

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SEP 03 1980



Mr. W. H. Levelius  
Vice President  
Pittsburgh Testing Laboratory  
P.O. Box 1646  
Pittsburgh, PA 15230

Dear Mr. Levelius:

SUBJECT: QUALITY ASSURANCE OF SIEVES

In your letter dated November 6, 1979, you present PTL's corporate position regarding the control of sieves used to test concrete and soil construction materials. Your position is based on the belief that the initial certification of the sieve's conformance to industry standards is a sufficient means of attesting to the accuracy of the sieve for its lifetime since no measurable wear occurs in the sieve openings, extreme accuracy is not warranted for construction materials, national authorities do not verify actual sieve openings during commercial laboratory inspections, and ANSI N45.2 exempts these types of equipment. Therefore, you conclude that only a routine visual inspection by the user provides adequate quality control of sieves.

In our analysis of this matter, we have concluded that successful accomplishment of the following three steps should provide the necessary assurance of sieve adequacy:

1. Verification that the sieve conforms to requirements when received by the using organization.

This means that the sieve complies with the ASTM E-11 specification. This can be done by either a) receipt inspection which verifies by test or measurement that the specification (including dimensional tolerances) is met or b) a certificate of compliance provided by the supplier certifying that the sieve meets the ASTM E-11 specification. Method "b" is acceptable only if the supplier's certificates of compliance are periodically evaluated by audits, independent inspections, or tests to assure they are valid.

2. Frequent visual checks by the user to verify that the sieve has not been damaged.

Prior to each use, the sieve should be visually checked by the unaided eye for defects such as tears, loose wires, loose screen, warp, or other physical damage. A damaged sieve should be discarded.

3. Periodic checking, "independent" of user.

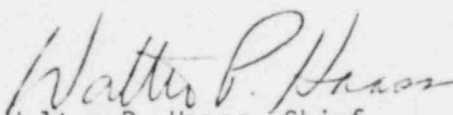
On an approximately annual frequency, based on the criticality of particle size and the importance to safety of the end use of the sieve analyses, the

sieve should be checked by someone "independent" of the user. This check should consist of a repeat of step 2 and, as a minimum, a dimensional check of opening size by means of a hand lens with a graduated scale for the finer sieves and by means of calipers or "go:no-go" gages for the coarser sieves.

In summary, we generally agree with your position regarding the need for rechecking the accuracy of sieves. We do believe, however, that in certain instances in which particle size is more critical and the end use of the sieve analysis is determined to be of particular importance to safety additional controls should be exercised as noted in item 3 above.

We regret the length of time required to respond to your letter, but we wanted to provide a position which has been fully coordinated within the NRC staff. If you have any questions or comments on this position, please call me at (301) 492-7741.

Sincerely,

  
Walter P. Haass, Chief  
Quality Assurance Branch  
Division of Engineering