quality and contamination of air and water by the mine. I will reiterate those concerns.

1. Pg 2-224 of EIS
   "Approximately two percent of the groundwater particles originating from the Yellow Pine pit backfill are predicted to reach those groundwater areas which could observe an associated increase in groundwater antimony and arsenic."

   "In groundwater samples from alluvial and bedrock wells, analytes concentrations generally met regulatory criteria except for arsenic and antimony. Arsenic and antimony are considered the key chemicals of public health concern in groundwater in the analysis area. Highest groundwater concentrations were noted in wells directly downgradient of the legacy disturbed areas"

   Question: How will the groundwater be monitored during the mining process and afterwards? What criteria will be used to determine an "acceptable" increase in groundwater antimony and arsenic? To me, no increase in groundwater heavy metals is acceptable. There are many unknowns about the complexity of groundwater migration. The ATSDR Public Health Study that is quoted is almost 25 years old and we now know that no increase in antimony or arsenic is safe. Will production be halted if the groundwater is contaminated, or will the mine simply be fined? This will be of little consolation to those living with the health effects of the contamination.

2. Pg 2-224 quote:
   " Air emissions from the project have the potential to contribute metals to the ground surface by wet and dry deposition that have the potential to affect surface water chemistry. Most of these contributions would be in the form of particulate matter, but a portion of the local aerial deposition of mercury may also occur in elemental form. Total mercury emissions from the project are predicted to be approximately 13.6 pounds of mercury per year."

   The report concludes without evidence that "aerial deposition would have a minor to moderate, long term effect on particulate mercury loads in streams within the project watershed, depending on the annual precipitation conditions." There is no plan to monitor air or water quality during the project for mercury deposition.

The entire town of McCall depends on the water quality of Payette Lake for drinking water. The risk of long-term contamination of this body of water alone is significant and there is no plan to monitor it or stop the project if it surpasses a threshold.

New information involves the Haile Gold Mine in S. Carolina which was fined $100,000 in 2021 for release of excessive amounts of mercury, failure to submit required pollution tests and providing misleading statements. This occurred in a similar setting to our own – a small town nearby with permanent damage. This is a clear example of what could happen here. Bonnie Gestring of Earthworks has said that "mercury is such a highly toxic pollution. It is really impossible to remediate."

Medically, mercury is a significant risk factor for headaches (including migraine), nerve damage, loss of peripheral vision and muscle weakness. It is also associated with oxidative stress and impairment of the ability to make glutathione in humans. This impairs our overall detoxification capabilities for all toxins. Increased toxin load is a risk factor for cancer in general.

Antimony also decreases free glutathione levels and decreases detoxification capabilities. We know that it accumulates in plants and soils. Plant concentration can exceed 440 ppm and remains pronounced around mining areas. This extends toxic effects into humans or wildlife consuming such plants. Human contact with contaminated soil is one of the major exposure pathways. Antimony and mercury, as heavy metals, are not destroyed but rather recycled constantly in the geosphere and biosphere.
Ref: Int J Environ Res Public Health, 2022 Apr; 19(8): 4669
Published online 2022 Apr 12. Doi:10.3390/ijerph19084669.

I would also like to comment on the inaccuracy of claims that antimony is important for national security. There are no current or planned antimony processing plants in the United States. Any antimony concentrate produced in the US must be shipped to Asia for processing. Antimony is common in many precious metal mines in the United States and any of these mines could provide antimony if domestic processing becomes available.

Question: How will the air, soil and plant contamination with mercury and antimony be measured? What actions will be taken if thresholds are exceeded? How will screening and treatment of acute and chronic heavy metal exposures be available to the surrounding communities and onsite workers? What information will be available to the public regarding these possible health hazards? Because there is no real remediation once the contamination occurs, I would argue against any permit to mine in this area.

3. The significant risk of hazardous materials spills from prolonged and frequent transport increases proportionally with the number of transport vehicles involved.

The impact of even 1 spill in a rural area with limited resources and nearby waterways would be a very significant risk for contamination of air and water. Hazardous materials spills are the responsibility of local Fire Departments. The proposal does not indicate that there would be any Technician Level (NFPA 472) Hazardous Material Responders available to respond quickly and with the most expertise/equipment to a spill. These logistical, economic and other risks of road closures involved in such situations have not been addressed.

Conclusion:
The EIS clearly states that the mine will result in further degradation to the water of the East Fork of the South Fork of the Salmon River. The open pit mine proposed will negate the money and time already invested by USFS and EPA to contain the toxins already present, will require water treatment in perpetuity, and ensure further contamination with heavy metals impactful to water, air, soil, plants and human health.

Sincerely
Gail Eberharter Rankin, MD