March 31, 2013

Via E-Mail

Amanda Stevens
U.S. Environmental Protection Agency
ENERGY STAR Appliance Program
appliances@energystar.gov

Re: **ENERGY STAR Program Requirements Product Specification for Residential Dishwashers – Eligibility Criteria Draft 1 Version 6.0**

Dear Ms. Stevens:

BSH Home Appliances Dishwasher Division submits the following comments regarding the ENERGY STAR Product Specification for Residential Dishwashers, Eligibility Criteria, Draft 1, Version 6.0.

BSH supports efforts to protect our environment and accepts a responsibility to prepare for future generations. Best in class energy performance is embedded in the BSH philosophy. BSH supports the Department of Energy (DOE) in their efforts to reduce energy consumption. However, much care should be taken to ensure methods and test procedures are correctly developed and not prematurely implemented. A good test procedure introduced correctly will serve as a tool to manufacturers, consumers and regulators. However, a test procedure incorrectly implemented will be a burden to all involved, resulting in countless hours of discussions, providing incorrect evaluations of efficiency, leading to a loss of confidence in the program, and ultimately an increase in cost to all involved. If a test procedure will be used as part of a verification program, reproducibility must be confirmed. Otherwise, there will be numerous cases of false noncompliance and uncertainty for manufacturers, consumers and regulators.

BSH supports EPA and the Department of Energy (DOE) in their efforts to provide incentives to manufacturers, retailers, and consumers for continual energy efficiency improvement. Accordingly, BSH agrees that performance must be considered as more stringent energy and water criteria are set. In our experience, a reduction in a dishwasher's energy or water always has an influence on at least one aspect of the dishwasher performance. As explained by Dr. Herbert Sinner's (Sinner's Circle) theory on performance of washing machines and dishwashers; Time, Temperature, Mechanical action and chemistry are the main attributes of cleaning. If you reduce one of the attributes, you will need to increase another to maintain performance. With improvements in detergents and dishwasher technology, manufacturers have been able to maintain consumer satisfaction in performance while reducing energy usage. But we are reaching the limits of current technology and care must be taken to avoid issues.

A. Energy and Water Performance Requirements

BSH agrees with the AHAM comments concerning the specification on compact dishwashers. It causes concern that a specification is being set with only two non-representative units available for investigation. BSH produces countertop dishwashers, but they are not currently sold in the USA. BSH produced countertop dishwashers have not been adapted to the energy and performance requirements for the USA, so it is difficult to predict the impact of the specification without testing. BSH would caution that the specification should consider all types of compact dishwashers that may be sold in the USA in the future; avoiding any specification that would prevent such models from being introduced into the USA market. We suggest that EPA speak with manufacturers of compact dishwashers in order to more fully understand whether the levels EPA proposed are achievable.

The Draft test procedure to measure cleaning performance indicates that we will now be required to maintain water hardness for testing. Equipment to continuously monitor water hardness is expensive. BSH would request for the test procedure to be adjusted to measure and record the water hardness once for each test. This should provide an adequate means of checking water hardness without requiring costly equipment.

B. Connected

BSH feels strongly that the final test procedure to evaluate connected criteria for dishwashers needs to be in place before a final Energy Star connected specification is established. Further, BSH disagrees with EPA's decision to provide a 5% allowance for connected appliances. BSH contends that smart or connected capabilities on a dishwasher do not save energy. In fact, they cause the dishwasher to use more energy. We feel that Energy Star promoting a technology that does not save energy will cause confusion for its customers and may damage the brand identity. In addition, most dishwashers already contain a delay start feature that could serve to allow operation at low cost energy periods. In the event that EPA moves forward with providing this allowance, BSH would request for EPA to watch closely and remove this incentive as soon as it serves the stated purpose.

As noted, BSH opposes any connected allowance. However, if a connected allowance is implemented, there are some cycle(s) and /or option(s) which are adversely affected by the Temporary Appliance Load Reduction Capability interruption and would require an exemption (NSF cycles and Soil Sensor calibration). Again, we feel that the final test procedure needs to be in place before the specifications are established so manufacturers have the information necessary to determine issues.

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C. Reporting Requirement for Cleaning Performance

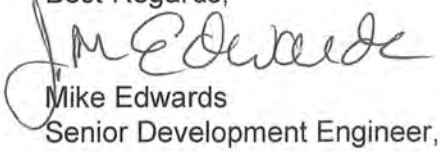
BSH agrees that EPA should evaluate whether performance will be negatively impacted by any specification levels it proposes. It is important for performance to be maintained as efficiency requirements become more stringent. BSH supports a cleaning specification for dishwashers as long as the test is consumer representative while being repeatable and reproducible. In fact BSH supports an all inclusive test method that evaluates all attributes of the dishwasher (cleaning, energy, water, noise, drying, capacity and time). All of these attributes are part of dishwasher cycle development and are interconnected; with an improvement in one attribute often impacting other attributes. In summary, BSH feels that a test that evaluates all the attributes, such as IEC 60436, is the correct way to evaluate dishwashers. For example, a reduction in dry performance may help improve energy, but is this really what the consumer wants. All attributes need to be evaluated so the consumers can make informed decisions.

If data is to be collected on cleaning performance, BSH strongly believes that AHAM should collect and analyze that data. We would also request for DOE to provide to AHAM any data they collect from 3rd party labs so that data can also be analyzed. In energy conservation rulemakings, AHAM often provides aggregated and de-identified data to DOE upon DOE's request.

We also note that the utility of data collected using the existing ENERGY STAR test method for determining residential dishwasher cleaning performance will be questionable given the level of variation our round robin testing demonstrated. The scoring results, using the AHAM scoring method, from the round robin conducted by AHAM showed a two sigma range of 99.5 to 71.4 for the soil sensing unit tested and 94.8 to 83.4 for the non-soil sensing unit tested. It will be difficult to accurately or confidently compare data across manufacturers given the concerns we have raised about reproducibility. It would be preferable for the test procedure to first be tightened before engaging in data collection of the scale EPA proposes. But, we understand that the timeline for improving the test procedure would likely be too long to allow for the collection of data in time for the next specification revision. Nevertheless, we believe that test procedure revision prior to data collection should at least be considered.

Finally, if EPA proceeds with a reporting requirement, we agree that the data should not be posted on the ENERGY STAR qualified products list. Given the inherent variation in the data, it would be confusing and potentially misleading to provide it to consumers.

Best Regards,



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