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Date: 08/10/2011 02:49 PM
Subject: Utility Heaters

Hi Gil,

Under the direction of HPBA, I am sending you the utility heater applicability/definition language we have been working on for the past several months. The background section includes details about the proposal. We feel that we have reached a consensus within the industry and we are hopeful that this proposal will meet EPA's objectives for this product category.

My suggestion is that you look this over and that we discuss this on the call that David has been working on scheduling with you.

I will be out of the office after noon tomorrow and not back in the office until Tuesday, August 16th,so please direct any immediate questions you might have during that timeframe to David.

Best regards,

Bob

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(See attached file: NSPS Utility Heater Applicability.Definition Prop

NSPS Utility Heater Applicability/Definition Proposal August 10, 2011

Prepared for HPBA by David Menotti and Bob Ferguson

Proposal for Utility Heater Category

Heaters whose burn rate characteristics are different than those for products that have been and will remain to be considered as residential wood heaters will fall into a new category. Generally speaking, these are the types of products that are currently exempt from emission limits. For purposes of this definition, they will be referred to as "Utility Heaters".

Under this category, two subcategories have been identified.

The first are true single burn rate heaters. These products may or may not include air controls (including stack dampers, either built into the appliance, sold with it, or recommended for use with it by the manufacturer), but if a user-controllable air control device of any type is included it can have only two positions. The first position is fully closed. This would be considered a safety feature so the air can be completely shut down in case of a chimney fire. In this position, the heater cannot sustain a fire. The second position is fully open. The air control must be designed to insure that intermediate positions between off and on cannot be achieved. The fixed burn rate in the on position can be at any level desired by the manufacturer, but will have to satisfy EPA's requirements for testing and certification. The testing would be in accordance with Annex X1 of ASTM E2780-10. If the product includes any type of automatic air control that is not adjustable and not readily accessible for tampering by the consumer, that control would not disqualify the model as a single burn rate utility heater (subcategory 1), and would be allowed to operate as designed. Again, this subcategory has either no consumer adjustable air control or an air control with only two positions – fully off or fully on.

The second subcategory includes products with user-adjustable burn rates. In this case, the air control may or may not include the fully off position (for safety purposes as described earlier) but if the off position is included, the air control must prevent air settings between the off position and the minimum air setting from being achieved. These heaters will be required to achieve a minimum burn rate of 1.76 dry kg/hr or higher when tested in accordance with ASTM E2780-10. There would be no limit for the maximum burn rate. Table 2 in section 9.5 of ASTM E2780-10 will be used to determine the medium burn rate requirement between the minimum and maximum burn rate settings, if applicable. For example, if the minimum achievable burn rate is 1.8 kg/hr and the maximum burn rate is 6.0 kg/hr, a test in the medium category would be required between 36 and 53% of the maximum. This would result in a burn rate range for the medium category between 2.2 and 3.1 kg/hr. If the maximum achievable burn rate results in a medium burn rate category requirement (36-53% of maximum) that is equal to or less than 1.76 kg/hr, the low burn rate setting shall be used for the medium burn rate test. Or alternatively, the single low burn rate test can receive the combined weighting of the low and medium categories when determining the average emissions per equation 10 in section 10.2 of ASTM E2780-10.

Stack dampers, whether built into the product or installed by users per manufacturers recommendations would be considered air control devices with regard to both subcategories. Manufacturers' recommendations would be determined from advertising, user manuals and other product literature. A widespread pattern or practice of user installation (or modification) of any burn rate control device would be treated as a manufacturer's recommendation.

The current annex X1 in ASTM E2780-10 was developed in anticipation of the first subcategory of utility heaters described above. Based on the definitions proposed here, the annex should probably be revised to delete the requirement that the appliance's capability to operate at a single burn rate be demonstrated by gauging the precision of duplicate test runs (while maintaining the requirement to average the results from two or more runs). The annex will have to be revised to address the specific details of testing for the second subcategory. Once EPA has finalized the utility heater category definition, the process for making any revisions needed in the annex can be initiated.

Utility Heaters

1. A Residential Heater is a Utility Heater if it satisfies the requirements of either subsection (a) or (b), and the requirements of subsection (c):

(a) Single Burn Rate Utility Heaters. A heater is a Single Burn Rate Utility Heater if:
(1) the burn rate is not adjustable by the consumer (no manual burn rate control device) or,
(2) if the heater has a burn rate control device, that device can only be adjusted from the fully off to the fully on position with no intermediate positions.

(b) Multiple Burn Rate Utility Heaters: A heater is Multiple Burn Rate Utility Heater if:
(1) the heater includes one or more user adjustable burn rate control devices and,
(2) the minimum achievable burn rate with the burn rate control device or devices set at the lowest burn rate setting other than fully off when tested in accordance with ASTM E2780 is greater than 1.75 dry kg/hr.

(c) Burn rate control devices include stack dampers that control the outflow of flue gases from the heater to the chimney, whether built into the appliance, sold with it, or recommended for use with the heater by the manufacturer, and air control slides, gates or any other type of mechanisms that control combustion air flow into the heater Automatic burn rate control devices that have no user interface and are not readily accessible for tampering are not user-adjustable burn rate controls. Owner's manuals, advertising materials in any form and dealer training materials or programs will be considered in determining manufacturers' recommendations, as will a widespread pattern or practice of the installation or modification of burn rate control devices by users.