

APPENDIX C SEALED-BIN TESTING

C-1. Introduction

Sealed-bin testing is an acceptance-testing program that seeks to give maximum assurance that a material meets specification requirements when it is used in construction. The procedure is to sample material as it is being delivered into storage bins and to seal the storage bin until testing confirms compliance. Material is loaded into conveyances under the surveillance of an inspector and again sealed until delivery into the storage facilities at the construction site. Under this system, there is little or no opportunity for untested material to reach the project.

C-2. Authority and Procedures for Initiating Sampling, Inspection, and Testing

a. Sampling, inspection, and testing of cement, slag, or pozzolan shall be undertaken only on direct or confirmatory request of the using agency. Upon receipt of a request from the using agency, the U.S. Army Engineer Waterways Experiment Station (WES) shall authorize the mill or source inspector to perform the required sampling and inspection. Receipt of this authorization by the inspector shall constitute authority to perform sampling and inspection when requested to do so by the producer. The inspector shall promptly notify the producer of receipt of such authority. The inspector shall perform no sampling without proper authorization from WES.

b. In the event a producer requests inspection and testing of cement, slag, or pozzolan for which WES has not received a request from a using agency, WES will immediately contact the using agency to confirm that inspection and testing are desired in connection with the order in question. Oral, followed by written, confirmation shall be a satisfactory basis for the

laboratory to authorize the necessary sampling and inspection.

C-3. Inspector

a. Contract. Inspectors can be Government employees or contract employees, but they must not be employees of the producer. Development and maintenance of inspector contracts may be the responsibility of the using agency or of WES.

b. Duties. The inspector is responsible for sampling, witnessing the transfer of material, and maintenance of records as follows:

(1) Sampling. When authorized, by WES or by the using agency, to initiate inspection activities on a lot of material, the inspector will take samples of the material as it is transferred from process to storage. Exact location for taking samples will depend on the setup of the production facility and should be coordinated with production personnel. Instructions on sampling frequency will be issued from the using agency or from WES prior to the start of inspection.

(2) Witnessing and sealing. Once a storage bin is full, or no more material is to be placed into it, the inspector shall seal the bin so that no additional material can be added without the inspector's knowledge. During loading for transport to the project site, which must not occur until notification from WES that the material complies with specification requirements, the inspector shall note the storage bin from which material is taken, the tanker number, and the amount loaded into it and seal the discharge tube(s), noting the seal numbers.

(3) Records. The inspector shall maintain logs of seal numbers, their location, and dates of

ER 1110-1-2002
30 Sep 98

application and/or removal. The inspector shall also maintain logs of amounts of materials shipped from each sealed bin, dates of shipping, truck or rail line responsible for transport, and tanker numbers. Copies of records shall be sent to WES monthly.

C-4. Testing and Reporting

Samples taken during the filling of bins will be sent to WES for testing. Full or reduced testing will be applied as required by ASTM C 183. Test results will be transmitted to the using agency, the inspector, and the producer.