



January 15, 2021

Mr. David Olson
Streets of West Pryor, LLC
7200 W 132nd Street, #150
Overland Park, Kansas 66213

Re: Response to Comments
Mine Mitigation Study
Mine Filling at Pryor Crossing
Lee's Summit, Missouri
Geotechnology Project No. J035637.02

Dear Mr. Olson:

Geotechnology has prepared this brief letter to address questions and comments from the City of Lee's Summit and their third-party consultant (HDR Engineering, Inc) regarding our draft report titled *Mine Mitigation Study: Mine Filling at Pryor Crossing Lee's Summit, Missouri* dated December 22, 2020 and the *Project Manual for Mine Filling at Pryor Crossing* dated December 22, 2020.

Modifications to the *Mine Mitigation Study* and *Project Manual* are highlighted in the attached document. A summary of changes is included here for your convenience.

Groundwater Conditions

Section 2.1 *"During this limited mine observation dome-outs were noted in several areas of the mine and the water was observed to be up to 8 feet deep. Water levels could be deeper in other unexplored areas of the mine. Borings performed by others did not note groundwater. A hydrological study of the site has not been performed."*

Section 3.3 *"The water levels in the mine could be in excess of 8 feet."*

Failures Propagating to the Surface

Section 2.1 *"There are no previously documented surface failures at the site. Surface failures were not observed during Geotechnology's site reconnaissance. Surface failures on the north mine property have been documented."*

Mine Stability Calculations

Section 2.2 *"Various mine geometry scenarios were considered. Based on the factor of safety (FS) calculations performed, the mine as a FS greater than 2 with the exception of the scenario*



where the roof beam fails in tension due to the loss of one or more pillars. Based on our calculations, the critical beam span is approximately 50 feet (for FS of 2). Based on our observations of the north and south mine space, pillar loss is unlikely at this site."

Additional calculations have been performed for additional overburden thicknesses (for 55, 65 and 75 feet), as well as calculations for the factor of safety against chimney failure.

Footprint

Section 3.4 *"The total development area is estimated at approximately 11.2 acres; however, modifications to the mine filling extents will be evaluated based on observed conditions during backfilling operations."*

Test Hole(s)

Section 3.4 *"To finalize the mine filling methodology we recommend test holes completed with the rock slinger and available prepared aggregate be observed from the mine space to evaluate the geometry of the fill piles."*

Backfill Materials

Section 4.0 Aggregate *"Backfill materials should consist of a 2-inch minus, prepared aggregate with less than 20% fines. Organic material should be excluded from the stockpile. Material specifications are subject to change on the basis of the test hole(s) performed and the backfilling operations."*

Mine Filling Observation

Section 4.0 Mine Filling *"The base of the fill pile is expected to encompass the entire room filled. A representative of Geotechnology should observe the top of each pile with a borehole camera to verify the distance from the mine roof."*

Borehole Abandonment

Section 4.0 *"The boreholes should be backfilled to prevent water infiltration into the mine space. The borehole should be plugged with bentonite chips, cement bentonite or bentonite grout, or concrete."*

Pile Observation

Section 4.0 Fill Pile Observation *"Use of a boat may be necessary to observe fill piles. Probing by hand at the lateral extents may be required."*

Flawed Pile Geometry

Section 4.0 Fill Pile Observation *"Flawed geometry could include piles which have sloughed on one or more sides, or are shorter than recommended."*

* * * * *



We appreciate the opportunity to work with you on this project. Please contact the undersigned should you have any questions or need additional information.

Very truly yours,

GEOTECHNOLOGY, INC.

A handwritten signature in blue ink, appearing to read 'A. Prince', is positioned above the printed name.

Andrea Prince, P.G.
Senior Project Manager

ALY/ALP/MHM:aly