Nancy Coyne

I am concerned that the AZDEQ protect the land, water and air quality of Arizona from being contaminated by pollutants, heavy metals, noxious materials and toxic runoff....as mandated by law in ARS 49-204(A)(1),(7),(9) and (10)...Please do not approve the permits for South32 (No.AZ0026387) to discharge tremendous amounts of mine water extracted from the acquifer and released without updating the TMDL. This is a gigantic new mining operation, NOT a continuation of a small 1963 mine. The impact of releasing up to 6.48 million gallons of mine water per day (for an undisclosed time) into Harshaw Creek, and it's impact on Sonoita Creek (which runs through the town of Patagonia and empties in Patagonia Lake may be catastrophic.) A discharge of contaminated acidic water polluted with heavy metals, will likely have a huge impact on the health and welfare of residents of the town, users of the lake, and all the plant and wildlife in this riparian area which is a jewel of biological diversity.
AZDEQ must do the TMDL analysis and set standards in order to comply with the Clean Water Act.The point of discharge is in Upper Harshaw Creek (listed as impaired), which obviously also impacts Lower Harshaw Creek.The AZDEQ must revise its grossly outdated TMDL for Upper Harshaw Creek, and acknowledge the impairments to Lower Harshaw Creek and prepare a TMDL for Lower Harshaw Creek BEFORE it can issue the proposed AZPDES permit.
The same is true for Alum Gulch, which is impaired with elevated levels of cadmium, copper, lead, zinc and acidic pH that can result in heavy metals contamination. So, a new TMDL is also required for Alum Gulch.The tailings pile also contains tons of new mine waste materials, and thus seepage is not only from the historic tailings. AZDEQ must do a current analysis and update the TMDL BEFORE issuing a renewed permit.
These creeks, with contaminated water, flow into Sonoita Creek, which is impaired with zinc. Thus AZDEQ must complete a TMDL for zinc for Sonoita Creek, and a waste load allocation for discharges into Sonoita Creek. This is required by the Clean Water Act so that South32's discharges will not further contaminated or degrade these downstream waters but can support the future restoration of water quality in the creek.
Furthermore, the permit must include frequent or continual monitoring for all contaminates including Maganese and sulfate, not the infrequent periodic review in the Draft Permit. This close monitoring is necessary to protect human health and the drinking water systems and infrastructure of the Town of Patagonia and residents of the area BEFORE issuing a renewed permit.
The people of Arizona place their trust in the AZDEQ to uphold the requirements of the Clean Water Act and ensure that we are not exposed or ingesting water contaminated with arsenic. cyanide, lead, cadmium, mercury, uranium, manganese or sulfur.
We implore you to live up to the trust and do what is not only right but also legally mandated to protect human health and the quality of our environment.
Thank you for standing strong and doing your job.

Summary of Proposed Comments to ADEQ On Proposed Renewal of AZPDES Discharge Permit No. AZ0026387 to South32 Hermosa, Inc.
The Patagonia Area Resource Alliance (PARA) objects to the proposal from Arizona Department of Environmental Quality (ADEQ) to renew the Arizona Pollutant Discharge Elimination Permit (AZPDES) No. AZ0026387 for South32's Hermosa Project mine. A summary of PARA's primary objections to the Permit are listed below. The proposed Permit would allow for dangerous

discharges of mine water to Harshaw Creek, Alum Gulch, and Sonoita Creek, threatening the health of local residents and the environment in violation of the Federal Clean Water Act and Arizona's laws relating to surface water quality. The issuance of the Permit, as written, is also contrary to ADEQ's own statutory duties which require, among other things, that ADEQ "act to protect the environment", promote "the protection and enhancement of the quality of water resources", provide for the "prevention and abatement of all water and air pollution"; and "[e]nsure the preservation and enhancement of natural beauty" in our state. A.R.S. § 49- 204(A)(1), (7), (9) and (10). Instead of doing its job to enforce the discharge provisions of the Clean Water Act to protect human health and the environment as required by law, ADEQ appears to have instead spent a great deal of time and effort during permit drafting attempting to avoid these core obligations and responsibilities. Under controlling law, the Permit cannot issue until, among other things, ADEQ updates or first prepares the Total Maximum Daily Load (TMDL) studies and necessary waste load allocations required by the Clean Water Act so that the impaired (contaminated) surface waters of Harshaw Creek, Alum Gulch, and Sonoita Creek can finally be returned to good health. Section 303(d) of the Clean Water Act requires states to identify waters that are impaired by pollution, even after application of pollution controls. For those waters, states must establish a TMDL of pollutants to ensure that water quality standards can be attained. A TMDL is both a quantitative assessment of pollution sources and pollutant reductions needed to restore and protect U.S. waters and a planning process for attaining water quality standards. The TMDL program is a core element of overall efforts to protect and restore water quality to surface waters across the United States and here in Arizona. ADEQ's concerted efforts to avoid or trivialize its TMDL obligations in the Permit is astounding. HARSHAW CREEK The AZPDES Permit would allow discharge of up to 6.48 million gallons of mine water per day into Upper Harshaw Creek. This water will be produced from deep and destructive mine dewatering wells, and it will include historic and new seepage from the mine's tailings piles, core cuttings, and potentially acid-generating (PAG) rock from mine shaft development. The waters of Upper Harshaw Creek are impaired (contaminated) with elevated levels of copper, and low pH (acidity) that can result in heavy metal contamination. Despite documented impairments in the receiving waters of Harshaw Creek, ADEQ takes the position that it need not prepare a TMDL analysis to regulate South32's discharges into these impaired surface waters so that water quality standards can be achieved. This violates the Clean Water Act. ADEQ has long been in possession of evidence and documentation that (1) the discharge location for Harshaw Creek (Outfall 002) is located in the impaired segment of Upper Harshaw Creek; and (2) the downstream segment of Lower Harshaw Creek is also impaired, including from acid mine drainage from historic mining in the area. Nevertheless, ADEQ fails to acknowledge that it cannot issue the proposed AZPDES to South32 without first updating its 20-year-old TMDL for Harshaw and performing a waste load allocation of South32's massive new discharge in order to bring Harshaw Creek's water quality into compliance. This threatens human health and the health of the environment. Public records also show that ADEQ has already been allowing South32 to discharge mine water into Harshaw Creek (under its expired AZPDES permit) for the last few months – since at least August 2023. The Draft Permit and public fact sheet totally fail to acknowledge this fact, and ADEQ denies that discharge data is available in calculating critical numeric permit limits in the draft. Ø COMMENT: ADEQ claims without basis that the discharge location (Outfall 002) is in Lower Harshaw Creek. However, PARA has provided ADEQ with extensive evidence and documentation showing that Outfall 002 is actually constructed in Upper Harshaw Creek which is listed as impaired for various pollutants under Arizona's Clean Water Act 303(d) list. Accordingly, ADEQ must revise its grossly outdated TMDL for Upper Harshaw Creek before issuing this renewed Permit. Ø COMMENT: ADEQ must acknowledge the impairments in Lower Harshaw Creek and prepare a TMDL for Lower Harshaw before it can issue the proposed AZPDES permit.

Ø COMMENT: ADEQ must acknowledge the true extent of the ongoing discharge to Harshaw and revise this Permit accordingly to include this discharge data in calculating permit limits – before issuing this renewed permit. ALUM GULCH The AZPDES Permit would allow South32 to discharge up to 172,000 gallons of mine water per day into Alum Gulch. The waters of Alum Gulch are impaired (contaminated) with elevated levels of cadmium, copper, zinc, lead, and low pH (acidity) that can result in heavy metal contamination. ADEQ must prepare a new TMDL for lead (since no TMDL has ever been prepared for lead) and it must update its outdated TMDL for the other contaminates. This is required by the Clean Water Act to demonstrate that South32's discharges will not further contaminate or degrade these surface waters but rather, will support the future restoration of water quality in Alum Gulch. ADEQ appears to have no plans to complete this work. Instead, ADEQ has written the Permit to simply avoid these requirements in violation of the Clean Water Act. This threatens human health and the health of the environment. Ø COMMENT: The outdated TMDL must be updated and a new TMDL study must be completed on the new lead impairment in Alum Gulch – before ADEQ issues the renewed Permit.
. Ø COMMENT: ADEQ's workaround proposal to only allow discharge from "historic tailings" into Alum Gulch is absurd. It ignores documented facts about how South32 has operated this mine site for years. It also disregards the well-known fact documented by both South32 and ADEQ that the tailings pile and mine seepage from this pile includes dangerous new sources of pollutants. Indeed, the tailings pile has, for years, been used by South32 to hold many tons of new waste rock, exploration rock, treatment plant waste, and potentially acid-generating material. ADEQ's tortured analysis and conclusion that the only mine seepage that will be discharged to Alum Gulch from the tailings pile will come from historic tailings is wildly inaccurate and misleading to the public. ADEQ must revise this provision – before issuing this renewed Permit. SONOITA CREEK Both Alum Gulch and Harshaw Creek are tributaries to Sonoita Creek. PARA's hydrology experts have demonstrated that the significant discharges of mine water to these tributaries will reach the waters of Sonoita Creek. The waters of Sonoita Creek are impaired for zinc, however ADEQ has never completed the required TMDL study for this impairment. The Draft Permit and Fact Sheet never acknowledge this key fact. Ø COMMENT: ADEQ must complete a TMDL for the zinc impairment in Sonoita Creek – before issuing this renewed Permit. Ø COMMENT: ADEQ must perform a waste load allocation for the discharges to Sonoita Creek. This is required by the Clean Water Act so that South32's discharges will not further contaminate or degrade these downstream surface waters but rather can support the future restoration of water quality in the Creek. THE HERMOSA PROJECT IS A BRAND-NEW MINE The historic activities that took place many decades ago at the Trench Camp mine in no way resemble the large-scale industrial mine being developed by South32 today. When the mining company bought the abandoned mine through the ASARCO Custodial Trust in 2016, not a single building or structure remained, except for contaminated historic tailings and mine shafts that were managed for remediation purposes only.
The deep mine shafts, two wastewater treatment plants, exploration shafts, dewatering wells, new expanded tailings facility containing both historic and new material, tailings drainage pond, and associated infrastructure at the Hermosa Project site were built within the last 10 years (or are currently being constructed) for the purpose of constructing this massive and destructive new mine. Despite these clear and obvious facts, ADEQ has failed to perform a "new source" analysis to determine if South32's is subject to the modern requirements of the Clean Water Act, taking the position that this new mine project is nothing more than a continuation of an old historic mine. The fact that historic mining occurred previously at a small portion of the Hermosa Project site does not forever exempt any of South32's new mine workings, shafts, structures, and facilities from being considered a "new source" under the Clean Water Act. Ø COMMENT: ADEQ must determine these new facilities to be legal "new sources" of discharge – before issuing this renewed Permit. Ø

COMMENT: ADEQ must revise the Permit to acknowledge that this mine is expected to go into production during the life of this Permit. Ø COMMENT: As a new source, the mine is subject to all modern performance standards and requirements of the Clean Water Act. MANGANESE AND SULFATE MUST BE MONITORED ADEQ has the discretion to revise the Draft Permit to include monitoring for a certain (secondary) category of contaminants which includes manganese and sulfate. Elevated levels of these contaminants can cause noticeable odors, tastes, and smells in the water. They also have the potential to harm human health and damage and corrode water pipes, fixtures, and other infrastructure, and have destroyed entire water systems leaving them unusable. As the Hermosa Project is a zinc, lead, silver, and manganese mine, these contaminants are likely to be present in the discharged wastewater. Ø COMMENT: ADEQ must revise the Draft Permit to require monitoring for manganese and sulfate in order to protect human health and the drinking water
before issuing this renewed Permit. MONITORING MUST BE DONE MORE FREQUENTLY The Draft Permit contains several different monitoring requirements. Some of these are intended to serve as so-called "triggers" where detection of contaminants above certain levels can trigger additional testing. Some are for collecting information about the discharged wastewater. These detect things like toxicity, arsenic, cyanide, cadmium, lead, mercury, and uranium, and are important measurements. However, the Draft Permit only requires these measurements be taken once per quarter (Assessment Levels), twice per year (Discharge Characterization Testing), even only once per year (Whole Effluent Toxicity), which is far too infrequent. As ADEQ is aware, the Town of Patagonia and many local residents only treat their water with chlorinating disinfectant prior to use. We are extremely concerned about the potential effects on human health from contaminants at elevated levels like arsenic, cyanide, cadmium, lead, mercury, uranium in our water, which may go undetected due to insufficient monitoring requirements. Ø COMMENT: ADEQ must revise the Draft Permit to require this important monitoring be done at least monthly.