Method of Sampling Portland Cement and Fly Ash in the Field

1. Scope:

This is the procedure for sampling Portland cement and fly ash in the field for use in Portland cement concrete.

The sampling of Portland cement for certification of plants shall be in accordance with SD 416.

2. Apparatus:

2.1 Tube sampler.

2.2 Shovel.

2.3 Sample cans - 4 lb.

3. Procedure:

3.1 Sample size.

A. The samples shall consist of two full cans for cement and one can for fly ash.

3.2 Sampling.

A. Packaged.

1. Randomly select 3 packages from the load.

2. Obtain approximately equal amounts from each package, using the tube sampler and place the material in the can making sure it is full.

B. From bulk storage (Train cars / truck transports).

1. Obtain a sample by inserting the full length of a sampling tube vertically into the material at various well distributed locations over the entire area of the bulk storage container (A minimum of 3 locations).

2. The openings in the sampling tube shall be closed when it is inserted into the material. Following insertion to the tubes full length, allow the material to flow into the orifices of the tube by turning the inside tube on the top of the device 90 degrees or as required to completely open the orifices for the applicable device.

   3.   Remove the tube from the material and place the contents directly into the sample container.

C.   From bulk storage at points of discharge.

   1.   Draw sufficient material from the discharge openings to obtain a representative sample.

D.   From conveyor delivering to bulk storage.

   1.   Take the sample from material passing over the conveyor with a shovel or can. This may be accomplished by taking the entire sample in a single operation, known as the "Grab method" or by combining several approximately equal portions, (Minimum of three) taken at regular intervals known as the "composite method".

3.3   Seal the sample container by taping the lid to the can.

4.   Report:

4.1   Prepare Sample Data Sheet (DOT-1) and attach to the container(s) of the sample.

5.   References:

SD 416
DOT-1