



[6450-01-P]

DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

[Case No. RF-045]

Notice of Interim Waiver and Request for Waiver to AGA Marvel from the Department of Energy Refrigerator and Refrigerator-Freezer Test Procedures

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Notice of granting of interim waiver; notice of request for waiver; request for public comment.

SUMMARY: This notice announces receipt of a petition for waiver from AGA Marvel seeking an exemption from specified portions of the U.S. Department of Energy (“DOE”) test procedure for determining the energy consumption of electric refrigerators and refrigerator-freezers. AGA Marvel seeks to apply an alternative test procedure for measuring the energy usage of combination cooler-refrigerator basic models. DOE has reviewed AGA Marvel’s alternate procedure. Rather than permit the use of this alternative procedure, which would effectively alter both the test procedure and the standard that AGA Marvel’s products would need to meet, DOE has tentatively concluded that it is more appropriate to apply the alternative procedure that other manufacturers of similar products have been permitted to use in prior waivers granted by DOE. This approach would allow AGA Marvel to measure the energy use of its products while alleviating the testing problems that prompted AGA Marvel’s request. Accordingly, DOE is

granting to AGA Marvel an interim waiver to permit it to use this alternative testing method to measure the energy usage of its combination cooler-refrigerator basic models. DOE notes that the method detailed in this interim waiver is consistent with the most recent approach that DOE outlined in an interim waiver issued earlier this year for other similar products. DOE solicits comments, data, and information concerning AGA Marvel's petition and suggestions on the alternate test procedure DOE is permitting AGA Marvel to use as a condition of its interim waiver.

DATES: DOE will accept comments, data, and information with regard to the proposed modification until **[INSERT 30 DAYS AFTER THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: You may submit comments, identified by Case Number RF-045, by any of the following methods:

- **Federal eRulemaking Portal:** <http://www.regulations.gov>. Follow the instructions for submitting comments.
- **E-mail:** AS_Waiver_Requests@ee.doe.gov Include [Case No. RF-043] in the subject line of the message. Submit electronic comments in Microsoft Word or PDF file format, and avoid the use of special characters or any form of encryption.
- **Mail:** Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, Mailstop EE-5B/1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-2945. Please submit one signed original paper copy.
- **Hand Delivery/Courier:** Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, 950 L'Enfant Plaza SW., Room 6094, Washington, DC 20024. Please submit one signed original paper copy.

Docket: For access to the docket to review the background documents relevant to this matter, you may visit the U.S. Department of Energy, 950 L'Enfant Plaza SW., Washington, DC, 20024; (202) 586-2945, between 9:00 a.m. and 4:00 p.m., Monday through Friday, except Federal holidays. Available documents include the following items: (1) this notice; (2) public comments received; (3) the petition for waiver and application for interim waiver; and (4) prior DOE waivers and rulemakings regarding similar clothes washer products. Please call Ms. Brenda Edwards at the above telephone number for additional information.

FOR FURTHER INFORMATION CONTACT: Mr. Bryan Berringer, U.S. Department of Energy, Building Technologies Program, Mailstop EE-5B, 1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-0371, E-mail: Bryan.Berringer@ee.doe.gov.

Mr. Michael Kido, U.S. Department of Energy, Office of the General Counsel, Mail Stop GC-33, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0103. Telephone: (202) 586-8145. E-mail: Michael.Kido@hq.doe.gov.

SUPPLEMENTARY INFORMATION: On January 26, 2016, AGA Marvel submitted a petition for waiver and application for interim waiver under 10 CFR 430.27 for its combination cooler-refrigerator models. (A subsequent e-mail from AGA Marvel sent on March 9, 2016, identified the specific basic models addressed in its petition.) AGA Marvel's submission seeks to use an alternative to the test procedure found at appendix A to subpart B of 10 CFR part 430. The basic models at issue incorporate wine chiller/beverage compartments (referred to as cooler

compartments) that prevent the manufacturer from testing these products in accordance with the applicable test procedure in appendix A. Specifically, the cooler compartments operate at temperatures higher than the standardized compartment temperatures used for testing in appendix A. Accordingly, these basic models cannot be rated based on the test procedure in appendix A. DOE is granting AGA Marvel with an interim waiver but modifying the alternative testing method approach outlined in AGA Marvel's petition to ensure consistency with the approach outlined in a recently issued interim waiver issued for similar products.

I. Background and Authority

Title III, Part B of the Energy Policy and Conservation Act of 1975 ("EPCA"), Public Law 94-163 (42 U.S.C. 6291-6309, as codified) established the Energy Conservation Program for Consumer Products Other Than Automobiles, a program covering most major household appliances, which includes the electric refrigerators and refrigerator-freezers that are the focus of this notice.¹ Part B includes definitions, test procedures, labeling provisions, energy conservation standards, and the authority to require information and reports from manufacturers. Further, Part B authorizes the Secretary of Energy to prescribe test procedures that are reasonably designed to produce results that measure energy efficiency, energy use, or estimated operating costs, and that are not unduly burdensome to conduct. (42 U.S.C. 6293(b)(3)) The test procedure for electric refrigerators and refrigerator-freezers is set forth in 10 CFR part 430, subpart B, appendix A.

DOE's regulations allow a person to seek a waiver from the test procedure requirements for a particular basic model of a type of covered consumer product when (1) the petitioner's

¹ For editorial reasons, Part B of EPCA was codified as Part A in the U.S. Code.

basic model for which the petition for waiver was submitted contains one or more design characteristics that prevent testing according to the prescribed test procedure, or (2) when the prescribed test procedures may evaluate the basic model in a manner so unrepresentative of its true energy consumption characteristics as to provide materially inaccurate comparative data. 10 CFR 430.27(a)(1). A petitioner must include in its petition any alternate test procedures known to the petitioner to evaluate the basic model in a manner representative of its energy consumption characteristics. 10 CFR 430.27(b)(1)(iii).

The granting of a waiver is subject to conditions, including adherence to alternate test procedures. 10 CFR 430.27(f)(2). As soon as practicable after the granting of any waiver, DOE will publish in the Federal Register a notice of proposed rulemaking to amend its regulations so as to eliminate any need for the continuation of such waiver. As soon thereafter as practicable, DOE will publish in the Federal Register a final rule. 10 CFR 430.27(l). The waiver process also allows the granting of an interim waiver from test procedure requirements to manufacturers that have petitioned DOE for a waiver of such prescribed test procedures upon a finding that it appears likely that the petition for waiver will be granted and/or if DOE determines that it would be desirable for public policy reasons to grant immediate relief pending a determination on the petition for waiver. 10 CFR 430.27(e). Within one year of issuance of an interim waiver, DOE will either: (i) Publish in the Federal Register a determination on the petition for waiver; or (ii) Publish in the Federal Register a new or amended test procedure that addresses the issues presented in the waiver. 10 CFR 430.27(h)(1).

A petitioner may request that DOE extend the scope of a waiver or an interim waiver to include additional basic models employing the same technology as the basic model(s) set forth in

the original petition. DOE will publish any such extension in the Federal Register. 10 CFR 430.27(g).

II. Application for Interim Waiver and Petition for Waiver

By letter dated January 26, 2016, AGA Marvel submitted a petition for waiver and application for interim waiver under 10 CFR 430.27(a) for 12 basic models of combination cooler-refrigerators that are required to be tested using the test procedure detailed at appendix A to subpart B of 10 CFR part 430. AGA Marvel supplemented its filing with a March 9, 2016, email identifying the basic models. Appendix A requires measuring the energy consumption of refrigerators using a standardized compartment temperature of 39 degrees Fahrenheit (°F), a temperature which AGA Marvel's products are not capable of achieving in all compartments. As a result, AGA Marvel seeks a waiver to appendix A's procedure to apply a standardized compartment temperature of 55 °F to the cooler compartments within its products. These compartments maintain a higher temperature typical for storing beverages. AGA Marvel also requested that the products be tested with a 0.55 usage factor, rather than with no usage factor as required according to appendix A, which is consistent with the test procedure approach recommended by the Miscellaneous Refrigeration Products ("MREF") Working Group. The Working Group's approach, which was developed during a recent negotiated rulemaking, is detailed in the relevant October 20, 2015, Term Sheet ("Term Sheet #1").²

DOE notes that it previously granted a similar waiver to Panasonic Appliances Refrigeration Systems Corporation of America ("PAPRSA") through an interim waiver (78 FR

² See docket ID EERE-2011-BT-STD-0043 on regulations.gov for information on the MREF Working Group. Document 113 (Term Sheet #1) within that docket includes the Working Group's recommended test procedures.

35894 (June 14, 2013)) and a subsequent Decision and Order (78 FR 57139 (September 17, 2013)) under Case No. RF-031. DOE also granted an extension of waiver (79 FR 55769 (September 17, 2014)) to PAPRSA under Case No. RF-041. Additionally, DOE granted a similar waiver to Sanyo E&E Corporation (“Sanyo”) through an interim waiver (77 FR 19654 (April 2, 2012)) and a subsequent Decision and Order (77 FR 49443 (August 16, 2012)) under Case No. RF-022. On October 4, 2012, DOE issued a notice of correction to the Decision and Order incorporating a K-factor (correction factor) value of 0.85 when calculating the energy consumption (77 FR 60688). Sanyo E&E Corporation has since changed its corporate name to Panasonic Appliances Refrigeration Systems Corporation of America, meaning that it is the same manufacturer to which DOE granted the August 2012 waiver. More recently, DOE became aware of minor issues with regard to the equations detailed in the prior waiver decisions. On January 26, 2016, DOE issued a proposed modification of its prior waivers and granted PAPRSA with an interim waiver (81 FR 4270) under Case No. RF-043 to correct the known issues.

AGA Marvel’s petition for waiver included an alternate test procedure to account for the energy consumption of its combination cooler-refrigerator products. Specifically, it proposed using the test procedure for combination cooler refrigeration products detailed in the MREF Working Group’s Term Sheet #1 noted earlier. In AGA Marvel’s view, the Working Group’s test procedure calculations, when compared with the current DOE test procedure’s calculations, are the most representative of the annual energy usage of its combination cooler refrigeration products. However, DOE’s recent notice detailing a modified version of the calculation method used to measure and rate the energy use of products similar to AGA Marvel’s combination cooler-refrigerators provides a simpler and equitable solution to the problems identified in AGA Marvel’s petition. See 81 FR 4270 (proposal to modify PAPRSA’s alternative test method for

combination cooler refrigeration products). Accordingly, applying the test method outlined in the recent PAPRSA interim waiver to determine compliance with the existing refrigerator standards would follow an already-established approach and help ensure consistency when testing similar products.

AGA Marvel also requests an interim waiver from the existing DOE test procedure. An interim waiver may be granted if it appears likely that the petition for waiver will be granted, and/or if DOE determines that it would be desirable for public policy reasons to grant immediate relief pending a determination of the petition for waiver. See 10 CFR 430.27(e)(2).

DOE understands that absent an interim waiver, AGA Marvel's products cannot be tested and rated for energy consumption on a basis representative of their true energy consumption characteristics. DOE has reviewed the alternate procedure offered by AGA Marvel and concludes that whatever procedure AGA Marvel uses should be consistent with the approach taken with similar interim waivers that have been granted to other manufacturers to allow for the accurate measurement of the energy use of these products, while alleviating the testing problems that prompted AGA Marvel's request. Consequently, while DOE has determined that AGA Marvel's petition for waiver will likely be granted, based on similar waivers that have been granted in the past, in DOE's view, the alternate test procedure used by AGA Marvel should be consistent with the approach permitted by DOE for other manufacturers with similar products. Accordingly, DOE, is granting AGA Marvel an interim waiver based on the modified test approach detailed in Section III of this document. In addition to the revised test procedure, DOE clarifies in this document the specific basic models that would be tested under the alternate approach.

Under the interim waiver, the alternate test procedure must be used, going forward, with respect to all of the basic models AGA Marvel identified in the collective portions of its petition. These models are listed in the following section.

III. Conclusion

Therefore, DOE has issued an Order, stating:

After careful consideration of all the material submitted by AGA Marvel in this matter, DOE grants an interim waiver regarding 12 basic models identified below. Accordingly, it is ORDERED that:

(1) AGA Marvel must, going forward, test and rate the following AGA Marvel basic models as set forth in paragraph (2) below.

Basic models under the MARVEL brand:

ML24WBG***1

ML24WBF***1

ML24WBS***1

ML24WBP***1

Basic models under the MARVEL Outdoor brand:

MO24WBG***1

MO24WBF***1

MO24WBS***1

MO24WBP***1

Basic models under the MARVEL Professional brand:

MP24WBG***1

MP24WBF***1

MP24WBS***1

MP24WBP***1

Where (*) represents a character in the model number that corresponds to door swing, door style, color, or marketing features and has no impact on the number of compartments, compartment function, product class, or test method.

(2) The applicable method of test for the AGA Marvel basic models listed in paragraph (1) is the test procedure for electric refrigerator-freezers prescribed by DOE at 10 CFR part 430, appendix A, except that the test temperature for the “cooler compartment” (i.e., the compartment designed to store wine or other beverages) is 55 °F, instead of the prescribed 39 °F.

The K-factor (i.e., correction factor) value is 0.85. The test must include (where applicable) the icemaking energy usage as defined in 10 CFR part 430, subpart B, appendix A, sec. 6.2.2.1.

Therefore, the energy consumption is defined by:

If compartment temperatures are below their respective standardized temperatures for both test settings (according to 10 CFR part 430, subpart B, appendix A, sec. 6.2.2.1):

$$E = (ET1 \times 0.85) + IET.$$

If compartment temperatures are not below their respective standardized temperatures for both test settings, the higher of the two values calculated by the following two formulas (according to 10 CFR part 430, subpart B, appendix A, sec. 6.2.2.2):

Energy consumption of the “cooler compartment”:

$$ECooler\ Compartment = (ET1 + [(ET2-ET1) \times (55\ ^\circ F-TW1) / (TW2-TW1)]) \times 0.85 + IET$$

Energy consumption of the “fresh food compartment”:

$$EFreshFood\ Compartment = (ET1 + [(ET2-ET1) \times (39\ ^\circ F-TBC1) / (TBC2-TBC1)]) \times 0.85 + IET.$$

If the optional test for models with two compartments and user operable controls is used (according to 10 CFR part 430, subpart B, appendix A, sec. 6.2.2.3):

$$E = (Ex \times 0.85) + IET.$$

(3) Representations. AGA Marvel may make representations about the energy use of its combination cooler-refrigerator products for compliance, marketing, or other purposes only to the extent that such products have been tested in accordance with the provisions set forth above

and such representations fairly disclose the results of such testing in accordance with 10 CFR 429.14(a).

(4) This interim waiver shall remain in effect consistent with the provisions of 10 CFR 430.27(h), (k), and (l).

(5) This interim waiver is issued on the condition that the statements, representations, and documentary materials provided by the petitioner are valid. DOE may revoke or modify this waiver at any time if it determines the factual basis underlying the petition for waiver is incorrect, or the results from the alternate test procedure are unrepresentative of the basic models' true energy consumption characteristics.

(6) Granting of this interim waiver does not release AGA Marvel from the certification requirements set forth at 10 CFR part 429.

IV. Summary and Request for Comments

Through this notice, DOE has granted AGA Marvel an interim waiver from the specified portions of the test procedure for certain basic models of AGA Marvel combination cooler-refrigerators and announces receipt of AGA Marvel's request for petition of waiver from those same portions of the test procedure. DOE is publishing AGA Marvel's request for a petition of waiver in its entirety pursuant to 10 CFR 430.27(b)(1)(iv). The petition contains no confidential information. The petition includes a suggested alternate test procedure to determine the energy consumption of AGA Marvel's specified combination cooler-refrigerators. AGA Marvel is

required to follow this alternate procedure, as modified in Section III of this document, as a condition of its interim waiver. DOE will consider the continued use of this procedure in its subsequent Decision and Order.

DOE solicits comments from interested parties on all aspects of the petition, including the suggested alternate test procedure and calculation methodology. Pursuant to 10 CFR 430.27(d), any person submitting written comments to DOE must also send a copy of such comments to the petitioner. The contact information for the petitioner is Joshua Ambrose, Project Engineer, AGA Marvel, 1260 E. VanDeinse St., Greenville, MI 48838. All comment submissions to DOE must include the Case Number RF-045 for this proceeding. Submit electronic comments in Microsoft Word, Portable Document Format (PDF), or text (American Standard Code for Information Interchange (ASCII)) file format and avoid the use of special characters or any form of encryption. Wherever possible, include the electronic signature of the author. DOE does not accept telefacsimiles (faxes).

Issued in Washington, DC, on June 16, 2016.

Kathleen B. Hogan
Deputy Assistant Secretary for Energy Efficiency
Energy Efficiency and Renewable Energy

January 26, 2016

U.S. Department of Energy
Building Technologies Office
Office of Energy Efficiency and Renewable Energy
1000 Independence Avenue SW
Washington, DC 20585-0121

To whom it may concern:

Pursuant to 10 CFR 430.27, AGA Marvel respectfully submits this Petition for Waiver and application for Interim Waiver for AGA Marvel combination cooler refrigerator models on the grounds that the affected models listed below contain one or more design characteristics that prevent testing of the basic model according to the test procedures prescribed in 10 C.F.R. § 430, subpart B, appendix A. Without this waiver, AGA Marvel is unable to certify models as compliant with 2014 DOE energy conservation standards. This request is similar to past petitions for waivers that have been granted by DOE to Sub-Zero (80 FR 7854), PAPRSA (78 FR 35894), and Sanyo (77 FR 49443), who make similar combination cooler refrigerator products.

10 C.F.R. § 430.27 states: "DOE will grant a waiver from the test procedure requirements if DOE determines either the basic model(s) for which the waiver was requested contains a design characteristic which either prevents testing of the basic model according to the prescribed test procedures, or the prescribed test procedures may evaluate the basic model in a manner so unrepresentative of its true energy consumption characteristics as to provide materially inaccurate comparative data." AGA Marvel requests that the DOE grant this petition on both grounds.

In November 2011, the DOE began a process to consider whether to include as covered products, and establish energy conservation standards for certain types of refrigeration products, that largely fall outside of DOE's regulations pertaining to refrigerators, refrigerator-freezers, and freezers. To help better inform its potential regulation of these items, DOE established a negotiated rulemaking Working Group that would operate under the Appliance Standards and Rulemaking Federal Advisory Committee (ASRAC) with the purpose of exploring possible energy efficiency requirements for Miscellaneous Refrigeration Products (MREFs) (80 FR 17355). The Working Group ultimately reached consensus among its members on a variety of issues, including the potential scope of coverage, applicable definitions, test procedure details, and energy conservation standards that would apply to these products and compiled these recommendations into a term sheet for consideration by ASRAC (EERE-2011-BT-STD-0043).

In granting the most recent petition to Sub-Zero, DOE confirmed the previous rulings for Sanyo, and PAPERSA, that cooler compartments cannot be tested at the prescribed temperature of 39 °F because the minimum compartment temperature is higher than the standardized temperature of 39 °F. The Working Group has defined a cooler compartment as, "a refrigerated compartment designed exclusively for wine or other beverages within a consumer refrigeration product that is capable of maintaining compartment temperatures either (a) no lower than 39 °F (3.9 °C), or (b) in a range that extends no lower than 37 °F (2.8 °C) but at least as high as 60 °F (15.6 °C) as determined according to § 429.14(d)(2) or § 429.61(d)(2)."

The alternate test procedure used in all three previous waivers (originally submitted by Sanyo), accounts for the energy consumption of combination cooler refrigerator models. The procedure tests the wine storage compartment at 55 °F, instead of the prescribed 39 °F. 55 °F is presumed to be representative of expected consumer use, as it is the ideal long-term storage temperature for both red and white wine. 55 °F is also used in the test procedures for wine products adopted by the Association of Home Appliance Manufacturers (AHAM), California Energy Commission (CEC), and Natural Resources Canada (NRCan).

The test procedure recommended by the MREF Working Group is slightly modified from the test procedure used in the previous waivers, and has been agreed to in the final ASRAC Miscellaneous Refrigeration Products Term Sheet dated October 20, 2015.

Affected Models

The basic models affected that are manufactured by AGA Marvel use the following model number layout:

*WB^

Where:

WB – Represents the model platform, which corresponds to Dual-Zone Wine/Beverage Center (combination cooler refrigerator) containing exactly one cooler compartment and one refrigerator compartment.

(*) – Represents characters in the model number that correspond to brand and width

(^) – Represents characters in the model number that correspond door swing, door style, color, and marketing features.

The * and ^ characters have no impact on the number of compartments, compartment function, product class, or test method.

Design Characteristics Dictating a Waiver

AGA Marvel is requesting a waiver to the test procedures for its combination cooler/refrigerator models that consist of one refrigerated storage compartment and one cooler compartment. The DOE considers combination cooler/refrigerator models as covered products to be tested according to DOE test procedures for All-Refrigerators prescribed in 10 C.F.R. § 430, subpart B, appendix A. The test conditions specify that energy consumption is to be determined using the fresh food compartment standardized temperature of 39 °F for both compartments.

It is not possible to test and rate these combination models under the existing testing procedures, as the cooler compartment of these models is not designed for, nor capable of meeting the standardized temperature of 39 °F. AGA Marvel has designed the cooler compartments of its products to achieve a temperature range ideal for wine storage, with the coldest temperature setting for the compartment being above 39 °F. Also, the current testing requirements do not measure energy usage in a manner that truly represents the energy-consumption characteristics of these products.

AGA Marvel requests an interim waiver until a waiver for the affected models is granted or a final ruling is made on the energy efficiency requirements and test procedures for this combination cooler refrigeration product under the MREF DOE ruling. It is essential that an interim waiver is granted, as AGA Marvel has planned sales volumes for the affected models in the annual budget, with a planned launch date of 3rd quarter of 2016.

Proposed Modified Test Procedure

AGA Marvel proposes to use the test procedure for combination cooler refrigeration products, listed in ASRAC Miscellaneous Refrigeration Products Term Sheet dated October 20, 2015, as the calculations are most representative of AGA Marvel's combination product annual energy usage. The affected basic models are defined as "cooler-all refrigerators" in Appendix 2 of the Term Sheet, as the basic models have one cooler compartment and one refrigerator compartment capable of maintaining compartment temperatures above 32 °F (0 °C) and below 39 °F (3.9 °C).

In section 4 subpart 4.2 of the Term Sheet, "The working group recommends product classes for combination cooler refrigeration products that are analogous to the 2014 refrigerator, refrigerator-freezer, and freezer product classes. A product would be classified into a product class of combination cooler refrigeration product based on how the product would be classified without a cooler compartment." Without a cooler compartment, the affected basic models are covered by the 13A standard (Compact All-Refrigerator – Automatic Defrost).

Appendix 3 subpart 3.2 of the Term Sheet states the test shall use a standardized temperature of 39 °F for the fresh food compartment and a standardized temperature of 55 °F for the cooler

compartment. The test sequence follows the same test sequence for all-refrigerators in 10 C.F.R. § 430, subpart B, appendix A.

Appendix 3 subpart 5.2.1.1 of the Term Sheet defines the energy consumption in kilowatt-hours per day as:

$$ET = (EP \times 1440 \times K) / T$$

Where:

K = dimensionless correction factor of 0.55 for combination cooler refrigeration products to adjust for average household usage.

Appendix 3 subpart 6.2.4.2 of the Term Sheet defines the average per-cycle energy consumption as the higher of the two values calculated by the following two formulas:

Energy consumption of the wine compartment:

$$E_{\text{Cooler}} = (ET_1 + [(ET_2 - ET_1) \times (55^\circ\text{F} - TC_1) / (TC_2 - TC_1)]) + IET$$

Energy consumption of the refrigerated beverage compartment:

$$E_{\text{Fresh Food}} = ET_1 + [(ET_2 - ET_1) \times (39^\circ\text{F} - TR_1) / (TR_2 - TR_1)] + IET$$

Where:

IET equals 0 for all products without an automatic icemaker.

Combination refrigerator coolers are currently certified to the 2014 DOE Energy Consumption Standards using the alternative test procedure established in the waivers granted to petitioning manufacturers. The 2014 13A standard needs to be adjusted to reflect the new .55 usage factor for coolers and combination cooler refrigerators. To do this the AEU equation must first be divided by .85 (15% usage credit used in granted waivers) to establish the maximum allowable energy consumption of a combination product to the existing 2014 standard. That value is then multiplied by .55 to reflect the new energy consumption standard for combination product. In section 4 subpart 4.2 of the Term Sheet, to simplify conversion, the AEU equation is multiplied by a correction factor of .647 (.55/.85).

Thus, the maximum AEU in kWh/year for a compact combination cooler refrigerator is defined as:

$$AEU = (9.17AV + 259.3) * 0.647$$

In conclusion, 2014 Energy Conservation Standards do not allow an energy use rating to be calculated for the affected basic models listed, and AGA Marvel respectfully requests that DOE considers this petition for an interim and final waiver. AGA Marvel would be pleased to discuss this waiver petition with DOE and provide any additional information that DOE might require.

Sincerely,

Joshua Ambrose
Project Engineer

James R. Holland
Director of Engineering

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Supplemental E-Mail from AGA Marvel

From: Joshua Ambrose
Sent: Wednesday, March 09, 2016 11:05 AM
To: Berringer, Bryan
Subject: RE: Petition for Waiver - AGA Marvel

Bryan,

AGA Marvel is the manufacturer of all models in the petition and all models are under the Marvel brand. In the Marvel brand we have (3) “series” of product, and the series associated with the model numbers are as follows:

MARVEL

- ML24WBG***1
- ML24WBF***1
- ML24WBS***1
- ML24WBP***1

MARVEL Outdoor

- MO24WBG***1
- MO24WBF***1
- MO24WBS***1
- MO24WBP***1

MARVEL Professional

- MP24WBG***1
- MP24WBF***1
- MP24WBS***1
- MP24WBP***1

Let me know if you need anything else.

Thanks,

Josh Ambrose

Project Engineer

AGA MARVEL

1260 East Van Deinse Street, Greenville, MI 48838

[FR Doc. 2016-15142 Filed: 6/24/2016 8:45 am; Publication Date: 6/27/2016]