Dear Arizona Department of Environmental Quality,

I’m writing to request you not approve the proposed South32’s Hermosa permit (#AZ0026387) for discharging pumped aquifer waste water into Harshaw and Alum Creeks in its current form. The likely adverse impacts allowed by this proposed permit include reduction in groundwater due to aquifer pumping and adverse physical and chemical impacts due to significantly increased flow rates in Harshaw and Alum creeks from South32 discharges.

*Groundwater Impacts*

Pumping out the aquifer waste water will undoubtedly reduce the water table level in the area and will likely adversely affect the water supply of numerous neighbors. The change in hydraulic gradients around the mine will very likely change the where current springs emerge, permanently drying natural water sources. Neighboring ranchers will likely be adversely impacted as groundwater fed livestock tanks could dry up. *It’s not clear that replenishing the groundwater with the treated aquifer waste water, rather than discharging it, was considered. ADEQ should evaluate recharging the aquifer as an alternative to discharge.*

*Stream Impacts*

Up to 6.5 million gallons of water per day is proposed to be discharged into Harshaw Creek and up to 172,000 gallons per day into Alum Creek. Such large volumes will far exceed the usual intermittent, and base flows in these creeks. This will likely result in significant adverse physical impacts, including significant upstream erosion and excessive downstream sedimentation.

In addition to the physical impacts, such large volumes of water introduced into these creeks will also likely liberate and transport numerous toxic materials existing within the sediments of both Lower Harshaw and Alum Creek. These contaminants, including acid, lead, copper, and zinc, are well known remnants of legacy mining in the area. In fact, EPA, USFS, and ADEQ are very aware of this issue and have formed a partnership to remediate many of these sediments in Harshaw Creek. I’m attaching an EPA fact sheet describing this partnership.

The proposed discharges from South32 are likely to release these known contaminants from the sediments in the creeks, yet the permit only names a point of compliance immediately downstream of the outfall. *ADEQ should require additional monitoring further downstream and require South32 to continue to remediate the contaminated creek sediments released as a result of their discharges.*

For these reasons, I request the Arizona Department of Environmental Quality to not issue the proposed permit in its current form.

Sincerely,

James Nolan

Seattle, WA