

U.S Environmental Protection Agency, Region 9
Drinking Water Protection Section, Mail Code WTR-3-2
75 Hawthorne Street
San Francisco, CA, 94105
Attention: Nancy Rumrill
Sent by email to: rumrill.nancy@epa.gov

RE: Comments regarding Gunnison Copper Project Class III Draft Underground Injection Control Permit

Dear Ms. Rumrill,

I appreciate the opportunity to comment on the Draft Class III Underground Injection Control Permit (UIC) for Excelsior Mining's Gunnison Copper Project located in Cochise County, Arizona.

This project uses a mining method called in-situ mining to mine copper. This method, by definition, intentionally pollutes groundwater. Excelsior plans to drill 1,400 wells up to 1,400 feet deep and to inject over 7 million gallons of acid per day directly into an aquifer of drinking water quality. This acid would leach copper and other toxic minerals from underground rock which would then be pumped to the surface and copper would be extracted from the water.

To date, there are no commercial in-situ project at greenfields sites anywhere in the United States. In-situ mining has been used to mine for uranium, but to date, **no** in-situ mine has returned groundwater to pre-mining conditions. I am concerned that groundwater in the Dragoon area could be permanently polluted and unavailable for families and businesses.

I am very concerned because Arizona is currently experiencing a severe drought with no signs of abatement and every drop of groundwater is precious. The EPA needs to exercise extreme caution in permitting any activity with the potential of contaminating groundwater especially since this project would use an untested technology for copper production and is proposed by a new mining company that has never attempted this type of mining.

Conceptual flow models of the project area and surrounding area indicate that existing water wells could be permanently compromised. Some studies have suggested that groundwater quality continues to decline even after post-mining groundwater rinsing has been completed.

The Environmental Protection Agency's draft UIC permit is inadequate to effectively detect potential pollution because there are not enough monitoring wells, and there is not sufficient modelling to best determine their placement. EPA must vastly increase the number of required outer monitoring wells from five to at least 25, and that these wells be drilled over a broad area extending further from the project site. Additional monitoring wells should be placed where contaminants would be most likely to migrate based on additional modelling. The monitoring schedule for these wells is inadequate. All monitoring wells should be drilled at least one year prior to commercial operation, and extensive baseline water quality data should be collected by a

third-party laboratory for all of them and posted online. Baseline data should include every known constituent of concern that could degrade groundwater quality in any way.

Excelsior (the mining company) and EPA must demonstrate that they are committed to the preservation of baseline water quality. If pollution is found in the monitoring wells, Excelsior must cease all injection operations immediately until the problem is fixed.

EPA did not conduct a Cumulative Impacts Analysis. This analysis must be completed and incorporated into a revised/supplemental draft UIC.

The draft permit allows water quality parameters to be determined after the issuance of a final permit. These levels must be determined before the issuance of a final permit and must be subject to public comment.

In light of the prevalence of uranium and other radioactive chemicals associated with Arizona copper deposits, the list of radioactive chemicals and elements sampled in monitoring wells should be expanded.

The historic preservation review process for this permit is inadequate and needs to be redone before a final permit may be granted. The historic preservation review process should include cultural and archeological surveys at a minimum. The assessment should also give attention to the landscape scale, indirect, and cumulative effects to the well-known historic property complexes in the immediate vicinity.

I have grave concerns about the granting of an Aquifer exemption for this project. If EPA grants this exemption, a current and future source of drinking water would be permanently compromised.

Due to the lack of explanation as to the origin of EPA's interpretation of critical regulatory terms, the lack of a cumulative impacts analysis as required, and the issues raised in my comments, the draft UIC package is incomplete. A revised/supplemental draft UIC permit must be completed and re-noticed for at least a 90-day public comment period. Please keep me informed of any further actions regarding this matter.

Sincerely,