



September 8, 2023

MIKE BUSH PRESIDENT
LINWOOD MINING AND MINERALS CORP
401 E FRONT ST
DAVENPORT IA 52804

**Re: Linwood Mining and Minerals Corp. (401 E Front St, Davenport, IA 52804)
Action Items and Schedules – August 29, 2023 Meeting Follow-up**

Dear Mr. Bush:

On August 29, 2023, the Iowa Department of Natural Resources (DNR) met with Linwood Mining and Minerals Corp. (Linwood) representatives as well as representatives from other entities to discuss the action plan requested in the DNR letter dated May 19, 2023 ([Doc #106626](#)). The DNR acknowledges and appreciates the progress made to address the items in the Notice of Violations (NOV) issued by the DNR on December 1, 2022 ([Doc #104718](#)).

This letter transmits the attached meeting notes, as well as summarizes the agreed-upon action items and associated schedules from the August 29, 2023 meeting.

Action Items and Schedules

Pile 18 Action

At the meeting, Linwood agreed to submit a Materials Management Plan (Management Plan) to the DNR for this pile, referred to as Pile 18. The Management Plan shall include operational and management procedures to preclude further waste from being placed in the pile, as well as the removal of existing waste as the pile is depleted. In addition, the Management Plan shall limit the pile size and provide suitable uses for the material if or when it cannot be depleted in a timely manner. Further, alternative approaches to waste disposal shall be included if the Alternative Source Demonstration being performed by the Scott County Landfill determines the pile is impacting groundwater. If the Alternative Source Demonstration is not completed before the Management Plan is developed, the Management Plan can be amended at a later date to incorporate necessary changes.

During the meeting, it was agreed that the Management Plan could be submitted within 60 days. Therefore, the Management Plan shall be submitted 60 days after the date of this letter, on or before November 6, 2023.

Pile 19 Action

At the meeting, Linwood agreed to deplete the stockpile, referred to as Pile 19, no later than Spring 2024 in accordance with the Action Plan dated August 22, 2023 ([Doc #107557](#)) and submitted to DNR on August 24, 2023. Therefore, the depletion of the pile shall be completed on or before May 31, 2024. Upon completion, Linwood shall notify the DNR in writing so the DNR may perform a confirmation site visit.

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

The development of an Action Plan to cease the deposition/disposal of exhaust, exhaust-related material, and LKD in the mine is dependent on many factors, which may impact the timing and trajectory of the Action Plan such as the outcome of the Site Assessment Plan for the mine stope, installation of emission controls at the kilns, and Underground Injection Control permit application approval from U.S. Environmental Protection Agency (EPA) Region 7. Therefore, the Action Plan needs to include sufficient detail to address these potential impacts as they are currently understood. Although a deadline for the submittal of the Action Plan was not discussed at the August 29, 2023 meeting, the DNR is willing to allow 90 days from the date of this letter, on or before December 6, 2023.

Groundwater Contamination in Mine Stope

During the meeting, a Site Assessment Plan (Plan) for the groundwater contamination associated with the mine stope was discussed, and a presentation was given by SCS Engineers that focused on the vertical delineation of the plume and the use of existing wells in the area for assessment.

As a reminder, the Plan should be a written proposal for a study of a contamination situation to determine the types, amounts, and sources of contaminants present, hydrogeological characteristics of the site, and the vertical and horizontal extent of contamination, with a goal of developing an adequate remedial action plan. If horizontal plume delineation is not part of the Plan, please go into detail about the site challenges and why they should be considered regarding plume delineation.

The Plan must include recommendations for the collection of relevant historical data such as site management practices, inventory records, literature searches, photographs, and personal interviews; a methodology for obtaining groundwater flow information including well placements, construction documentation, elevation data, bore logs, static groundwater table measurements, groundwater elevations, groundwater gradients (isopleth), information on soil transmissivity, porosity, and permeability; and a methodology for identifying contaminant plumes, including additional monitoring wells to identify the horizontal and vertical extent of contamination, a site plot showing the estimated configuration of contamination, and a sampling schedule and list of constituents to be analyzed. The Plan may require preliminary field investigations. The Plan shall be approved by the DNR prior to initiation of the assessment unless otherwise approved by the DNR.

During the meeting, it was agreed that the Plan could be submitted within 30 days. Therefore, the plan shall be submitted 30 days after the date of this letter, on or before October 7, 2023.

Status Reports

To document and monitor the progress of the above action items, Linwood shall submit monthly status reports to the DNR on or before the 15th of each month starting on September 15, 2023. The reports shall summarize efforts since the last status report, compliance with deadlines/schedules, inbound/outbound pile tonnages, photos, logs, and other pertinent data.

Failure to complete these action items according to the listed schedules may result in this matter being referred to the DNR Legal Services Bureau for further enforcement.

All submittals and correspondence shall be directed to me, and I will then coordinate with the appropriate DNR staff. If you have any questions, you may contact me at [\(515\) 537-4051](tel:515-537-4051) or brian.rath@dnr.iowa.gov.

Sincerely,

Brian L. Rath, P.E.
Environmental Engineer Senior
Land Quality Bureau

Enclosure (1)

cc: Michael Sullivan
Iowa DNR
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Kathy Morris, Director
Waste Commission of Scott County
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Iowa DNR Field Office #6, Washington

Darin Osland, Environmental Manager
Linwood Mining and Minerals Corp.
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Davenport, IA 52804

Damion Sadd
Continental Cement Company, L.L.C.
301 East Front Street
Buffalo, IA 52728



NOTES

LINWOOD MINING & MATERIALS AND IOWA DNR MEETING

AUGUST 29, 2023, 10:00 AM TO 12:00 PM

SCOTT AREA LANDFILL

11555 110TH AVE., DAVENPORT, IA 52804

ATTENDEES

Linwood Mining & Materials: Mike Bush, Darin Osland, Greg Bush, Johnathan Wilmhurst, Mark Looman

SCS: Tim Buelow

DNR: Amie Davidson, Mike Sullivan, Mike Smith, Kurt Levetzow, Chad Stobbe, Shelly Nellesen, Brian Rath

Waste Commission Of Scott County: Kathy Morris, Casey Reitz, Brian Seals, Bryce Stalcup

Continental Cement: Damion Sadd, Dan Carney

AGENDA ITEMS

1. Introductions

- a. All those that were invited were in attendance and introduced themselves.

2. Overview and Background

- a. Brian Rath noted that this meeting is a continuation of action related to the Notice of Violation (NOV) issued to Linwood in 2022, the prior meeting in January of 2023, and the subsequent follow-up letter from the Iowa Department of Natural Resources (DNR).
- b. Brian R. noted that the DNR had received an action plan from Linwood late last week that covered all items except the stope contamination. However, he noted that he had several conversations with Tim Buelow and understood he would present a draft of the action plan for the stope contamination today.

3. Draft Action Plan

a. General

- i. Mike Bush provided an overview as outlined in the action plan.

b. Groundwater Contamination in Mine Stope

- i. Tim Buelow presented the draft action plan developed by SCS.
- ii. Evaluation of existing data found that nitrate, boron, magnesium, molybdenum, nickel, and vanadium are likely indicators for stope water. And that there is not a clear indication of impact beyond the stope.
- iii. Tim noted that he had not incorporated the Umthun Trucking files into the analysis yet.

- iv. A plan was presented to perform further sampling, including the indicator parameters noted above as well as geochemical. If there are hits, then additional parameters will be sampled.
- v. Focus will be on Silurian water supply wells. Several reports note that the Silurian flows upward and that the Otis is a confining layer between the Silurian and Davenport.
- vi. Johnathan noted that Linwood typically only pumps about 2 feet of water from their mine sump. Tim noted that the Iowa Geologic Survey Bureau indicated that the layer is generally dry. Continental Cement noted that when they sampled the stope, the water level was into the casing, so the depth of water was 10 feet or more.
- vii. Shelly Nellesen stated that she will have to review the action plan to better understand the limitations of drilling into/through the mine for monitoring. She also requested the plan to address potential receptors.

c. Pile 19

- i. Mike Bush provided an update on Pile 19 along with the expected timeframe for removal of the pile (Spring of 2024) as outlined in the action plan.
- ii. Chad Stobbe acknowledged the timeframe is acceptable.

d. Pile 18

- i. Mike Bush presented the action plan for Pile 18 and noted that it is not a solid waste pile as the DNR's NOV states but has value. Further, Linwood has removed the waste on the pile's surface and changed their operations to preclude waste from being dumped or placed in the pile in the future. In addition, Linwood's sales staff is actively selling the material.
- ii. The DNR expressed their concern that there is likely waste within the pile and not just on the surface. Linwood noted that certain non-aggregate materials are inadvertently placed in aggregate piles, and they try to remove them before sale. And that this is typical in the mining industry.
- iii. Mike Smith reminded everyone that the DNR's focus on the piles was driven by groundwater impact at the adjacent landfill that increased in wells closer to the piles compared to wells closer to the landfill. A proposed groundwater study being conducted by the Waste Commission is expected to determine whether or not the piles are the source of the impact. However, the progress is dependent upon lease negotiations between the Waste Commission and Linwood.
- iv. Linwood's proposed plan is to limit the pile size so that the volume does not exceed the quantity necessary for an end-use plan for the mine or to level the ground to create an industrial park.
- v. Limiting the pile size seems favorable to the DNR. However, the feasibility of this approach is dependent on the outcome of the groundwater study and the potential contamination from the piles.

e. Exhaust, Exhaust-Related Material, and Lime Kiln Dust Deposition in Mine Stope

- i. As previously noted, Linwood no longer owns or operates the lime kilns. However, they are contracted to take the exhaust from the kilns and discharge it into the mine stope. In addition, Linwood is responsible for the permitting of the emission point.
- ii. Linwood believes the kiln owners intend to stop discharging into the mine in the next two to three years. However, they have been unable to design an emission control system that meets the same permit requirements as the mine stope.
- iii. Darin Osland noted that EPA is open to Linwood applying for an injection permit, which if approved would resolve this issue.
- iv. The DNR reminded Linwood that the action plan needs to include a parallel path for stopping the deposition of waste in the mine if the EPA denies the injection permit or if the stope contamination study requires action.

4. Next Steps

- a. Linwood will prepare and submit a management plan for Pile 18 within 60 days of the meeting.
- b. SCS will finalize the stope action plan for Linwood within 30 days of the meeting.
- c. Linwood will provide an updated action plan for the exhaust, which shall include the two parallel paths noted above.

5. Other

- a. None.