



December 6, 2023

Mr. Brian Rath, P.E.
Environmental Engineer Senior
Land Quality Bureau
Iowa Department of Natural Resources

RE: Exhaust, Exhaust-Related Material, and Lime Kiln Dust (LKD) Deposition in Mine Stope

Dear Mr. Rath:

On August 29, 2023, representatives from the Iowa Department of Natural Resources (IDNR) met with representatives from Linwood Mining and Minerals Corp. (Linwood). It was agreed at that meeting that Linwood would submit an Action Plan to the DNR within 90 days for Exhaust, Exhaust-Related Material, and Lime Kiln Dust (LKD) that is currently being deposited in the mine stope. This document is to serve as that action plan and includes an update regarding actions already taken.

In our August 2023 meeting, we discussed that two options were being considered for the management of the lime kiln exhaust, specifically as relates to the utilization of the mine stope as an emissions control device (referred to as "Limestone Mining Tunnel (CE TL1)" in Air Quality Construction Permit No. 73-A-219-S8). Limestone Mining Tunnel (CE TL1) is listed as the 2nd set of control equipment for numerous emission units in the permit. The two options are listed below.

1. Install a baghouse to replace the use of the mine stope as an emission control device.
2. Apply for an Underground Injection Control (UIC) – 5 permit with the EPA to allow continued use the mine stope control device as currently permitted.

As mentioned in the August 2023 meeting, neither of these two options is currently without contingent factors. Option No. 1 is not under the control of Linwood as the lime production operation is not owned by Linwood and therefore the decision to install a bag house is not Linwood's. The viability of Option No. 2 is predicated on the outcome of the mine stope groundwater site assessment as presented in the Site Assessment Plan for Mine Stope dated October 20, 2023. Consequently, the DNR requested that the Action Plan pursue these two options concurrently. As a result of the contingent factors, the Action Plan content for the two options is necessarily brief. The Action Plan for the exhaust, exhaust-related material, and LKD is described below.



Action Plan

Carmeuse has applied for an air construction permit to install a new bag house that would eliminate the need to vent the lime kilns through the mine stope. They submitted the permit application to the IDNR on April 4th, 2023, and are awaiting the approval as of the date of this letter. When I reached out to Carmeuse to ask what I should include in this Action Plan they sent me the following statement:

If it is determined that continued use of the smoke hole/mine stope was environmentally or legally not possible, the current owner of the lime manufacturing plant, Carmeuse, is working to develop the best strategy for moving forward. As part of that strategy, Carmeuse submitted an air permit application to the IDNR Air Quality Bureau to construct a bag house for the facility. We would be happy to arrange for IDNR to meet with representatives of Carmeuse.

Option No. 2 – UIC-5 Permit:

We (Linwood) have reached out to the EPA regarding the efficacy of receiving a UIC-5 permit for kiln exhaust. EPA indicated that they would consider a UIC-5 permit for the kiln exhaust, but only after the IDNR is satisfied with the outcome of the mine stope groundwater assessment and provided that the effects of the exhaust in the mine stope are not causing a groundwater quality concern in the vicinity of the mine stope. Consequently, this option is on hold pending the outcome of the mine stope groundwater assessment.

If you have any questions regarding this Action Plan, please contact me at 651-324-7762 or mbush@linwoodmining.com.

Sincerely,

Michael Bush

President

Linwood Mining & Minerals