



TILDEN MINING COMPANY L.C.  
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January 7, 2021

Sydney Hewson  
EGLE, AQD, Marquette District  
1504 West Washington Street  
Marquette, MI 49855

Re: Tilden Mining Company L.C., December 17, 2020 Violation Notice

Dear Ms. Hewson:

This letter is in response to the December 17, 2020 violation notice sent by the Department of Environment Great Lakes and Energy (EGLE), Air Quality Division (AQD) regarding fugitive dust attributed to Tilden Mining Company's (Tilden's) operations.

As a result of an atypical combination of weather events beyond Tilden's control including dry and intermittently warm then freezing weather conditions, a lack of snow cover and high winds, Tilden experienced intermittent dust lift-off from the Gribben tailings basin which was observed off-site by either Tilden or EGLE staff on November 30, December 14 and December 18, 2020. These temperature swings around the freezing point can result in tailings surface areas that are too wet to be safely accessible by low ground-pressure mulch spreading equipment, yet freeze-drying of the uppermost surface can make certain areas susceptible to wind lift-off. The duration of exposure to these 'shoulder season' events is typically limited through arrival of adequate snow cover to limit exposure and/or longer durations of cold weather which freezes the surface to support safe use of low-ground pressure mulch spreading equipment to cover vulnerable surface areas to suppress dust formation.

This November-December represented a longer than typical shoulder season and in response, Tilden implemented all control measures under the Fugitive Dust Control Plan (FDCP) that could be safely taken given conditions on the basin. In addition, Tilden took action to augment the fugitive dust control practices identified in its FDCP until such time that more typical seasonal weather conditions returned. Those actions included: sourcing additional hay and hay-spreading equipment for when ground conditions supported safe access; targeted use of aerial application of hay via helicopter; and deployment of water cannons in specific areas.

At this time both the normal seasonal arrival of adequate snow cover and sustained cold weather have ameliorated the weather conditions that created the unique situations of the prior weeks and greatly diminished the potential for further events.

In addition, Tilden is committed to completion of an evaluation of its FDCP and a revised plan will be submitted to EGLE by March 8, 2021. The revised plan will incorporate any augmented

fugitive dust control measures to be employed at Tilden operations that may mitigate the effect of atypical weather conditions in the future.

The Violation Notice requests Tilden provide information to correct any inaccuracies in the notice. In response, Tilden wishes to provide the following information:

1. Regarding the alleged violation of Condition IX.2 of MI-ROP-B4885-2017b, issued to Tilden, the language of that permit condition reads as follows: *“The permittee must prepare, and at all times operate according to, a fugitive dust emissions control plan that describes in detail the measures that will be put in place to control fugitive dust emissions from the locations listed in paragraphs (a) through (f) below. (40 CFR 63.9591(a)(1-6), (b) and 63.9635)...”* and subsequently includes the tailings basin as one of the locations. Tilden has both prepared an FDCP, the most recent version which is dated June 2020, and operated in accordance with the fugitive dust control measures contained therein for the tailings basin. Specific to the events noted above, Tilden continues to:

A. Optimize water inundation of the tailings basin

A certain amount of the tailings basin is covered by the basin water pond, providing for fugitive dust reduction by maintaining the fine tailings beaches below water. Pond depth is managed to maintain acceptable factors of safety in the containment dams and dikes. As of December 10, 2020, discharge of excess water through the Gribben water treatment plant has been paused, which is allowing the pond elevation to rise within acceptable thresholds and resulting in additional tailings beach coverage.

B. Manage the tailings discharge point

Minimizing movement of the tailings spigotting point in the basin retains a wetted area near that discharge point for a longer period of time, and limits creation of larger wet areas which are more difficult for mulching equipment to access. Spigotting has been consistently maintained at the southeast corner of the Gribben south basin since this fall.

C. Apply mulch coverings and plant vegetation

Hay mulch continues to be the most effective method of dust abatement for the tailings beach areas, providing cover over the beaches and also slowing airspeeds directly at the ground surface. Mulch applications are ongoing through the year once surface conditions allow for access. Approximately 2,400 tons of hay have been spread on the basin in 2020 covering more than 680 acres of beach.

D. Utilize repurposed scrap tire windbreaks (as permitted by EGLE)

A north-south windbreak of scrap tires has been established in the north basin. Tires continue to be added to this windbreak as they become available.

E. Compact snow

Compaction of snow has been found to extend the life of the snow cover on the basin by preventing wind erosion of snow cover and slowing the melting rate during warmer conditions. Tilden initiated snow rolling/compaction on December 23, after enough snow accumulated to merit compaction. Snow rolling continues as additional snowfalls have occurred.

These actions in Tilden's FDCP are consistent with recognized best practices for fugitive dust management on tailings basins beaches in the iron ore industry.

Because Tilden has both prepared and operated in accordance with the FDCP for the tailings basin, a violation of this permit term has not occurred and Tilden requests the alleged violation of not preparing or operating according to its FDCP be removed from the Violation Notice.

2. Regarding the alleged violation of R901, Tilden observes that the language of the rule focuses on ensuring that permittees do not bring about emissions of contaminants, such as fugitive dust, in quantities that unreasonably interfere with the comfortable enjoyment of life and property. As noted above, Tilden continues to operate according to its FDCP and is committed to a review and update of its plan in response to these events, but is not currently aware of further actions it could have reasonably taken to prevent these weather-driven events. By doing everything reasonable to respond to events beyond Tilden's control, the effect of the dust downwind is a reasonable, though unfortunate, result of atypical weather conditions. As indicated above, Tilden is committed to review and update its FDCP to reflect lessons learned from these weather events that may help prevent reoccurrence of dust incidents in future transitions to the consistent snow and cold that suppresses dust from the tailings basins. We understand EGLE's desire to allege a violation to ensure that these improvements are incorporated into an updated FDCP, but Tilden objects to any suggestion that it was reasonable for Tilden to do more to prevent this unforeseen situation. For these reasons, Tilden requests the alleged violation of R901 be removed from this notice following completion of the updated FDCP.

Thank you for the opportunity to provide this response and additional information. Please contact Brent Ketzenberger at 906-475-3792 if you have any questions or require additional information

Sincerely,



Ryan Korpela

The Cleveland-Cliffs Iron Company, as Managing Agent of Tilden Mining Company L.C.

cc: Jenine Camilleri, Enforcement Unit Supervisor, EGLE  
Ed Lancaster, District Supervisor, AQD, Marquette District Office, EGLE  
Scott Gischia, Director of Compliance, USIO, Cleveland Cliffs Inc.