



November 10, 2023

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

RE: Pile 18 Materials Management Plan

Dear Mr. Rath:

On August 29, 2023, representatives from the Iowa Department of Natural Resources (DNR) met with representatives from Linwood Mining and Minerals Corp. (Linwood). It was agreed to at that meeting that Linwood would submit a Materials Management Plan (Management Plan) to the DNR within 60 days for Pile 18. This document is to serve as that Management Plan and includes an update regarding actions already taken since December 2022.

Actions Update

After Linwood received the Notice of Violations (NOV) dated December 1, 2022, Linwood acted and removed all visible non-mining derived materials from Pile 18 and disposed of them properly. Darin Osland (Linwood Environmental Manager) started and will continue to perform and document monthly inspections of Pile 18 to ensure that only off-spec lime product is added back to the pile. A copy of the inspection sheet Darin has been keeping is included in Attachment A. Additional training has been given to Linwood employees as far as what can and cannot be placed in Pile 18. When Pile 18 material is sold, visible non-mining derived materials will be removed and disposed of in the proper fashion.

Linwood continues to pursue customers for the material in Pile 18. We recently secured a new customer in the Muscatine County Sanitary Landfill (Landfill). The Landfill had a positive reaction to test loads that were delivered to them and indicated that they would have an interest in purchasing more on an ongoing basis. In addition to this new customer, Linwood has and will continue to use Pile 18 material for both external sales and internally as a fill product.

Since our August meeting, Shive-Hattery performed a topographic survey of Pile 18 on September 26, 2023, to determine the volume of the pile. The survey indicated the volume of Pile 18 was approximately 313,730 cubic yards.



In our previous correspondence to DNR dated August 22, 2023, a draft action plan for Pile 18 was included in which it was indicated that a future contingency use of Pile 18 material would be to level the surrounding area to use the property post-mining for industrial activities. This development concept was actually considered in 2022 when we were approached by a prospective industrial company with a need for such a development area. A map of the area of potential pad construction for industrial development is included in Attachment B. In response to the request in 2022, we contracted with Shive-Hattery to perform a topographic survey of the approximately 120-acre area. Additionally, a wetland survey of the area was also completed. The figure included in Attachment C was developed from the 2022 topographic survey and shows a planar surface at elevation 661 over the proposed development area and shows cut fill depth-area intervals. The earthwork calculations indicate 1,290,000 cubic yards of cut and 2,080,000 cubic yards of fill (assuming 25% shrink) resulting in a net fill of 790,000 cubic yards. The following should be noted with regard to these earthwork quantities:

- The proposed pad surface is planar and not tied into the surrounding ground surface. It is anticipated that a net additional fill volume will result from the tie-in to the surrounding ground surface based on the depth of ravines being filled on the southern boundaries of the pad area compared to the shallower cut tie-ins generally on the northern boundaries of the pad area.
- The majority of Pile 18 is included in the 2022 topographic survey area indicated by the partial circular shaped cut area on the west side of the pad area.

The implications of Pile 18 already being included in the earthwork quantities shown in Attachment C is that potentially nearly 800,000 cubic yards more than what is currently in Pile 18 could be needed or a total of approximately 1,100,000 cubic yards of Pile 18 material required for pad construction.

Although it is Linwood's intention to sell the material in Pile 18 and not use it as fill, Linwood will commit Pile 18 as necessary for the construction of the proposed industrial area prior to the closure of the mine. In addition, Linwood will conservatively limit the volume of Pile 18 to 1,000,000 cubic yards. Even though this proposed area is not the only fill project that Linwood will need at mine closure, we will use that number as the volume limit to cap the potential size of Pile 18.

Management Plan

The Management Plan includes the following on-going actions:

- Continued addition and withdrawal of off-spec lime product from Pile 18 in response to generation and use fluctuations under the stockpile volume cap of 1,000,000 cubic yards.
- Annual refresher training of staff who manage Pile 18 and initial training for new employees who will manage the pile as to material that can and cannot be placed in the pile.



- Monthly inspection of Pile 18 and removal of inappropriate materials if present. Additionally, as portions of the pile that were placed prior to August 2023 are excavated, if inappropriate materials are encountered, they will be removed prior to the use of the pile material as product or fill and the inappropriate materials will be properly disposed of.
- Market the off-spec lime material to potential users on an on-going basis.
- Report annually to the DNR quantities of off-spec lime material additions to/withdrawals from Pile 18, inspection reports, and actions taken in response to the inspection findings. Additionally, annually survey Pile 18 to provide an updated pile volume for comparison to the volume limit and prepare an updated site map of the Pile 18 area based on the survey. Annual reports containing this information will be submitted to the DNR by March 31 of the year following the annual report period.

Additionally, it should be noted that Pile 18 is regulatorily affected by the following permits:

- Title V Air Permit administered by the IDNR-ABB permit # 04-TV-005R2.
- NPDES General Permit #3 coverage for LMM associated with SWPPP, permit # 0617-0435.

Linwood will continue to operate in compliance with these permits and manage Pile 18 in accordance with the requirements of those permits applicable to Pile 18 in addition to the management activities described in this Management Plan. If you have any questions regarding this Management Plan, please contact me at 651-324-7762 or mbush@linwoodmining.com.

Sincerely,

Michael Bush
President
Linwood Mining & Minerals

ATTACHMENT A

Pile 18 Visual Checklist

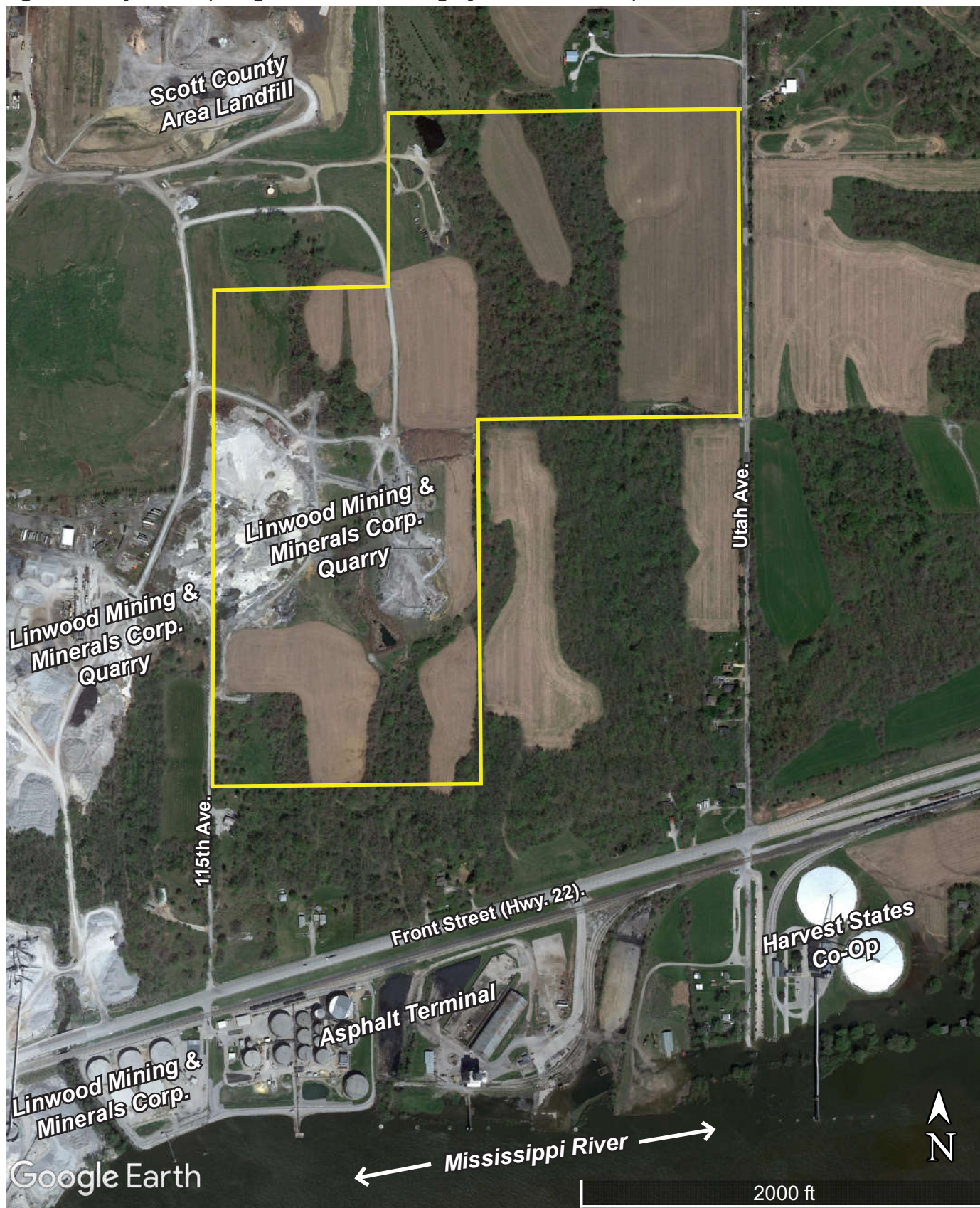
To be completed on a monthly basis to verify that no other articles are found other than limesone products

Anything found?					
		Inspector	Yes	No	Notes
2023	August	DSO		x	
2023	September	DSO		X	
2023	October	DSO		X	
2023	November				
2023	December				
2024	January				
2024	February				
2024	March				
2024	April				
2024	May				
2024	June				
2024	July				
2024	August				
2024	September				
2024	October				
2024	November				
2024	December				

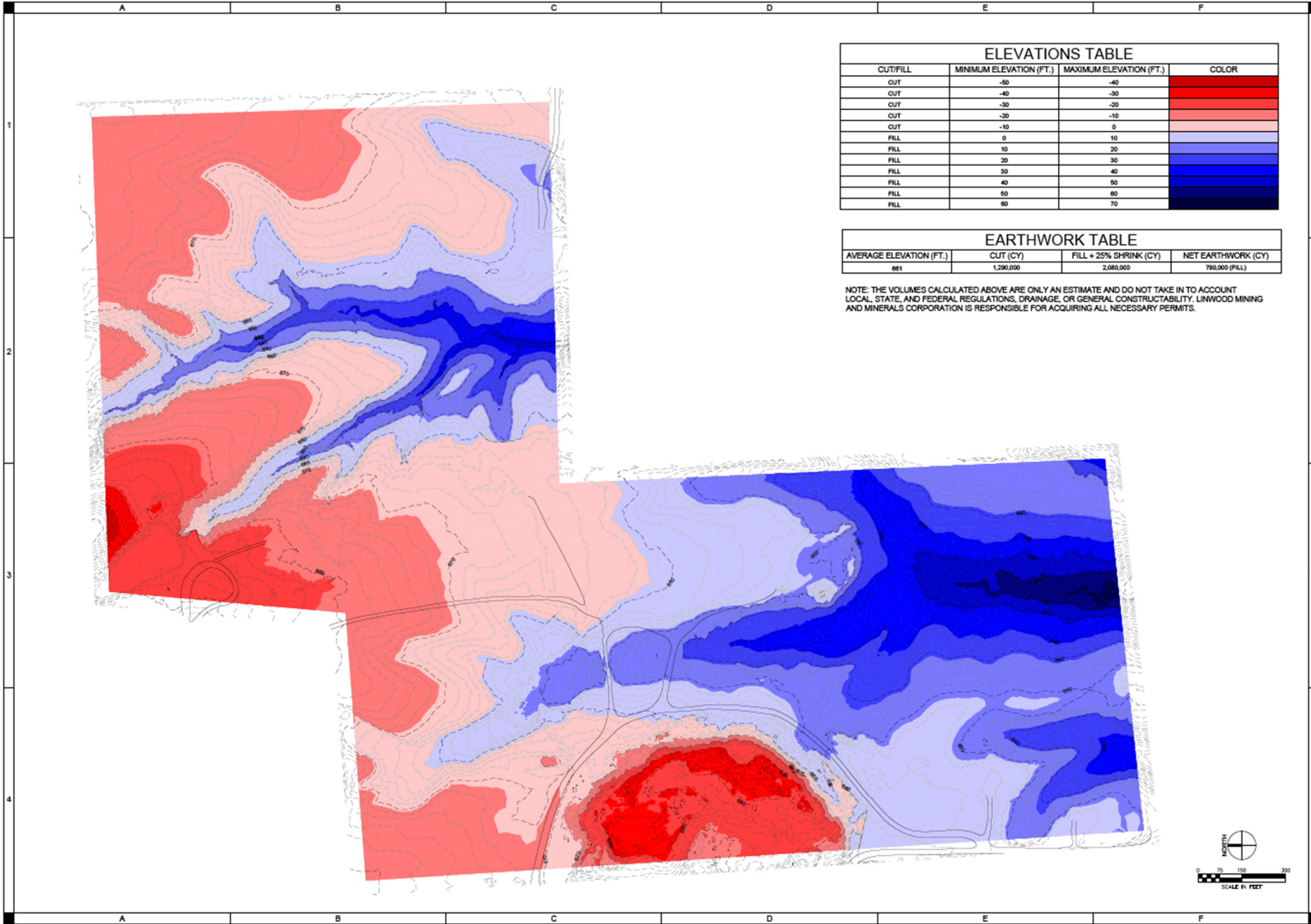
T:\LMM\Environmental\Air\Compliance Reports\2023\Piles\2023_Pile_18_Visual_Inspection

ATTACHMENT B

Figure 3: Project Site (Google Earth Aerial Imagery Date 04/25/2019)



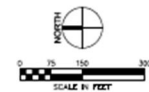
ATTACHMENT C



ELEVATIONS TABLE			
CUT/FILL	MINIMUM ELEVATION (FT.)	MAXIMUM ELEVATION (FT.)	COLOR
CUT	-50	-40	Red
CUT	-40	-30	Red
CUT	-30	-20	Red
CUT	-20	-10	Red
CUT	-10	0	Red
FILL	0	10	Blue
FILL	10	20	Blue
FILL	20	30	Blue
FILL	30	40	Blue
FILL	40	50	Blue
FILL	50	60	Blue
FILL	60	70	Blue

EARTHWORK TABLE			
AVERAGE ELEVATION (FT.)	CUT (CY)	FILL + 25% SHRINK (CY)	NET EARTHWORK (CY)
661	1,200,000	2,080,000	790,000 (FILL)

NOTE: THE VOLUMES CALCULATED ABOVE ARE ONLY AN ESTIMATE AND DO NOT TAKE INTO ACCOUNT LOCAL, STATE, AND FEDERAL REGULATIONS, DRAINAGE, OR GENERAL CONSTRUCTABILITY. LINWOOD MINING AND MINERALS CORPORATION IS RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS.



DRAWN BY	ICM
APPROVED BY	DA
ISSUED FOR	REVIEW
ISSUE DATE	10/10/2024
PROJECT NUMBER	210324026
FILE NUMBER	