LITHOS ENGINEERING

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April 14, 2023
Project No.: 19125

Holcim
1687 Cole Boulevard, Suite 300
Golden, CO 80401

Attention: Wyatt Webster & Neil Whitmer
Environmental and Land Managers

Regarding: Daniels Sand Pit 2, Permit No. M-1973-007-SG
Slope Stability Monthly Monitoring Report

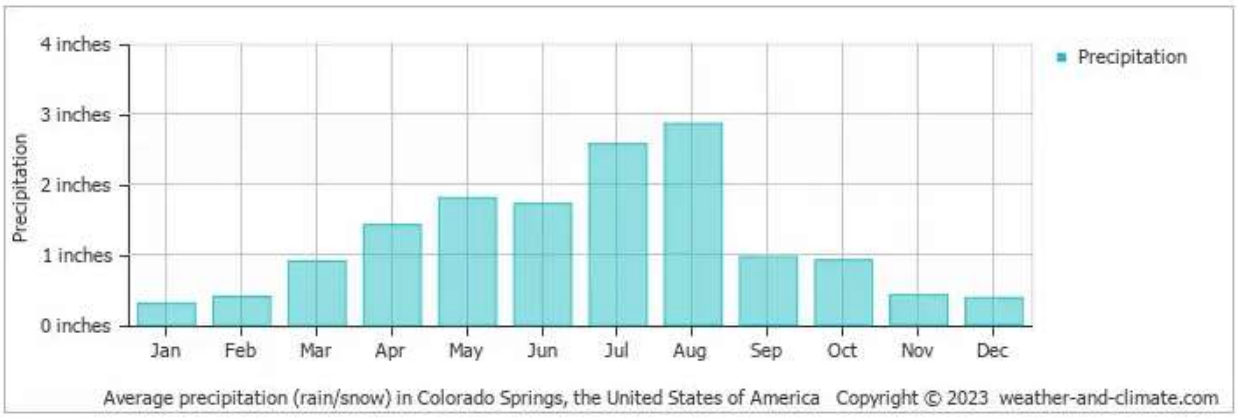
Mr. Webster and Mr. Whitmer,

Lithos Engineering (Lithos) has been retained by Holcim to implement a slope stability monitoring plan for the Fountain Mutual Ditch within Daniels Sand Pit 2. Monthly monitoring will occur for the first year after construction completion. Lithos Engineering (Lithos) visited the site on April 13, 2023. At several locations, erosion extending from the toe is still visible and those erosions have become gullies up to 5 feet wide and greater than 3 feet deep.

Recommendation to prevent Slope failure and/ or damage to the Fountain Mutual Ditch

In previous reports Lithos has addressed the eroding slope and suggested some low-cost repairs, aka gullies be backfilled with compacted soil within and that the areas be seeded per the reclamation plan. Because those recommendations haven't been implemented for the entire buttress there has been significant and rapid degradation of portions slope resulting in deep and steep gullies. As such some of the gully areas may require a more elaborate repair method, e.g. Stripping down to the depth of erosion and benching the slope back into the underlying materials. Neglecting the gullies will likely result in propagation of gullies upwards towards the Fountain Mutual Ditch.

The recommendation is to address the erosion of the slope immediately. Below is a graph of the monthly rainfall for the project area, it shows increasing amount of rainfalls for the next four and a half months. This will expedite the erosion process.



Site notes and photographs are presented below:

1) Weather: 70-75°, cloud, wind at 15 mph
2) Visual observation of the Fountain Mutual Ditch and ditch road:
   a) No tension cracks
   b) Vegetation growing on banks and at invert of ditch
   c) Water flowing in ditch
   d) No sloughed slope surfaces
   e) The condition of the ditch is stable
   f) Berm between ditch and access road is stable
3) Visual observations of the Buttress Slope
   a) The buttress slope varies from 3H:1V to 4H:1V
   b) Vegetation (mainly weeds) are growing randomly in some locations on the buttress
   c) Several locations visible evidence of surface water runoff and erosion gullies throughout eastern and central portions of buttress.
   d) East end of buttress slope was recently graded and appears to be seeded and mulched with very little vegetation established. The geese were enjoying it.

Photo 1. From the top of the buttress, looking down the slope, approximate 4 ft wide erosion gullies in central area of buttress are present.

Photo 2. Looking NE from central area showing recently graded buttress slope on east.

Photo 3. Heavy equipment path going up the slope

Photo 4. Representative image of erosion gullies near west end of buttress

If you have any questions regarding the contents of this report, please contact Holcim or Lithos Engineering.

Sincerely,
Lithos Engineering

Benny Siljenberg, PE