

June 7, 2022

To: Mr. Brock Bowles
Division of Reclamation, Mining and Safety
1313 Sherman St., Rm. 215
Denver, CO 80203

Re: Memo Summarizing Dust Control Activities at the Henderson Mill Tailings Storage Facility in May 2022

Henderson has prepared this Memo at the request of the DRMS as follow up to an inspection held on May 27th. The DRMS inspection was in response to a report regarding dust observed from County Road 3 near the Henderson Mill.

Henderson has rigorous controls in place to prevent mobilization of dust from the tailings storage facility. We maintain a team of up to 19 employees who operate and maintain the equipment (Figure 1) needed to apply a petroleum-based soil stabilizer known as Coherex onto over 1,100 acres of the tailings storage facility (Figure 2).



Figure 1. Typical Coherex spray truck. Henderson owns and operates 4 spray vehicles.



Figure 2. The Henderson Tailings Storage Facility consists of dry tailings impoundment (shaded light green) and reclaim pond (dark green). The dry beach and embankment are treated with Coherex to suppress dust mobilization.

The tailings storage facility is covered with snow during the winter months, and therefore dust suppression activities take place in the summer when the tailings are exposed. The work to control the dust starts in November of the prior year when the spray trucks are cleaned and maintained. This ensures that when the conditions allow in the spring all needed equipment is ready to start the Coherex campaign. This campaign consists of an initial application of Coherex over the entire tailings impoundment in the spring followed by maintenance of Coherex coverage throughout the rest of the summer and fall, until the snow once again covers the facility.

The spring of 2022 presented particularly difficult conditions for applying Coherex. Even though the spray trucks are specially designed with low ground pressure, the tailings beach saturation levels from the snow melt need to dissipate in order to ensure the trucks do not sink in the tailings. Snowpack peak is typically in mid-April and usually thaws over a period of 4-6 weeks. With snowpack at Henderson being below average this year, Henderson anticipated to start the Coherex campaign in mid-May. However, large storm events on May 3rd and 4th increased saturation levels within the tailings. The operations crew started to develop the needed access ramps and paths on the beach on May 6th. Unfortunately, the equipment persistently sank into the tailings on the 6th. The decision was made to wait until the 9th to start spraying Coherex. On the week of the 9th, it was determined that the beach was ready for truck traffic. The operations crew started spraying on the 11th. However, this week also correlated with very high winds throughout the State of Colorado, including in Grand County. The Henderson weather station measured wind speeds in excess of 40 mph during the week (Figure 3). The Henderson anemometer only collects data every 10 minutes, therefore, wind gusts in excess of those shown are likely. Due to the high winds, full crew spray operations were further delayed until May 16th.

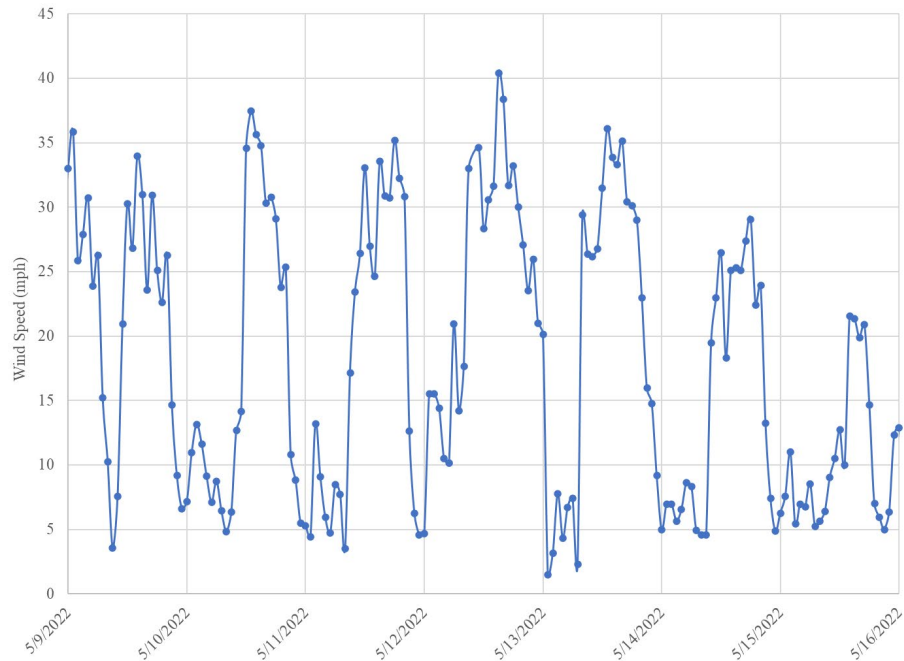


Figure 3. Maximum measured wind speeds at the Henderson Mill for the week of May 9th.

The crew of operators and mechanics work 10 hour shifts, 5 days a week throughout the summer season to maintain all aspects of the Tailings Storage Facility with dust suppression being a primary focus throughout the season. As of May 27th, the crew had applied just under 150,000 gallons of Coherex with ~65% of the facility covered (Figure 4). In a typical year, the application process takes close to 3 weeks, and utilizes ~250,000 gallons of Coherex.



(a)



(b)

Figure 4. Coherex spray truck on the tailings beach applying Coherex on May 16th (a) and 27th (b).

Lastly, the DRMS has requested the most recent surface water sampling data. Coincidentally, a surface water sampling event that occurs in Mid-May annually, took place on May 16th per Henderson's Groundwater Management Plan (Technical Revision 16). Surface water sampling location WFR-20 (upstream from the tailings facility) and WFR-40 (downstream from the tailings facility) were sampled during this event. As requested by the Division, these data will be provided as soon as results are available.