



March 15, 2023  
Project No.: 19125

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Holcim  
1687 Cole Boulevard, Suite 300  
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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 March 14, 2023. At several locations, erosion extending from the toe is still visible. We recommend those gullies be backfilled with compacted soil within the next several weeks and that the areas be seeded per the reclamation plan. A new access road has been built at the toe of the buttress slope. Site notes and photographs are presented below:

- Weather: 50-55°, sunny, winds 5 mph
- Visual observation of the Fountain Mutual Ditch and ditch road:
  - No tension cracks
  - Vegetation growing on banks and at invert of ditch
  - No water flowing in ditch
  - No sloughed slope surfaces
  - The condition of the ditch is stable
  - Berm between ditch and access road is stable



Photo 1. Fountain Mutual Ditch looking West

- Visual observations of the Butress Slope
  - The buttress slope varies from 3H:1V to 4H:1V
  - Vegetation (mainly weeds) are growing in some locations on the buttress
  - Several locations visible evidence of surface water runoff and erosion gullies throughout eastern and central portions of buttress
  - East end of buttress slope was recently graded and appears to be seeded and mulched although no vegetation has established



Photo 2. Looking SW from E end of ditch road showing recently graded buttress slope.



Photo 5. Erosion gullies in central area of buttress





Photo 6. General view of erosion gullies near west end of buttress



Photo 7. Closeup 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**



Steve Kuehr, PE  
Senior Consultant