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**CEMENT  
MILL TEST  
REPORT**

**Cement Identified as:** **API Class A** **Date:** 12/29/21

**Plant:** **Fairborn Cement Company**  
**Production Period:** **12/2/21 - 12/28/21** **Silo: 4, 8**

| STANDARD CHEMICAL REQUIREMENTS<br>(ASTM C 114)               |         | API SPECIFICATION<br>CLASS A |  | RESULTS       |
|--|---------|------------------------------|--|---------------|
| Silicon Dioxide (SiO <sub>2</sub> ), %                       |         | -----                        |  | 19.9          |
| Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> ), %          |         | -----                        |  | 4.6           |
| Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> ), %            |         | -----                        |  | 3.2           |
| Calcium Oxide (CaO), %                                       |         | -----                        |  | 62.3          |
| Magnesium Oxide (MgO), %                                     | Maximum |                              |  | 4.7           |
| Sulfur Trioxide (SO <sub>3</sub> ), %                        | Maximum | 3.0                          |  | 2.8           |
| Loss on Ignition (LOI), %                                    | Maximum | 3.5                          |  | 1.1           |
| Insoluble Residue, %   | Maximum | 1.50                         |  | 0.43          |
| Alkalies (Na <sub>2</sub> O equivalent), %                   |         | -----                        |  | 0.75          |
| Tricalcium Silicate (C <sub>3</sub> S), Potential %          |         | -----                        |  | 59            |
| Dicalcium Silicate (C <sub>2</sub> S), Potential %           |         | -----                        |  | 12            |
| Tricalcium Aluminate (C <sub>3</sub> A), Potential %         | Maximum | -----                        |  | 7             |
| Tetracalcium Aluminoferrite (C <sub>4</sub> AF), Potential % |         | -----                        |  | 10            |
| <b>PHYSICAL REQUIREMENTS</b>                                 |         |                              |  |               |
| (ASTM C 204) Blaine Fineness, m <sup>2</sup> /kg             | Minimum | 280                          |  | 297           |
| API Compressive Strength, psi (Mpa)                          |         |                              |  |               |
| 8 Hour, 100 degree F   | Minimum | 250 (1.7)                    |  | 1253 ( 8.6 )  |
| 24 Hour, 100 degree F  | Minimum | 1800 (12.4)                  |  | 3702 ( 25.5 ) |
| API Schedule 4 Thickening Time, minutes                      | Minimum | 90                           |  | 105           |
| Maximum Consistency, 15 - 30                                 |         |                              |  | 14            |

We hereby certify that this cement conforms to the standard requirements for API Specification 10A.

By: *Rusty Strader*

Physical Testing completed by: DG , JT  
 Chemical Testing completed by: TA, NM, NC, KL

Rusty Strader  
 Quality Control Manager  
 Fairborn Cement Company