



STATE OF  
COLORADO

Cazier - DNR, Tim <tim.cazier@state.co.us>

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## Slope Stability Monitoring Report

1 message

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**Neil Whitmer** <neil.whitmer@lafargeholcim.com>

Mon, Jan 17, 2022 at 7:45 AM

To: tim.cazier@state.co.us, Jeremy PRITCHETT <jeremy.pritchett@lafargeholcim.com>

Permit: M1973007SG  
ePermit Number: 615298  
Operation Name: Daniels Sand Pit 2

Tim,  
Attached is the Slope Stability Monitoring Report completed on January 13, 2022 by Lithos. Please let me know if you have any questions or need additional information.

Thanks,  
Neil



**Daniels Sand Pit 2 - January 2022 Observation .pdf**  
3190K



January 13, 2022  
Project No.: 19125

2750 S. Wadsworth Blvd, Suite D-200  
Lakewood, Colorado 80227  
303.625.9502  
[www.LithosEng.com](http://www.LithosEng.com)

Aggregate Industries – WCR, Inc  
1687 Cole Boulevard, Suite 300  
Golden, CO 80401

Attention: Jeremy Pritchett  
Environmental and Land Manager

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

Mr. Pritchett,

Lithos Engineering (Lithos) has been retained by Aggregate Industries 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 January 10, 2022. The condition of the buttress slope is stable. Site notes and photographs are presented below:

- Weather: 28°, sunny
- Visual observation of the Fountain Mutual Ditch:
  - No tension cracks
  - No toe erosion
  - No moisture changes, ditch is dry
  - No sloughed slope surfaces
  - Several broken branches near crest
  - The condition of the ditch is stable



Photo 1. Fountain Mutual Ditch looking west





Photo 2. Fountain Mutual Ditch looking east





Photo 3. Fountain Mutual Ditch looking north





Photo 4. Fountain Mutual Ditch invert

- Construction sequence
  - At this time, the buttress slope varies from 3H:1V to 4H:1V
  - Preparation for final lift
    - Stockpiled sand located at crest of embankment for the whole length





Photo 5. Stockpiled sand for final lift, access road and ditch (looking west)



Photo 6. Buttress slope

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

Sincerely,

**Lithos Engineering**



Steve Kuehr, PE  
Senior Consultant

Sarah Myers, EIT  
Project Engineer