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Kathleen G. Vokes  
ENERGY STAR Program  
U.S. Environmental Protection Agency  
Subject: Draft Lab Requirements

May 28, 2010

Dear Ms. Vokes,

The Cool Roof Rating Council (CRRC) appreciates the opportunity to comment on the Draft Conditions and Criteria for Recognition of Laboratories for the ENERGY STAR® Program. Please find below our recommendations to strengthen the ENERGY STAR® laboratory criteria. In addition, kindly consider our proposal to serve as the rating entity.

**Program Integrity and In-house Laboratories**

The Draft Conditions and Criteria for Recognition of Laboratories for the ENERGY STAR® Program notes that “in-house” labs can be used assuming they are ISO17025 registered and (a) lab employee compensation or bonuses are not tied to the financial performance of the parent company and (b) lab personnel do not originate with or return to the parent company or look for advancement within the parent company.

In order to ensure the credibility of ENERGY STAR® products, the CRRC advises against allowing product certification through in-house laboratories. We believe that the use of in-house laboratories to produce energy performance ratings creates an unrealistic expectation, and it is precisely why the CRRC was formed in 1998; to provide a method for conducting standardized, unbiased, third-party roofing product testing in order to deliver credible, accurate and consistent test results.

As proposed in the Draft Conditions and Criteria for Recognition of Laboratories for the ENERGY STAR® Program, allowing in-house certification equates to accepting self-certification. Being ISO 17025 certified does not guarantee prevention of falsification of energy performance qualifications for ENERGY STAR® products. The only way to guarantee independence and credibility is to require third-party testing, not only for roofing products, but for all products.

Implementation of a system where a third-party program would review manufacturer in-house lab reports and certify that the product meets the ENERGY STAR® requirements would compromise the integrity of the ENERGY STAR® program. A third-party reviewer would not be able to verify the validity or credibility of roofing product radiative property test results. A reviewer lacks the ability to visually determine whether a value presented on paper can legitimately be certified. Should the EPA decide to implement this system, it will open up a significant loophole in the certification program.

For credibility purposes, the CRRC program accepts and publishes radiative property values from independent testing laboratories (that have no ownership of commercial interest in a supplier or roofing product



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company and are not owned by such). The only circumstance under which the CRRC will accept manufacturer in-house laboratory radiative property readings is for custom color one-time-use products that are not for general market sale. The CRRC will only publish ratings that have been conducted in accordance with the guidelines of its Product Rating Program Manual (CRRC-1), which mandates that only CRRC Accredited Independent Testing Laboratories and Test Farms can conduct initial and aged testing or sample weathering for placement on the CRRC's Rated Products Directory.

### **Calibration and Inter-Laboratory Comparison Testing**

To certify that each EPA accredited laboratory has properly calibrated equipment, the ENERGY STAR® criteria should extend beyond the ISO 17025 requirements (that laboratories maintain accurate and calibrated measuring equipment with calibration records). The CRRC program implements a robust system to help ensure that our accredited laboratories' equipment is calibrated and that each lab produces consistent test results across the board.

As part of the CRRC accreditation process, a lab must demonstrate properly calibrated equipment by conducting initial reflectance and emittance testing on product samples provided by the CRRC. Test results are then compared to the most recent round robin test results to ensure that the new lab's test equipment is properly calibrated and consistent with other accredited CRRC test laboratories. The CRRC proposes that the EPA implement the CRRC calibration verification process in their lab criteria document.

Additionally, each year the CRRC requires all accredited labs to participate in annual round robin testing. This requirement is similar to the Inter-Laboratory Comparison (ILC) testing noted in the EPA laboratory criteria document. Under CRRC protocol, the labs, in successive order using the same samples, test a diverse range of roofing products under a variety of test methods. The CRRC collects the data from each lab, upon which the Technical Committee, which includes a subcommittee comprised of all CRRC testing lab and test farm technical staff, and the Board of Directors analyze the results and determine if any corrective actions are required.

The EPA laboratory criteria requests that the laboratory submit result analysis and a corrective action response, however, a comprehensive analysis of the results from all participating labs should be carried out. The CRRC recommends that the EPA adopt the CRRC ILC testing method, where each lab tests the same products in succession and the results are vetted by a panel of technical experts.

### **Overview**

The CRRC's comprehensive and independent Product Rating Program has an excellent track record and our lab accreditation requirements meet all the criteria outlined in the Draft Conditions and Criteria for Recognition of Laboratories for the ENERGY STAR® Program. CRRC's Program goes far beyond these requirements and includes many policies and procedures for uncommon or exceptional scenarios.





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The CRRC also employs standardized ASTM test methods and when necessary, rigorously researches and develops new test methods with national laboratories and other stakeholders to measure the new products with accuracy and consistency, in accordance with the CRRC-1 Product Rating Program Manual (ANSI approved).

Further, complex issues such as random post-production product testing, product rating failures, product rating sharing (authorized or unauthorized), label use and abuse, product reformulating or retesting, and so on, will arise. This laboratory conditions and criteria draft may not be the appropriate document to address such concerns, but these are matters that will require constant oversight and attention.

The CRRC respectfully proposes to be appointed the rating entity for the ENERGY STAR® qualified roof products program, similar to how the National Fenestration Rating Council (NFRC) is the sole rating body for the ENERGY STAR® qualified windows, doors, and skylights program.

In addition to the above recommendations, please find below supplementary questions:

1. Which ISO 17025 standard is being used; 17025:2005 or 17025:1999? The 2005 version is the most recent and reflects important quality control protocols. The 1999 version is out of date and should not be used.
2. When will details of specific programs (such as roofing) be developed? Will industry and organizations like the CRRC, be allowed to participate and develop the cool roof program?
3. For sample testing, and in the case of roofing, 3-year test farm exposure, will there be a chain of custody requirement?

Thank you again for considering our comments. In particular, we hope you favorably consider CRRC's proposal for appointment as the rating entity for the ENERGY STAR® qualified roof products program. Please contact me with any questions or concerns.

Sincerely,

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