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Subject: Cottonwood Sand Mining Project Draft Environmental Impact Report
Issued 12/16/21
(PDS2018-MUP-18-023), (PDS2018-RP-18-001); LOG NO. PDS2018-ER-18-19-007; SCH# 2019100513

Thank you for the opportunity to present the following comments on the Cottonwood Sand Mining Project Draft Environmental Impact Report issued on December 16, 2021 for public review.

San Joaquin Valley Fever (coccidioidomycosis or Valley Fever) is an incurable infectious disease. It is caused by fungal spores that can become airborne when they are disturbed in the soil of endemic areas such as the geographical region that includes the Cottonwood Sand Mining Project.

Valley Fever has increased in epidemic proportions, with each year's total caseload either close to or becoming the worst year for over two decades. With doctors' inadequate medical education about fungal diseases, Valley Fever patients are frequently ignored as they suffer their illness. Deaths from the disease are so undercounted there may be seven times more deaths than presently acknowledged (Jones) and overall infections may be fifty times greater than the recorded number of diagnoses. (Cole)

The spores that cause Valley Fever are species of Coccidioides. These are most virulent fungal parasite known to man and were regulated under the CDC Select Agent rule in two antiterrorism laws. (Dixon)

The history of weaponized Valley Fever stretches back decades including simulated terrorist attacks and consideration of the disease's effects against

minorities for use as a race-specific biological weapon. (Miller) Legislation to protect the U.S. only started after renewed interest in biological warfare in the wake of the 1995 sarin gas attack on Japanese subways. At that time the United States evaluated its own security for biological weapons and passed the Antiterrorism and Effective Death Penalty Act of 1996. After the 9/11 attacks, further biological weapons regulation was passed in the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. In recognition of the dangers, both of these laws regulated Select Agents, including the spores that cause Valley Fever (U.S. Public Law, 1996 and 2002)

Once inhaled into the lung a person or animal, Coccidioides spores cause inflammatory conditions like arthritis, rashes, and pneumonia. Valley Fever can be deadly.

In the same way that lung cancer is bad but metastasized lung cancer is far worse, when Valley Fever spreads from the lung it is known as dissemination. Up to half of disseminated Valley Fever cases attack the lining of the brain with meningitis, and this symptom is nearly always fatal unless treated with costly and frequently toxic antifungal drugs. (Bañuelos) Other cases of disseminated Valley Fever can cause inflammation or lesions in virtually any organ. When it attacks the bones with osteomyelitis, amputations are possible. (Deresinski)

Since Chronic Fatigue Syndrome and fibromyalgia are medically regarded as a "collection of symptoms" rather than diseases with a specific biological cause, it is worth noting that all of those symptoms can be caused by Valley Fever. (Muir) This effectively makes Valley Fever a possible cause of CFS or fibromyalgia. Debilitating chronic fatigue is not an uncommon manifestation of Valley Fever.

All of this information has been documented from my research into thousands of peer-reviewed medical documents, many of which were cited in my book "Valley Fever Epidemic."

Construction and mining are also major risk factors, not only to the workers themselves but also the surrounding community. Coccidioides spores have been known to blow up to 500 miles to infect people far from the original site of soil-borne spore disturbance. (DiSalvo) The endemic areas have also been expanding, increasing the number of areas at risk. (Gorris)

Although Valley Fever can cripple or kill anyone of any race, it is also uniquely known to affect people with African-American and Filipino heritage with the worst of its symptoms more often. (Ruddy) These facts are must be strongly considered both to protect the local community and potentially to protect the owners and participants of any work site from legal liability or the appearance of racial bias against minority members of the community.

Many medical resources sadly and incorrectly minimize the serious impact of fungal diseases. (Rodriguez) The Valley Fever technical appendix to the Cottonwood Sand Mine's Draft Environmental Impact Report does not include most of the information presented in this letter. It also focuses on data that would be interpreted far more severely if studied in its proper context. For example, simply noting local case report data ignored the CDC's model that would predict a far higher infection rate (Cole). This DEIR Valley Fever appendix also did not

correctly note the vast difference in safety between maintenance of a golf course (which uses grass that covers much of the soil) and a mine (which exposes soil and soil borne microorganisms repeatedly).

Soil moving activities are well known human-caused drivers of Valley Fever outbreaks and should be recognized as such. (de Perio, Nicas, Laws) The debilitation, deaths, and long-term health consequences of Valley Fever can often be traced to such digging and mining activities. From the youngest child to the oldest grandparent and even family pets, the risk is real.

Since digging, and mining would be primary activities at the proposed Cottonwood Sand Mining Project, the grave risk of Valley Fever to workers and the local community should not be ignored.

Sincerely,

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