



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

RESEARCH TRIANGLE PARK, NC 27711

JUN 01 2007

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Request to use the CSA B415.1 Test Protocol as an Alternative Test Method for Determining Thermal Energy Efficiency Rating for Wood Stoves Affected under the New Source Performance Standard (NSPS) for Residential Wood Heaters at 40 CFR Part 60, Subpart AAA

FROM: Conniesue B. Oldham, Ph.D., Group Leader
Measurement Technology Group

Robin R. Segall for CBD

TO: Michael S. Alushin, Director
Compliance Assessment and Media Programs Division
Office of Compliance.

I am writing in response to your February 6, 2007, memorandum requesting, on behalf of Environmental Protection Agency (EPA) accredited laboratories that perform woodstove certification testing and manufacturers of woodstoves, approval of the Canadian Standards Administration (CSA) B415.1 test protocol as an alternative test method for determining the thermal energy efficiency rating for wood stoves affected under the New Source Performance Standards (NSPS) for Residential Wood Heaters in 40 CFR Part 60, Subpart AAA. As you know, Subpart AAA in §60.536(i)(3) allows affected sources to determine the thermal efficiency rating for wood stoves either by using a default number (63 percent for noncatalytic wood stoves, 72 percent for catalytic wood stoves, and 78 percent for pellet stoves), or by measuring the actual efficiency.

The default values used in the rule were calculated using an energy efficiency measurement procedure developed by the Oregon Department of Environmental Quality (DEQ) that closely resembles the CSA B415.1 test protocol: the methods are both stack loss based methods, are procedurally similar, and produce similar results. The CSA B415.1 method will be incorporated in the Canadian wood smoke regulations.

It was the intent of EPA to develop a test method for measuring the thermal efficiency of wood stoves and pellet stoves as indicated in §60.534(d); "Appendix J is used as an optional procedure in establishing the overall thermal efficiency of wood heaters." However, an efficiency test method was never developed.

We are aware that EPA accredited laboratories are using and have been using CSA B415.1 for many years. Based on similarity of the CSA B415.1 protocol to the Oregon DEQ method used to determine the allowed default values, we agree that use of the CSA B415.1 test protocol for determining an actual thermal energy efficiency rating for wood stoves affected under the NSPS for Residential Wood Heaters in 40 CFR Part 60, Subpart AAA is an acceptable alternative to the use of the default values.

If you have additional questions, please call Michael Toney at (919) 541-5247.