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20 February 2024

Carmen Rose, Permit Lead
Mining Act Reclamation Program
New Mexico Mining and Minerals Division (MMD)
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Modification 24-1 to Emma-B Exploration Project, Freeport-McMoRan Tyrone Operations, Permit No. GR083EM; NMDGF No. NMERT-3176.

Dear Ms. Rose,

The New Mexico Department of Game and Fish (Department) has reviewed the exploration project modification referenced above. Freeport-McMoRan Tyrone Operations (Tyrone) is proposing to drill an additional 26 exploratory bore holes, to a maximum depth of approximately 1,300 feet, from a total of 25 drill pad sites. The proposed drilling sites are located near previously drilled and reclaimed exploration sites. The project area is located in Grant County, Township 19S, Range 15W, Sections 25 and 36. The proposed drilling project would disturb a total area of approximately 4.97 acres. Staff from the Department, MMD, New Mexico Environment Department (NMED), and Tyrone conducted a site inspection on 14 February 2024. The Department provides the following recommendations to minimize potential impacts of the proposed action to wildlife and wildlife habitat.

The permit application states that, in order to prevent wildlife entrapment, plastic tarps will be placed over the drilling mud pits. The Department believes that placing plastic tarps over the mud pits may not adequately prevent wildlife from entrapment and recommends that, if tarps are used, they be securely anchored over the pits. The mud pits should also be adequately fenced to prevent larger animals from walking onto the tarps and potentially becoming entrapped. To exclude mule deer and other large animals, the above-ground fence height should be a minimum of eight feet. The Department continues to recommend that Tyrone use a closed loop drilling system. Closed loop systems eliminate the need to build fences or install netting or similar materials to exclude wildlife from mud pits, reduce the amount of surface disturbance associated with the drill pad site, and consume significantly less water.

During drilling operations, it is also important to prevent wildlife from entering and becoming trapped in stockpiled drill pipes. Capping piping is the most effective way to prevent wildlife entry. At a minimum, the Department recommends that each section of pipe should be visually inspected prior to use to verify that wild animals are not inside.

To minimize the likelihood of adverse impacts to migratory bird nests, eggs, or nestlings during road and drill pad construction activities, the Department recommends that ground disturbance

and vegetation removal activities be conducted outside of the primary breeding season. This breeding season is 1 March – 1 September for migratory songbirds and most raptors; for golden eagle (*Aquila chrysaetos*) and great horned owl (*Bubo virginianus*) it is 1 January – 15 July. If ground disturbing and clearing activities must be conducted during the breeding season, the area should be surveyed for active nest sites (with birds or eggs present in the nesting territory) and avoid disturbing active nests until young have fledged. For active nests, establish adequate buffer zones to minimize disturbance to nesting birds. Buffer distances should be a minimum of 100 feet from songbird and raven nests; 0.25 miles from most raptor nests; and 0.5 miles for American goshawk (*Accipiter atricapillus*), golden eagle, peregrine falcon (*Falco peregrinus*), and prairie falcon (*Falco mexicanus*) nests. Active nest sites in trees or shrubs that must be removed should be mitigated by qualified biologists or wildlife rehabilitators. Department biologists are available to consult on nest site mitigation and can facilitate contact with qualified personnel.

The Department recommends that, to the maximum extent feasible, large mature trees are left undisturbed during road and drill pad construction. Tree species that should be left undisturbed include alligator juniper (*Juniperus deppeana*), piñon pine (*Pinus edulis*), and all species of oak (*Quercus* spp.).

The Department concurs with the proposed seed mix. The Department also recommends that only certified weed-free seed be used to avoid inadvertently introducing non-native species to the reclamation site. Any alternate plant species, used to substitute for primary plant species that are unavailable at the time of reclamation, should also be native. When possible, the Department recommends using seeds that are sourced from the same region and habitat type as the reclamation site and suggests including seeds from a region that represents potential future climatic conditions at the site.

During the site inspection, staff from the Department, MMD, and NMED observed that some of the previously drilled and reclaimed pad sites had significantly exceeded the permitted area of disturbance. This was likely the result of substantial cut and fill earthwork, which is required to develop a level drill pad site in steep terrain. Tyrone needs to account for the effects of steep terrain when calculating the total area of disturbance for their minimal impact exploration permit application.

Thank you for the opportunity to review and comment on the proposed exploration project. 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