

Lime Mill Certification

1. Scope:

Mills furnishing Lime to South Dakota Department of Transportation projects will be classified by the Chief Materials and Surfacing Engineer as Certified mills or non-certified mills in accordance with this procedure.

2. Apparatus:

- 2.1 Dipper, hand scoop, sampling tube, shovel or any satisfactory sampling device.
- 2.2 Sample container (Cement can)
- 2.3 Miscellaneous. Brooms, brushes and a funnel.

3. Procedure:

3.1 Certified mill.

A. Basis for qualification.

- (1) A certified mill is any mill that furnishes lime on a relatively continuous basis or a volume sufficient to justify the sampling and testing necessary to qualify and maintain a "Certified" status. The mill will:
 - (a) Have an acceptable quality history based upon the manufacturer's data or Department of Transportation test records, as required by the Chief Materials and Surfacing Engineer.
 - (b) Maintain mill laboratory facilities which are periodically inspected by an authorized representative of the Office of Materials and Surfacing.
 - (c) As production warrants, and/or as directed by the Chief Materials and Surfacing Engineer, at the beginning of each month, make available a minimum of one random composite sample of material produced during the previous month along with copies of results of tests made by the plant since the last sample. This sample will be collected from the mill and tested by the Department.

Additional samples may be requested as deemed necessary, to determine the quality of lime being produced.

- (d) In addition to making a sample available as specified in (c) above, the certified mill will also furnish the Central Testing Laboratory weekly certified analysis of its product, reporting the following:
 - (1) Percent calcium and magnesium oxide.
 - (2) Percent free water or mechanical moisture.
 - (3) Accumulative percentage, by weight of residue retained on the #6, #20 and #100 sieves.
- (e) When tests confirm non-specification material or product, the certified plant will be notified of the deviation and may be removed from the certified list until the deviation and cause have been corrected.

3.2 Non-certified mills.

A. Basis for qualification.

- (1) Any mill not currently identified as a certified mill will be a non-certified mill.
 - (a) The manufacturer and appropriate Department of Transportation personnel will be notified by the Office of Materials and Surfacing when a mill is certified and when there is a change in a mill's certification.

3.3 Lime delivery.

A. From a certified mill.

- (1) Two copies of a Certificate of Compliance will accompany each conveyance to the project.
- (2) No sampling will be required on the project.

B. From a non-certified mill.

- (1) Two copies of a properly executed Certificate of Compliance will be submitted by the manufacturer for each conveyance, prior to or at the time of delivery to the project. Information required by the certificate may be included as part of the

standard bill of lading, loading or weight ticket, or shipping invoice.

The original will be placed in the project file. The copy will be forwarded to the Office of Materials and Surfacing.

- (2) A sample consisting of two cement cans will be obtained and submitted to the Central Testing Laboratory for testing for each conveyance of lime received on the project. The sample will be obtained from the loading or unloading spout/hose.

Seal sample containers against contamination from air or moisture immediately after filling. Submit the samples and a Certificate of Compliance as required, to the Central Testing Laboratory.

- (3) Shipments of lime received from a non-certified mill without the required certification will not be used until the Engineer in charge of the project has obtained the documents or has received satisfactory test results on the samples.

3.4 Safety precautions.

- A. Although lime (Calcium hydroxide) does not normally cause severe burns, care should be exercised to avoid excessive material contact with lungs, eyes and the exposed areas of the body.

4. **Report:**

Report the test results.

5. **References:**

DOT-60

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION
CERTIFICATE OF COMPLIANCE
LIME

DOT-60
6-18

FILE # _____

PROJECT _____ COUNTY _____ PCN _____

CAR OR TRUCK NO. _____ NET WEIGHT: TON _____ SEAL NO. _____

MANUFACTURER _____ DESTINATION _____ DATE _____

This sealed shipment of hydrated lime is in compliance with the Department of Transportation Specifications in effect on the project shown. AND, if submitted herewith, the two test specimens obtained by the manufacturer in accordance with SD 502, are truly representative of the transported material described above. They have been as indicated below.

1. _____ For Truck Shipment Specimens and certificates sent with driver for delivery to the Project Engineer

2. _____ For Rail Shipment Specimens mailed directly to: South Dakota Department of Transportation, Central Testing Laboratory, Pierre, SD 57501. The Certificate is mailed to: Project Engineer.

Signed _____
Manufacturer's Authorized Agent

INSTRUCTIONS

The Certificate of Compliance and its duplicate copy must accompany each load of hydrated lime, if the material is to be used on the project prior to receipt of satisfactory test results from the Central Testing Laboratory.

Certified shipments of lime which have been sampled by the manufacturer will have the 2 Certificates (original and one copy) and the 2 test specimens forwarded as follows:

1. SEALED SHIPMENTS BY TRUCK TRANSPORT - The driver will deliver to the Engineer in charge of lime blending operations, the 2 Certificates and the 2 test specimens at the time the load is delivered to the project.
2. SEALED SHIPMENTS BY RAILROAD CAR - The original and 1 copy of the Certificate of Compliance will be affixed to the lower side of 1 of the upper hopper car doors. The inside of the boxcar door, or to the car's placard board. The 2 test specimens (when taken by the manufacturer) should be sent directly to the South Dakota Department of Transportation, Testing Laboratory, Pierre, SD 57501. NOTE: The Project Engineer must be informed by the manufacturer, if the test specimens are sent directly to the Central Testing Laboratory.

CERTIFICATE DISTRIBUTION BY PROJECT ENGINEER:

Original - To project file

Duplicate - To Central Testing Laboratory with test specimens (except in 2, above)