

January 6, 2016

Mr. Rich Lewis, Chair
Laws & Regulations Committee
National Conference on Weights & Measures
1135 M Street, Suite 110
Lincoln, NE 68508



RT: Editorial Clarifications for NIST Handbook 133

Dear Chairman Lewis:

In response to comments from Michigan and Ohio representatives expressing concerns regarding the joint editorial proposal for NIST Handbook 133 submitted by NIST OWM and the MSC, we wish to clarify several points in question.

As noted, the mulch test procedure has remained significantly unchanged for many years. Historically, information resources included NIST Handbook 133 as well as inspector training conducted by NIST, and instructional videos jointly produced by NIST and MSC for use by states and industry. The Mulch & Soil Council has always been a proponent of weights and measures inspections as a protection to assure companies are competing on a level playing field. The objective in providing joint training materials has always been to promote uniform testing within the industry and among the states.

It should be noted that as budget and other training resources for inspectors have declined over the years, more reliance is placed on NIST Handbook 133 documentation without the additional procedural clarifications of classroom and video instruction, which can contribute to a gap in the application of uniform testing because the handbook is less detailed on procedural steps.

To help minimize that gap, combining elements of classroom and video instruction into more detailed guidance in NIST Handbook 133 does not change existing procedures– it merely clarifies what complete training achieved using more detailed resources.

Proposed clarifications to Chapter 1 simply reemphasize package selection requirements of Chapter 2 that, unfortunately, may or could be overlooked as there are five pages after where they are first mentioned in the handbook. Clarifying and cross referencing the two sections is recommended to assist inspectors and industry personnel who have not been exposed to package selection training elsewhere and was recommended by the Western L&R Committee

The compaction note has always been part of the test instructions as well as the specification to gently roll the package to decompress. However, we have observed that individual interpretation of “rolling” the package is highly variable and needed clarification for uniform results. This edit is a clarification, not a change to the procedure.

Mulch & Soil Council, 7809 N. FM 179, Shallowater, TX 79363

TEL: 806.832.1810 • FAX: 806.832.5244 • Email: info@mulchandsoilcouncil.org • Web: www.mulchandsoilcouncil.org

The objective to “ensure that the material is loose and free-flowing placed into the measure” has always been a pre-placement requirement of the testing protocol followed by “empty the contents of the package into a test measure” which was clarified in training and the video to not touch the product or interrupt the continuous free flow into the measure. While that has been taught for years, the instruction to “empty” is not clearly stated in NIST Handbook 133 and should be clarified consistent with training. Again, this is not a change in procedure — merely a clarification of a vague instruction to “empty”. It has always been a requirement that material be loosely free-flowing in a continuous uninterrupted manner in accordance with how it is mechanically packaged in a loose, continuous, free flowing manner at manufacturing facilities.

While moisture retention is a major benefit of mulch products, its supply chain handling procedures can expose it to significant moisture accumulation that distorts volume measure due to excessive water weight causing a reduction in column height. Full saturation causing free flowing water in the package is very unlikely to predominate in an entire inspection lot, and excluding some over saturated packages is not unreasonable. No manufacturer could predict the water saturation or evaporation rate of products as a calculated means of evading inspection.

Not to be redundant, but “empty the contents of the package into a test measure” is the current NIST Handbook 133 instruction. Classroom and video training have clarified the process as defined in the proposed edits. For industry and regulatory inspectors who rely only on NIST Handbook 133, that instruction is too vague and needs to be clarified. This is not a change in procedure— only a clarification of:

- Placement at, not significantly above, the measure
- Continuous flow for an interrupted loading of the measure
- Replication of the mechanical process that is current state-of-the-art for mulch bagging.

The issue of pore spaces (voids) has been a concern for regulators and industry since day one. Due to the non-uniform particle size of mulch, every attempt to measure the product will be subject to random combinations of pore spaces. Since mulch is 70% to 85% pore space, the infinite possibilities for random voids is both unpredictable and unavoidable.

However, it is the pore space that makes the product effective in a lawn and garden setting. Without pore space, there is no movement of water and air to the ground or trapping evaporative losses from below. So, pore space is THE essential element of mulch.

Because irregular particles randomly combine every time they are constrained in a physical measure, they are not a controllable method for short-filling packages. Pore spaces (voids) cannot be made or prevented in any predictable manner for any single package and retesting the same product in multiple test measures would never create the same pore spaces (voids) — ever. It is the random nature of pore space combinations that compels our industry to deliberately over pack by 5%-8% to avoid short filling products.

Artificially manipulating the pore space such as rocking, tamping, dropping, compressing, or sifting the material in the measure has been prohibited in the test procedure for 30 years. Nothing in the proposed editorial clarification to NIST Handbook 133 will change that.

The Mulch & Soil Council continues its belief and confidence in its submitted data that the clarification of test procedures for package contents of mulch will improve industry and regulatory uniformity by making NIST Handbook 133 more inclusive as a stand-alone reference and guide.

We will be happy to respond to any additional questions at the L& R Committee meeting at the NCWM Interim Meeting next week.

Sincerely,



Robert C. LaGasse
Executive Director

cc: MSC BOD
NIST OWM