PIMA COUNTY
ENVIRONMENTAL QUALITY

Inspection Report

Tracking ID: PC1910-033

Source: Freeport McMoran Sierrita Incorporated
Location: 6200 W Duval Mine Rd
Date: October 10, 2019
Arrival Time: 10:30 am
Departure Time: 1:00 pm
Inspector: Timothy Gentry. Jacqueline Ronstadt
Spoke With: Bryce Cooke, Environmental Specialist; Derek Berry, Tailings Dam Supervisor
Phone #:
Reason for Inspection: Complaint Response

Jackie and I arrived at Freeport McMoran Sierrita Incorporated (FMSI) at 10:30AM on October 10, 2019. We were greeted by Bryce Cooke, Environmental Specialist at the front gate and completed the notification of inspection rights protocol with him (attachment X). We were escorted to the tailings dam management office where we were met by Derek Berry, the tailings dam supervisor. We discussed the nature of our visit, to observe the tailings dam and to discuss the factors surrounding the fugitive dust release event which occurred two days prior.

We observed the tailings dam on the North phase (pic 1). We observed deposition on that section (pic 2&3). We observed fugitive dust being picked up and dispersing within the confines of the tailings dam (pics 4&5). We walked out toward the area where the all track had been stuck and where manual application had commenced. We observed areas where the surface was dry but the subsurface was less stable.

We asked about the Magnesium Chloride (Mag) application, the surface conditions, weather events, and any other operational proceedings, which may have contributed to the release. We asked about the timing of an all track getting stuck and asked whether this played a role in the fugitive dust release. We asked about deposition schedules as well as mag application schedules.

The deposition has been limited to the North dam for six months and new berm construction has begun on the South dam. Mag has been applied to the South dam over the course of these six months to prevent fugitive dust from emanating from this area where deposition has temporarily ceased. Deposition serves as a control measure as the material is wet and dries to form a crust. Deposition has been limited to the North dam during this time. A rain event on September 25, 2019 led the tailings management team to focus Mag application on the South dam due to the rain event potentially washing away the Mag applied to this area. During the application of Mag in the South dam it was noted that areas of the North dam were drying out more than expected. Mr.

Cooke explained that this time of year, although temperatures are not well over 100 F, the lack of humidity combined with the winds propagating over the surface of the tailings field drawn moisture off very quickly. Mag application was shifted to address the areas of the North dam where deposition was not occurring and where drying of the surface was noted. This application continued via all-track vehicles until October 4th as an all track got stuck in an area where the surface had dried out but the sub surface was too wet to support the vehicle. The all-track vehicle was extricated from the tailings impoundment within a couple of hours. Application of Mag continued via manual application where it was thought all-track vehicles could not go and all-tracks continued mechanical application where they could drive. On October 8th a fugitive dust release precipitated to an extent that FMSI reported fugitive dust crossing property lines at the intersection of W. Duval Mine Rd and W. Continental Rd. PDEQ also received one complaint as a result of this release. Mark Rogers responded on the 9th of October and observed a release of fugitive dust crossing property lines, inspection report dated October 9th, 2019. After the event on the October 8th the tailings dam management team started 24 hour shifts for Mag application to stabilize the affected area.

The tailings dam equipment includes six all-tracks vehicles, three of which have pumps and hoses installed for manual application, and water trucks that can supply Mag to the all tracks and which can also apply Mag via water cannon. At the time of our visit two all-tracks were out of service and two of the three pumps mounted to all tracks used to supply Mag water to hoses for manual application were down.

We requested records of the tailings dam inspections, Mag application records, and viewed daily satellite imagery that showed deposition and Mag application to the area.

The tailings dam inspection records indicate where problem areas are that need to be addressed, show where deposition is taking place, where the inspection focused, where all-tracks are applying Mag, and show where berm construction is taking place (pic 7). These record reiterate much of what we were told and what the satellite imagery indicates. Pictured is the inspection log from the day of the release. Mag application is to the East of the North dam, deposition in the north and an inspection of the area where the problem arose. The notes in this record indicate all available all-tracks running in the area. The satellite image is from October 8th, the same day as the log, and the East area of the North damn where Mag application was underway can clearly be seen (pic 8). The all-track daily log follows one all-track per log over the course of months. These simply tally the number of day vs the number of night loads. These records indicate some all-tracks running more than others. Determination of application rate and timing leading up to the event based on these records is problematic. Because the area in question is undetermined and the records are fairly low in resolution.

In conclusion the sequence of events can be summed up as follows. Deposition is taking place on the North phase alone. Mag has been applied to the South phase while it undergoes berm construction. A rain event on September 25, 2019 drew all Mag application to the South phase to prevent the rain from destabilizing the South dam. While stabilizing the South weather conditions contributors to the North dam drying out and becoming potentially unstable. Mag application was moved again to the North dam to stabilize the area. While doing so, an all-track became stuck and was removed the same day. Manual application began as it was clear that some areas were unsuitable for vehicular application. A release of fugitive dust crossing property lines occurred on the 8th.

Attachments:
Photo Log dated October 10, 2019
Inspection Rights dated October 10, 2019