



STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

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5 February 2024

Clint Chisler, Uranium Reclamation Coordinator
Mining and Minerals Division (MMD)
Mining Act Reclamation Program
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Ecological Risk Assessment for the St. Anthony Mine Pit 1 Site, Cibola County, New Mexico, Permit No. MK006RE; NMDGF No. 3127.

Dear Mr. Chisler:

The New Mexico Department of Game and Fish (Department) has reviewed the Ecological Risk Assessment for the St. Anthony Mine Pit 1 Site (ERA), submitted by United Nuclear Corporation and General Electric (UNC/GE). Staff from the Department, MMD, New Mexico Environment Department, and INTERA conducted a site inspection on 17 January 2024. Department staff observed approximately 200-300 water birds on the Pit 1 lake; species included: American coot (*Fulica americana*), canvasback (*Aythya valisineria*), and mallard (*Anas platyrhynchos*).

UNC/GE proposes to partially backfill Pit 1 so that it will continue to function as a hydraulic sink for contaminated groundwater. This action will keep the backfill elevation below the Jackpile-Dakota contact zone, thus preventing flow into the local, uncontaminated aquifer. The final configuration of the proposed Pit 1 reclamation will allow sections of bedrock stratigraphy along the highwall that surrounds the pit lake to remain exposed and assumes a future expression of groundwater at the base of Pit 1.

Section 2.1 of the ERA states that "Future maximum surface water concentrations are expected to be similar to concentrations measured in Pit 1 prior to the sodium tripolyphosphate (STPP) pilot test. These measured Pit 1 concentrations would therefore be representative of undisturbed expressed water conditions over the 30-year period after mine closure." This statement suggests that 30 years after STPP treatment, pit lake uranium and radon concentrations are expected to return to pre-treatment levels. The Department requests further information regarding the rationale of the STPP treatments and their effectiveness in reducing uranium and radon levels in the short term and whether UNC/GE anticipates repeating the STPP treatments every 30 years or as levels of uranium and radon dictate.

The Department believes that the hydrogeological complexities at the site and associated, inherent uncertainties will make prediction of future, long-term pit lake water quality extremely difficult. In addition, the potential long-term effects of climate change and prolonged drought could lead to the evapoconcentration of trace elements in the pit lake water, resulting in hazardous water quality conditions for wildlife. Therefore, the Department does not agree with

the definitive statement regarding long-term pit lake water quality in Section 5.3 that “The results of this ERA indicate that wildlife and livestock are not at risk from exposure to the Pit 1 environment”. The Department continues to recommend that UNC/GE install pit lake perimeter fencing to exclude wildlife, as previously recommended in the St. Anthony Mine 30% Closure/Closeout Plan comments letter submitted to MMD on 23 February 2023 (NMERT-2239).

At minimum, the Department recommends providing nearby sources of clean drinking water to attract wildlife away from the pit lake. Drinker tanks should be designed with textured escape ramps to prevent entrapment and drowning of smaller animals. The Department is available for consultation regarding the different types of appropriate wildlife drinker tanks.

The Department does concur with the evaluation that birds are unlikely to build nests on the exposed band of Jackpile sandstone. The formation lacks suitable crevices, cavities, and ledges that are necessary for nesting birds and roosting bats. The surrounding habitat provides an abundance of cliff lines and bluffs that are suitable for birds and bats. Staff from the Department, MMD, and INTERA observed an active red-tailed hawk (*Buteo jamaicensis*) nest with an adult and two downy young present on 6 June 2023. The nest was located on a cliff face approximately 0.6 miles from Pit 1.

Thank you for the opportunity to provide comments on the ERA. If you have any questions, please contact Ron Kellermueller, Mining and Energy Habitat Specialist, at (505) 270-6612 or ronald.kellermueller@dgf.nm.gov.

Sincerely,

Matt Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division

cc: USFWS NMES Field Office