



United States Department of the Interior



NATIONAL PARK SERVICE
Montezuma Castle and Tuzigoot National Monuments
527 S. Main St.
PO Box 219
Camp Verde, AZ 86322

IN REPLY REFER TO:

November 2, 2016

Freeport Minerals Corporation
Attention: Alicia Voss
333 North Central Ave.
Phoenix, AZ 85004

Dear Ms. Voss,

This letter addresses the National Park Service's (NPS) concerns with the recently released draft *Remedial Action Work Plan (RAWP) for the United Verde Soil Program VRP Site, VRP Site Code 512101-00*. We understand that the plan was submitted in accordance with the A.R.S § 49-175 and specifically addresses the removal of contaminated soil from residential, non-residential, and publicly-owned properties in Clarkdale, Arizona. We do not believe the plan adequately addresses all of the potential environmental impacts of transporting, treating, and storing contaminated soil. The dumping and storage of soil on lands currently owned and managed by the Freeport Minerals Corporation (FMC) is particularly concerning as the proposed Excavated Soil Staging Area (ESSA) and Soil Repository are within a few hundred feet of the Tavasci Marsh. Tavasci Marsh is part of Tuzigoot National Monument (TUZI) and is listed as an Important Bird Area (IBA) and is habitat for many unique and sensitive species of plants, animals, fish, amphibians, and reptiles including the threatened Northern Mexican gartersnake (*Thamnophis eques megalops*).

As you know, TUZI has a long history of interaction with the United Verde Copper Company (UVCC) and its successors. In fact, it was the UVCC that eventually ceded the land to create TUZI. Despite our long relationship, the environmental consequences of mining and copper production have often been at odds with the NPS mission goals. For example, dust storms containing mine tailings often interfered with visitor enjoyment until they were capped and mitigated in 2006. So, while we certainly understand that the remediation of contaminated soil in Clarkdale will help to protect community health, we also believe

that there are many potential environmental impacts that are not adequately considered in the draft RAWP.

The RAWP mentions the need for grading and right-of-way permits issued by the Town of Clarkdale as well as “adherence to permit standards” and consistency with “applicable federal, state, and local requirements”.¹ Will FMC apply for other permits associated with the removal and transport of contaminated soil? Similarly, are there other documents or plans which analyze the potential environmental impacts of the proposed transportation and long-term storage of contaminated soil in more detail? In lieu of these documents, we have the following comments and questions.

The RAWP identifies a protocol for soil transportation that states “trucks will follow a direct route using major roadways and avoid neighborhood streets to the extent practicable...truck drivers will be instructed as to the preferred routes between the property, backfill source, and ESSA prior to initiating hauling activities”.² How many trucks will be operating in the area each day? Where is the backfill source? Will FMC be responsible for damage to the road caused by truck traffic?

Although the RAWP addresses concerns with traffic-flow in residential neighborhoods, it does not discuss the potential impacts caused by dump trucks on Tuzigoot Road, which is owned by the NPS. Tuzigoot Road is a major access route to the Verde River as well as an access route to pedestrian trails on NPS, Arizona State Park, and Forest Service lands. Has FMC considered how increased traffic on Tuzigoot Road will impact recreational activities, Arizona State park and NPS operations, visitor enjoyment, and the local economy?

The RAWP also states that “Any materials spilled during transport will be cleaned up and removed as soon as practicable”.³ To reach the ESSA, trucks must cross over the Verde River via the Tuzigoot Bridge. Does FMC have a more detailed contingency plan for spills that could occur in or around the Verde River?

TUZI contains ancestral Native American sites and historic buildings listed on or eligible for the National Register of Historic Places. These important places interpret human occupation and land use in the Verde

¹ GHD, 2016, *Draft Remedial Action Work Plan Voluntary Remediation Program*, submitted to Freeport Minerals Corporation, Report No 4. Appendix D, pp.1.

² Ibid. pp.12

³ Ibid. pp.12

Valley and represent the enduring cultures and histories of living Native American people. Depending on the expected truck and equipment traffic on Tuzigoot Road, FMC operations may have short and/or long-term visual and auditory impacts to these properties. Similarly, the use of trucks and heavy equipment will also have negative impacts to visitor experience in and around TUZI. More information on the number of trucks and the expected duration of the project would be helpful for assessing and understanding these impacts in more detail.

Appendix A: Dust Control Measures, proposes several techniques to minimize fugitive dust generation from proposed excavation and treatment activities. For activities on FMC land, Peck's Lake is identified as a primary water source for controlling fugitive dust. Water removal has the potential to disturb lake sediments, which reportedly contain metal contaminants.⁴ Project activities have the potential to disturb these sediments, which could then be flushed into Tavasci Marsh. Although the RAWP describes water quality testing for dust control using Peck's Lake water, how will FMC avoid disturbing lake sediments?

Appendix B: Excavated Soil Staging Area Operations Plan identifies a location and techniques for storing, testing, and treating contaminated soils. TUZI is particularly concerned with the proposed location for these activities because it is within a few hundred feet of the Tavasci Marsh, an important component of the Verde River system. This area is also subject to seasonal flooding, particularly during the Summer Monsoon. The development of the ESSA, as defined in the RAWP includes the construction of a berm and the creation of concrete pads and a work area, in part, to control flooding, erosion, and the transport of contaminated soil into the marsh. Has FMC considered the potential environmental impacts of large-scale ground disturbance in and around the Tavasci Marsh?

We understand that the use of Toxicity Characteristic Leaching Procedure (TCLP) and Synthetic Precipitation Leaching Procedure (SPLP) analysis is needed to characterize soils and determine final storage locations for contaminated soils. It is unclear what long-term measures will be taken to manage soil with testing results below the regulatory thresholds identified in the RAWP. We also understand that decommissioning the ESSA will follow extensive soil testing. Does FMC have baseline data on arsenic, copper, lead, and other heavy metals that may already be present in soil from this area? If so, how do these levels compare with the regulatory thresholds identified in the RAWP?

⁴ Ecology and Environment, Inc., 1994, *Expanded site inspection summary report (analysis of ESI results) Phelps Dodge Verde Mine*, submitted to U.S. Environmental Protection Agency, EPA ID# AZD983475773.

Soil removed from Clarkdale contains seeds of invasive plant species including but not limited to tree of heaven (*Ailanthus altissima*), periwinkle (*Vinca major*), and Russian thistle (*Salsola tragus*). The transportation and storage of soils containing invasive seeds will spread these plants into new areas around Tavasci Marsh. The close proximity of the ESSA to the TUZI boundary would mean that the burden to control these invasive plants, as they spread into NPS land, would become the responsibility of the NPS. Does FMC have an invasive plant management strategy for preventing the spread of invasive plants in the ESSA? If so, is a copy of this strategy available for NPS review?

Appendix C: Soil Repository Operations Plan addresses the long-term operation and maintenance of the ESSA and Soil Repository. This includes a proposed annual monitoring and reporting period of ten years. Will copies of these annual reports be provided to the general public and the NPS? What happens after the ten year period? Appendix C identifies monitoring following unplanned events such as fires, floods, heavy rains, and seismic events. If contaminants linked to historic smelter operations or the proposed soil remediation program are discovered in Tavasci Marsh, will FMC take responsibility for coordinating and implementing clean-up efforts on NPS land?

Appendix C identifies a monitoring program following storm water discharge events. Appendix C states that storm water discharge will be “infrequent”.⁵ Does FMC have long-term data that indicates the infrequent nature of discharge events? Similarly, the plan states that, “the receiving stream will be sampled up-gradient and down-gradient of the discharge”.⁶ Considering the proposed ESSA and Soil Repository location, it is unclear what this sentence refers to. Presumably, “the stream” refers to Tavasci Marsh. Will FMC contact NPS in the event that sampling is required?

It is also unclear whether the proposed sampling targets water, sediment, or soil. How will specific sampling locations be chosen? If soil sampling occurs, how deep will samples be taken? A recent USGS study⁷ found copper, arsenic, and other heavy metals within marsh sediments. If FMC proposes to sample soil, how will new contamination be distinguished from existing heavy metals? Will this information be shared with NPS and the public?

⁵ GHD, 2016, *Draft Remedial Action Work Plan Voluntary Remediation Program*, submitted to Freeport Minerals Corporation, Report No 4. Appendix C, pp.3.

⁶ Ibid.

⁷ Beisner, Kimberly R., Nicholas V. Paretti, Anne M.D. Brasher, Christopher C. Fuller, and Matthew P. Miller. 2014, *Assessment of Metal and Trace Element Contamination in Water, Sediment, Plants, Macroinvertebrates, and Fish in Tavasci Marsh, Tuzigoot National Monument, Arizona*: U.S. Geological Survey Scientific Investigations Report 2014-5069.

NPS technical staff are continuing their review of the proposed plan and may have additional comments and questions. While we appreciate the opportunity to review the RAWP, it is regrettable that the NPS was not consulted regarding the development of the plan. We would appreciate the opportunity to discuss our concerns with you in more detail and hope to work with FMC in the development of this and future plans. If you have any questions or concerns, please contact me at dorothy_firecloud@nps.gov or (928) 567-5276 ext.223.

Sincerely,

A handwritten signature in black ink that reads "Dorothy FireCloud". The signature is written in a cursive style with a large initial "D" and "F".

Dorothy FireCloud
Superintendent

xc: John Patricki, ADEQ
Doug Von Gausig, Town of Clarkdale