**[6450-01-P]**

**DEPARTMENT OF ENERGY**

**10 CFR Parts 429 and 431**

**[Docket No. EERE-2014-BT-TP-0055]**

**RIN 1904-AD41**

# Energy Conservation Program: Test Procedures for Commercial Prerinse Spray Valves

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

**ACTION:** Final rule.

**SUMMARY:** On June 23, 2015, the U.S. Department of Energy (DOE) issued a notice of proposed rulemaking (NOPR) to amend the test procedure for commercial prerinse spray valves. That proposed rulemaking serves as the basis for this final rule. Specifically, this final rule incorporates by reference relevant portions of the latest version of the industry testing standard from the American Society for Testing and Materials (ASTM) Standard F2324–13, "Standard Test Method for Prerinse Spray Valves," including the procedure for measuring spray force. This final rule also adopts a revised definition of "commercial prerinse spray valve," clarifies the test procedure for products with multiple spray settings, establishes rounding requirements for flow rate and

spray force measurements, and removes irrelevant portions of statistical methods for certification, compliance, and enforcement.

**DATES:** The effective date of this rule is **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].** The final rule changes will be mandatory for representations starting **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].** The incorporation by reference of certain material listed in this rule is approved by the Director of the Federal Register as of **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].**

**ADDRESSES:** Docket: The docket, which includes Federal Register notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at regulations.gov. All documents in the docket are listed in the regulations.gov index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

A link to the docket web page can be found at DOE's rulemaking webpage at: https://www1.eere.energy.gov/buildings/appliance_standards/rulemaking.aspx?ruleid=119. This web page will contain a link to the docket for this document on the www.regulations.gov site. The www.regulations.gov web page will contain simple instructions on how to access all documents, including public comments, in the docket.

For further information on how to review the docket, contact Ms. Brenda Edwards at (202) 586-2945 or by email: Brenda.Edwards@ee.doe.gov.

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**SUPPLEMENTARY INFORMATION:**

This final rule incorporates by reference into part 431 the following industry standard: ASTM Standard F2324–13, ("ASTM F2324–13"), Standard Test Method for Prerinse Spray Valves, approved June 1, 2013.

Copies of ASTM Standard F2324–13 can be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428, or by going to http://www.astm.org/Standard/standards-and-publications.html.

See section IV.M. for additional information about this standard.

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## I. Authority and Background

Title III of the Energy Policy and Conservation Act of 1975 (EPCA),[1] sets forth a variety of provisions designed to improve energy efficiency. Part B of title III[2] establishes the "Energy Conservation Program for Consumer Products Other Than Automobiles," which includes commercial prerinse spray valves (CPSVs). EPCA provides definitions for commercial prerinse spray valves under 42 U.S.C. 6291(33), the test procedure under 42 U.S.C. 6293(b)(14), and energy conservation standards for flow rate under 42 U.S.C. 6295(dd).[3]

Under EPCA, the energy conservation program consists essentially of four parts: (1) testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. The testing requirements consist of a test procedure that manufacturers of covered products must use as the basis for (1) certifying to DOE that their products comply with the applicable energy conservation standards adopted under EPCA, and (2) making representations about the efficiency of those products. Similarly, DOE must use the test procedure to determine whether the products comply with any relevant standards promulgated under EPCA.

[1] All references to EPCA refer to the statute as amended through the Energy Efficiency Improvement Act of 2015, Pub. L. 114-11 (April 30, 2015).
[2] For editorial reasons, Part B was codified as Part A in the U.S. Code (42 U.S.C. 6291–6309, as codified).
[3] Because Congress included commercial prerinse spray valves in Part B of Title III of EPCA, the consumer product provisions of Part B (not the industrial equipment provisions of Part C) apply to commercial prerinse spray valves. However, because commercial prerinse spray valves are more commonly considered to be commercial equipment, as a matter of administrative convenience and to minimize confusion among interested parties, DOE adopted CPSV provisions into subpart O of 10 CFR part 431. 71 FR 71340, 71374 (Dec. 8, 2006). Part 431 contains DOE regulations for commercial and industrial equipment. The location of provisions within the CFR does not affect either their substance or applicable procedure, and DOE refers to commercial prerinse spray valves as either "products" or "equipment."

EPCA sets forth the current maximum flow rate of not more than 1.6 gallons per minute for commercial prerinse spray valves. (42 U.S.C. 6295(dd)) EPCA also requires DOE to use the ASTM Standard F2324 as the basis for the test procedure for measuring flow rate. (42 U.S.C. 6293(b)(14))

In the December 8, 2006 final rule, DOE incorporated by reference ASTM Standard F2324–03 into regulatory text under section 431.263 of Title 10 of the Code of Federal Regulations, Part 431 (10 CFR Part 431), and prescribed it as the uniform test method to measure flow rate of commercial prerinse spray valves under 10 CFR 431.264. 71 FR 71340, 71374. Later, on October 23, 2013, DOE published a final rule (October 2013 final rule) that incorporated by reference ASTM Standard F2324–03 (2009) for testing commercial prerinse spray valves, which updated the 2003 version to the 2009 version of the same test standard. 78 FR 62970, 62980.

Since the October 2013 final rule, ASTM has published a revised version of the F2324 test standard, ASTM F2324−13. In addition, DOE has initiated a rulemaking to consider amended water conservation standards for commercial prerinse spray valves (Docket No. EERE-2014-BT-STD-0027). DOE published a notice of proposed rulemaking (NOPR) for the test procedure on June 23, 2015, presenting DOE's proposals to amend the CPSV test procedure (80 FR 35874–5886) (hereafter, the "2015 CPSV TP NOPR"). DOE held a public meeting related to this NOPR on July 28, 2015 (hereafter, the "NOPR public meeting").

A. General Test Procedure Rulemaking Process

EPCA sets forth in 42 U.S.C. 6293 the criteria and procedures DOE must follow when prescribing or amending test procedures for covered products. EPCA provides that any test procedures prescribed or amended under this section shall be reasonably designed to produce test results which measure energy efficiency, energy use or estimated annual operating cost of a covered product during a representative average use cycle or period of use and shall not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(3))

In addition, if DOE determines that a test procedure amendment is warranted, it must publish proposed test procedures and offer the public an opportunity to present oral and written comments on them. (42 U.S.C. 6293(b)(2)) Finally, in any rulemaking to amend a test procedure, DOE must determine to what extent, if any, the proposed test procedure would alter the measured energy efficiency of any covered product as determined under the existing test procedure. (42 U.S.C. 6293(e)(1))

In this final rule, DOE amends the commercial prerinse spray valve test procedure to be based on the current industry standard, ASTM Standard F2324–13, "Standard Test Method for Prerinse Spray Valves," which continues to measure water use based on a maximum flow rate. By incorporating the newest version of ASTM Standard F2324–13, DOE is adding testing requirements for spray force. In addition, DOE is also specifying provisions governing representations of commercial prerinse spray valves with multiple

spray settings. In addition, DOE concludes that amendments adopted in this final rule do not change the measured energy and water use of commercial prerinse spray valves compared to the current test procedure. As such, all test procedure amendments adopted in this final rule are effective 30 days after publication in the Federal Register and required for representations regarding the water consumption of covered equipment 180 days after publication of this final rule in the Federal Register.

This final rule fulfills DOE's obligation to periodically review its test procedures under 42 U.S.C. 6293(b)(1)(A). DOE anticipates that its next evaluation of this test procedure will occur in a manner consistent with the timeline set out in this provision.

## II. Summary of the Final Rule

In this final rule, DOE amends 10 CFR 431.264, "Uniform test method for the measurement of flow rate for commercial prerinse spray valves," as follows:

- Modifies the definition of "commercial prerinse spray valve," and adds a definition for "spray force;"
- Incorporates by reference certain provisions (sections 6.1–6.9, 9.1–9.5.3.2, 10.1–10.2.5, 10.3.1–10.3.8, and 11.3.1) of the current revision to the applicable industry standard — ASTM Standard F2324–13, "Standard Test Method for Prerinse Spray Valves" — pertaining to flow rate and spray force measurement;

- Adds clarification addressing minor inconsistencies between the proposed test procedure and ASTM Standard F2324–13, and sources of ambiguity within ASTM Standard F2324–13;
- Modifies the current test method for measuring flow rate to reference sections 10.1–10.2.5 and 11.3.1 of ASTM Standard F2324–13;
- Adds a test method for measuring spray force that references sections 10.3.1–10.3.8 of ASTM Standard F2324–13;
- Adds a requirement for measuring the flow rate and spray force of each spray setting for commercial prerinse spray valves with multiple spray settings;
- Modifies the rounding requirement for flow rate measurement and specifies the rounding requirement for spray force measurement; and
- Modifies the existing CPSV sampling requirements to remove the provisions related to determining represented values where consumers would favor higher values.

## III. Discussion

The following sections describe DOE's amendments to the test procedure, including definitions, industry standards incorporated by reference, modifications to the test procedure, additional test measurements, rounding requirements, and certification and compliance requirements.

### A. Definitions

In this final rule, DOE amends the definition of "commercial prerinse spray valve" and adds a definition for the term "spray force." A detailed discussion of these terms follows.

#### 1. Commercial Prerinse Spray Valve

EPCA currently defines a "commercial prerinse spray valve" as a handheld device designed and marketed for use with commercial dishwashing and ware washing equipment that sprays water on dishes, flatware, and other food service items for the purpose of removing food residue before cleaning the items. (42 U.S.C. 6291(33)(A), 10 CFR 431.262) EPCA allows DOE to modify the CPSV definition to include products (1) that are used extensively in conjunction with commercial dishwashing and ware washing equipment, (2) to which the application of standards would result in significant energy savings, and (3) to which the application of standards would not be likely to result in the unavailability of any covered product type currently available on the market. (42 U.S.C. 6291(33)(B)(i)) EPCA also allows DOE to modify the CPSV definition to exclude products (1) that are used for special food service applications, (2) that are unlikely to be

widely used in conjunction with commercial dishwashing and ware washing equipment, and (3) to which the application of standards would not result in significant energy savings. (42 U.S.C. 6291(33)(B)(ii))

As described in the 2015 CPSV TP NOPR, DOE has observed the existence of products distributed in the U.S. with brochures describing them as ‘‘prerinse spray’’ or ‘‘prerinse spray valve;’’ these are often marketed (usually by third parties) to rinse dishes before washing, to pre-rinse items in a dish room in preparation for running them through a commercial dishwasher, or to be used with pre-rinse assemblies and/or as ware washing equipment. 80 FR 35874, 35876−77 (June 23, 2015). DOE has also observed products marketed as “pull-down kitchen faucets” or “commercial style prerinse,” which, generally speaking, are handheld devices that can be used for commercial dishwashing or ware washing regardless of installation location. Further, DOE has observed instances where products designed by the manufacturer for other specific applications are marketed on retailer’s websites for commercial dishwashing and ware washing. In DOE’s view, this illustrates that such products are also “suitable for use” as commercial prerinse spray valves and are marketed and used in commercial dishwashing and ware washing applications.

To ensure a level and fair playing field for all products serving commercial prerinse spray valve applications, all products that are used in such an application should be held to the same standard. As a result, in the 2015 CPSV TP NOPR, DOE proposed to modify the CPSV definition such that these categories of products would meet the

definition of commercial prerinse spray valve and would be subject to the associated regulations. Id. Specifically, DOE stated that installation location is not a factor in determining whether a given model meets the definition of commercial prerinse spray valve. Id. Therefore, DOE proposed defining "commercial prerinse spray valve" as "a handheld device … suitable for use with commercial dishwashing and ware washing equipment for the purpose of removing food residue before cleaning items." Id. at 35877.

Although DOE understands that manufacturers may market different categories of spray valves for various uses, such as cleaning floors or walls or filling glasses, DOE believes any such device that is suitable for use in conjunction with commercial dishwashing and ware washing equipment to spray water for the purpose of removing food residue should fall within the CPSV definition. Similarly, DOE believes products that are appropriate for removing food residue in dishwashing and ware washing applications should be subject to DOE standards and certification requirements, even if they are marketed without the term "commercial dishwashing and ware washing equipment." Therefore, after reviewing the current CPSV definition and products currently being distributed in the market as appropriate for dishwashing and ware washing applications, DOE proposed to replace the phrase "designed and marketed for use" with the phrase "suitable for use" in the CPSV definition. 80 FR 35874, 35876–77 (June 23, 2015).

During the NOPR public meeting, T&S Brass stated that manufacturers can only control what they design, intend, or market their product for. Specifically, T&S Brass

stated that manufacturers generally use the words "designed" or "intended for" when they qualify commercial prerinse spray valves. (T&S Brass, Public Meeting Transcript, No. 3 at p. 13)[4] T&S Brass provided the examples of a garden hose spray nozzle or pet grooming spray valves, which are identical in look and feel to commercial prerinse spray valves, but require much higher flow rates due to different factors, such as the sensitivity of the pet's skin when used in pet grooming. T&S Brass expressed concern that these other products could be interpreted as being suitable for washing dishes, despite the manufacturer's intent for product use. (T&S Brass, Public Meeting Transcript, No. 3 at pp. 14–16)

DOE also received written comments related to the term "suitable" in the proposed definition. Plumbing Manufacturers International (PMI) and Fisher Manufacturing Co. (Fisher) stated that the DOE proposed term "suitable" should be replaced with the phrase "designed and marketed," as a manufacturer designs, develops, and markets a product with a specific end use in mind. (PMI, No. 4 at p. 1; Fisher, No. 5 at p. 1) PMI commented that the term "suitable" is ambiguous and could imply that a device be considered a commercial prerinse spray valve even though it may have not been designed or developed for that intended purpose. (PMI, No. 4 at p. 1) T&S Brass added that the term "suitable" subjects the definition to misrepresentation and that a product that is defined for use with commercial dishwashing and ware washing

[4] A notation in the form "T&S Brass, Public Meeting Transcript, No. 3 at pp. 14-16" identifies a comment that DOE has received and has included in the docket of this rulemaking. This particular notation refers to a comment: (1) submitted by T&S Brass; (2) as recorded in the public meeting transcript, which is document number 3 of the docket; and (3) on pages 14 through 16 of that document.

equipment is "designed and marketed" specifically for that application. (T&S Brass, No. 7 at p. 1)

During the NOPR public meeting, DOE clarified its proposal and requested additional information regarding the specific design changes that manufacturers implement to distinguish products that are "intended" for commercial dishwashing and ware washing applications from products that are never "intended" for those applications. DOE explained it has experienced instances where the term "designed and marketed" in a definition creates ambiguity and inequitable equipment coverage, since such coverage is subject to marketing materials rather than objective design criteria. (DOE, Public Meeting Transcript, No. 3 at pp. 14–16) DOE has seen instances in the market where a manufacturer's self-declaration of intent varies greatly from how products are sold by retailers. DOE urged manufacturers to provide distinct design information or product characteristics that could be used to clearly distinguish products that are manufactured for dishwashing and ware washing installations. Thus, because the suggestion from T&S Brass of using "designed and/or intended for" does not differ functionally from the current definition of "designed and marketed for," it would still perpetuate a fundamental problem DOE seeks to remedy. In fact, by removing the term "marketed," T&S Brass's suggestion would increase ambiguity by requiring DOE or other parties to divine intent, without any express tie to objective criteria. Id. DOE requested that interested parties provide additional comments on how to clarify the definition to alleviate any unintended consequences. Id. Specifically, DOE requested comments on how to distinguish between products that are intended to be commercial prerinse spray valves versus those that are

not, but may have similar design features and characteristics. Id. DOE did not receive any additional comments about using an alternative phrase to replace "designed and marketed."

In response to T&S Brass's observation that certain products exist that are identical to commercial prerinse spray valves, but are advertised and/or intended to perform in different applications, such as pet grooming, DOE reviewed the comments from interested parties and different models of spray valves available on the market. DOE could not identify any differentiating characteristics among commercial prerinse spray valves and spray valves intended for other applications that would indicate that such products were not regularly used as commercial prerinse spray valves or that such products serve a unique utility in those applications. In addition, DOE has found spray valves that manufacturers market for specific applications listed on retailer's websites as appropriate for commercial dishwashing and ware washing.

Conversely, in a joint comment, Pacific Gas and Electric (PG&E), Southern California Gas Company (SCGC), Southern California Edison (SCE) and San Diego Gas and Electric (SDG&E) company (referred to as the California Investor Owned Utilities, or CA IOUs), pointed out that there are products currently marketed as pot fillers, which have very high flow rates (greater than 3 gallons per minute (gpm)), that can be used in a similar function to CPSVs. According to the CA IOUs, because these products are listed as "pot fillers," they would not be subject to standards. The CA IOUs stated that the definition of commercial prerinse spray valve should ensure that any product that may be used as a commercial prerinse spray valve is appropriately covered by the standard. The

CA IOUs cautioned that there is a loophole that allows manufacturers to sell commercial prerinse spray valves that do not meet the flow rate standard and encouraged DOE to define the products carefully to eliminate the loophole. (EERE-2014-BT-STD-0027, CA IOUs, No. 34 at p. 2)

DOE is aware that "pot fillers" that have many of the same physical characteristics as commercial prerinse spray valves. However, DOE does not agree that most of these products can be used extensively in commercial dishwashing. Under the definition proposed in the CPSV TP NOPR, a pot filler would not be considered a commercial prerinse spray valve because it is not suitable to be used for rinsing dishware before washing in a commercial dishwasher. A pot filler is used to fill a container with water, while a commercial prerinse spray valve is used to remove food residue from dishware. DOE believes that a reasonable consumer would not install a pot filler to be used as a commercial prerinse spray valve. In addition, most pot fillers are usually rigidly mounted to a wall with a swing arm, and are thus not handheld devices. Therefore, DOE believes that the proposed definition is adequate in distinguishing pot fillers from commercial prerinse spray valves.

When evaluating whether a spray valve model is suitable for removing food residue from food service items before cleaning them in commercial dishwashing or ware washing equipment, DOE would consider various factors including channels of marketing and sales, product design and descriptions, and actual sales to determine whether the spray valve is used extensively in conjunction with commercial dishwashing

and ware washing equipment. For example, a product marketed or sold through outlets that market or sell to food service entities such as restaurants or commercial or institutional kitchens is more likely to be used as a commercial prerinse spray valve than one marketed or sold through outlets catering to pet care. Similarly, a product marketed outside of the United States as a commercial prerinse spray valve, or for similar use in a kitchen-type setting, would be considered suitable for use as a commercial prerinse spray valve. In evaluating whether a spray valve is suitable for use as a commercial prerinse spray valve, DOE would consider how a product is marketed and sold to end-users, including how the product is identified and described in product catalogs, brochures, specification sheets, and communications with prospective purchasers. DOE would also consider actual sales, including whether the end-users are restaurants or commercial or institutional kitchens, even if those sales are indirectly through an entity such as a distributor.

For the reasons stated previously, DOE is modifying the CPSV definition in part by replacing the term "designed and marketed for use" with the phrase "suitable for use." By relying on suitability, DOE effectively differentiates products that are used in commercial dishwashing applications (and therefore fall under the DOE regulations) from products that are unlikely to be used to wash dishes. DOE believes that such a definition also removes the loophole noted by the CA IOUs in its comment by avoiding the ambiguity associated with determining product coverage based on manufacturer intent or marketing materials. DOE recognizes that this definition change will alter the range of products subject to standards. Therefore, DOE maintains in this final rule that

any equipment meeting the previous definition of commercial prerinse spray valve is subject to DOE's applicable standards and test procedure for such equipment. For clarity, DOE has moved the relevant portion of the previous CPSV definition to the current standard in 10 CFR 431.266 to ensure manufacturers understand the range of equipment subject to the current Federal energy conservation standards. Any representations with regard to water use for equipment meeting the revised definition must be based on the DOE test procedure as of 180 days following publications of this final rule. As of the compliance date for any amended standards, any equipment meeting the revised definition of commercial prerinse spray valve will be subject to DOE's applicable standards.

DOE also reviewed the prerinse spray valve definition in ASTM Standard F2324–13, which defines the term "prerinse spray valve" as "a handheld device containing a release to close mechanism that is used to spray water on dishes, flatware, etc." The "release-to-close" mechanism included in the ASTM definition means a manually actuated, normally closed valve, which is a typical feature of commercial prerinse spray valves. In the 2015 CPSV TP NOPR, DOE proposed a different definition that would include the term normally closed; that is DOE proposed to define commercial prerinse spray valve as "a handheld device containing a normally closed valve that is suitable for use with commercial dishwashing and ware washing equipment for the purpose of removing food residue before cleaning items." 80 FR 35874, 35877 (June 23, 2015).

DOE received one written comment regarding including the term "normally closed" in its proposed definition. The Alliance for Water Efficiency (AWE) does not support the inclusion of the phrase "normally closed valve" in the CPSV definition. AWE commented that many non-dishwashing products, similar to prerinse spray valves, include "normally closed valves," and that the proposed phrase would not distinguish commercial prerinse spray valves from other similar devices. Additionally, AWE stated that products sold and used to prerinse dishware could be deemed not subject to the proposed rule because the valve is not a "normally closed" valve. (AWE, No. 6, p. 2)

DOE is not currently aware of any commercial prerinse spray valves that lack a release to close valve, but agrees with AWE that including the term "normally closed valve" in the definition could result in a CPSV model not being considered a covered product if its design does not include such a valve. Therefore, DOE is not including the term "normally closed valve" in the definition and is instead replacing it with the term "release-to-close," consistent with the definition in ASTM F2324−13.

In summary, in this final rule, DOE adopts a modified version of the definition of "commercial prerinse spray valve" than what was proposed in the 2015 CPSV TP NOPR. 80 FR 35874, 35877 (June 23, 2015). Specifically, DOE defines "commercial prerinse spray valve" as "a handheld device that has a release-to-close valve and is suitable for removing food residue from food service items before cleaning them in commercial dishwashing or ware washing equipment." DOE has concluded that this definition satisfies the requirements at 42 U.S.C. 6291(33)(B) because (1) the products covered by

this definition are used extensively in conjunction with commercial dishwashing and ware washing equipment, (2) the application of standards to such products would result in significant energy savings, and (3) the application of standards to such products would not be likely to result in the unavailability of any covered product type currently available on the market.[5]

2. Spray Force

In the 2015 CPSV TP NOPR, DOE proposed adding a definition for the term "spray force," as "the amount of force exerted onto the spray disc, measured in ounce-force (ozf)." 80 FR 35874, 35878–79, 35886 (June 23, 2015). DOE understands spray force to be an important differentiating feature in commercial prerinse spray valves.

DOE received several written comments about adding a definition for spray force. DOE will finalize its decision regarding the use of spray force as it relates to the proposed amended energy conservation standards, and will address any comments related to spray force and product classes, in the ongoing CPSV standards rulemaking (Docket No. EERE-2014-BT-STD-0027).

During the NOPR public meeting, Pacific Gas and Electric (PG&E) supported adding spray force requirements because doing so could aid in saving water and energy. (PG&E, Public Meeting Transcript, No. 3 at p. 17) The Natural Resources Defense

[5] The analyses of the energy savings potential of standards and the impact of standards on the availability of any covered product type currently on the market are being conducted as part of DOE's concurrent energy conservation standards rulemaking for commercial prerinse spray valves. Docket No. EERE-2014-BT-STD-0027.

Council (NRDC) asked if DOE would be adding a definition for the term ounce-force. (NRDC, Public Meeting Transcript, No. 3 at p. 17) In this final rule, DOE does not include a definition for the unit ounce-force. Ounce-force is used by ASTM Standard F2324–13 and is a commonly understood unit of measurement.

As such, in this final rule, DOE adopts the term "spray force," defined as "the amount of force exerted onto the spray disc, measured in ounce-force (ozf)." Adopting this new term in the CPSV test procedure does not affect any amended CPSV energy conservation standards and does not guarantee or require its use in such standards.

B. Industry Standards Incorporated by Reference

EPCA prescribes that the test procedure for measuring flow rate for commercial prerinse spray valves be based on ASTM Standard F2324, "Standard Test Method for Pre-Rinse Spray Valves." (42 U.S.C. 6293(14)) Pursuant to this statutory requirement, DOE incorporated by reference ASTM Standard F2324−03 in a final rule published on December 8, 2006. 71 FR 71340, 71374. DOE last updated its CPSV test procedure to reference the updated ASTM Standard F2324−03 (2009) in a final rule published on October 23, 2013. 78 FR 62970, 62980. The 2009 version was a reaffirmation of the 2003 standard and contained no changes to the test method. The current version of the ASTM industry standard for CPSVs is the version published in 2013, ASTM Standard F2324–13.

In the 2015 CPSV TP NOPR, DOE noted that the most significant difference between ASTM Standard F2324–13 and the ASTM standard currently referenced by the DOE test procedure (ASTM Standard F2324–03 (2009)) is that ASTM Standard F2324–13 replaces the cleanability test with a spray force test and moves the cleanability test to a normative (i.e., non-mandatory) appendix. 80 FR 35874, 35878 (June 23, 2015). During the NOPR public meeting, T&S Brass requested DOE's assistance in updating California's Title 20 requirements related to commercial prerinse spray valves because California Title 20 currently includes a cleanability requirement (Title 20, Section 1605.3(h)(3)(A)), which has now been moved to the appendix of ASTM Standard F2324–13. T&S Brass stated that, under the 2015 CPSV TP NOPR, manufacturers who sell products in California must test for both cleanability and spray force. (T&S Brass, Public Meeting Transcript, No. 3 at p. 18) DOE appreciates T&S Brass's comments; however, DOE's adoption of any amendments to the Federal CPSV test procedure does not preclude California from adopting amendments to a rule California had in place prior to January 1, 2005, if that amendment is developed to align California regulations with changes in ASTM F2324. See 42 U.S.C. 6297(c)(7). Nonetheless, DOE welcomes any discussion with manufacturers and the State of California regarding any potential amendments to California's CPSV test procedure or requirements.

DOE also identified minor differences between ASTM Standard F2324–03 (2009) and ASTM Standard F2324–13, which include (1) tolerance on water pressure required for testing, (2) minimum flow rate of flex tubing, (3) water temperature for testing, and (4) length of water pipe required to be insulated.

Table III.1 summarizes changes between ASTM Standard F2324–03 (2009) and F2324–13 as they apply to DOE's test procedure.

**Table III.1 Changes to ASTM Standard F2324**

| | **Current DOE Test Procedure (ASTM Standard F2324–03 (2009))** | **Amended DOE Test Procedure (ASTM Standard F2324–13)** |
|---|---|---|
| Water pressure | 60 ± 1 psi and 60 ± 2 psi | 60 ± 2 psi |
| Minimum flow rate of flex tubing | 7 gpm | 3.5 gpm |
| Water temperature for testing | 120 ± 4 °F | 60 ± 10 °F |
| Minimum insulation requirement of water pipe | Requires any insulation to have a thermal resistance (R) of 4 °F x $ft^2$ x h/Btu for the entire length of the water pipe, from the mixing valve to the inlet of the flex tubing | No requirement |

DOE discussed the rationale for the changes between the ASTM Standards and the effects on testing results in the 2015 CPSV TP NOPR. 80 FR 35874, 35878−79 (June 23, 2015). In the 2015 CPSV TP NOPR, DOE concluded that the updates do not affect the measurement of flow rate for commercial prerinse spray valves. However, in this final rule, DOE is clarifying that the water temperature measurement for both spray force and flow rate tests is an instantaneous temperature measurement of the water at the start of the test, not the average temperature of the water over the duration of the test. Additionally, DOE clarifies that the water temperature will have no impact on the measured value of flow rate and spray force.

DOE received a written comment concerning the incorporation by reference of ASTM Standard F2324–13. AWE supports, in part, the use of this ASTM standard as a method to test commercial prerinse spray valves. However, AWE opposes this test

method as the sole means to determine compliance with a maximum flow rate of 1.28 gallons per minute (gpm). AWE stated that the ASTM Standard F2324–13 was developed and modified for flow rates not exceeding 1.6 gpm. AWE expressed concern whether the same test criteria would be adequate for testing commercial prerinse spray valves operating at flows significantly less than 1.28 gpm, because as water flow is reduced, the margin of error for performance narrows. (AWE, No. 6, p. 3)

Currently, section 10 from ASTM Standard F2324–13 is the generally accepted test procedure for the CPSV industry, and is used to certify commercial prerinse spray valves at all flow rates, including flow rates at less than 1.28 gpm. The ASTM flow rate test method specifies an allowable range of supply water temperature and pressure, which are the two physical parameters that would have the biggest effect on the accuracy and repeatability of the water flow rate measurement of a commercial prerinse spray valve. DOE has no evidence that the accuracy or repeatability of flow rate measurements lower than 1.28 gpm would be significantly different than flow rate measurements greater than 1.28 gpm. Additionally, DOE tested a range of commercial prerinse spray valves as part of the ongoing CPSV energy conservation standards rulemaking, and found the test method to be sufficiently accurate for spray valves with low flow rates. In a comment submitted by the Alliance to Save Energy (ASE), ASAP, and NRDC in response to the energy conservation standard NOPR, the commenters stated that they support incorporating provisions of ASTM Standard F2324–13 pertaining to flow rate and spray force into the DOE test procedure, including test methods and definitions. (EERE-2014-BT-STD-0027, ASE, ASAP, NRDC, No. 32 at p. 2) Finally, EPCA requires DOE to use

the ASTM Standard F2324 as a basis for the test procedure for measuring flow rate. (42 U.S.C. 6293(b)(14)) Therefore, DOE incorporates by reference the specified sections of ASTM Standard F2324–13 in this final rule.

DOE also received comments regarding its proposal to incorporate by reference elements of the water supply pressure specified in sections 9.3, 10.2.2 and 10.3.2 of ASTM Standard F2324–13. In the 2015 CPSV TP NOPR, DOE proposed to test commercial prerinse spray valves at a water pressure of 60 ± 2 psi when water is flowing through the commercial prerinse spray valve, as required by ASTM Standard F2324–13. As part of that proposal, DOE included a discussion on reports on water pressure across the country and the different aspects of testing at multiple water pressures. 80 FR 35873, 35878 (June 23, 2015). DOE also acknowledged that supply pressure will affect the flow rate of a commercial prerinse spray valve once installed. Typically, lower pressures result in lower flow rates and higher pressures result in higher flow rates. Nevertheless, DOE noted that testing at a single specific supply pressure to demonstrate compliance with the maximum allowable flow rate would create a consistent and standardized reference that would be comparable across all products. Id. Testing at multiple supply pressures would also increase test burden. DOE also reviewed the American Society of Mechanical Engineers (ASME) Standard A112.18.1–2012, "Plumbing Supply Fittings," which contains testing parameters for other plumbing products, such as faucets and showerheads, and found that it requires testing at lower supply pressures only when determining a minimum flow rate. 80 FR 35873, 35878 (June 23, 2015).

In comments provided for the related CPSV energy conservation standards rulemaking, AWE supported the use of the ASTM Standard F2324–13 test procedure and testing at a supply pressure of 60 psi. (Docket No. EERE-2014-BT-STD-0027, AWE, No. 8 at p. 2) During the NOPR public meeting, the Appliance Standards Awareness Project (ASAP) and NRDC both requested that DOE test at multiple water pressure values. (ASAP, Public Meeting Transcript, No. 3 at p. 27; NRDC, Public Meeting Transcript, No. 3 at pp. 19-20) In response to the 2015 CPSV TP NOPR, AWE commented that water pressure can vary from one water utility service area to another, impacting the performance of commercial prerinse spray valves. (AWE, No. 6 at p. 2) AWE also suggested that DOE suspend its rulemaking efforts until a comprehensive study is conducted to determine the effects of water pressure on performance of commercial prerinse spray valves. (AWE, No. 6 at p.4)

In response to AWE's comment regarding the effect of varied water pressures on performance, DOE acknowledged in the 2015 CPSV TP NOPR that supply pressures have an impact on flow rate. Consistent with what was described in Chapter 5 of the Technical Support Document (TSD) for the CPSV energy conservation standards NOPR (Docket EERE-2014-BT-STD-0027), DOE observed that flow rate increases with the square root of pressure. DOE compiled data from various field studies that demonstrated the performance of prerinse spray valves rated between 0.51 gpm and 1.88 gpm installed in commercial kitchen locations. While the water pressure measured in these locations ranged between 38 psi and 83 psi, the average water pressure observed in the commercial kitchens included in the studies was 55 psi, which is very close to the 60 psi supply

pressure specified in ASTM Standard F2324–13. DOE provides the full results of its data analysis in a separate report accompanying this final rule, titled "Analysis of Water Pressure for Testing Commercial Prerinse Spray Valves Final Report."[6] From the analysis, DOE found that although the flow rate of CPSVs can vary by almost 40 percent when the water pressure changes from the analyzed range of 40 psi to 80 psi, the weighted average flow rate for CPSVs installed with varying supply pressures results in a 5-percent decrease in flow rate as compared to the flow rate of a CPSV installed with a water pressure of 60 psi. Based on this information, DOE determined that 60 psi is representative of the water pressures observed across the nation. Therefore, this final rule incorporates the single water pressure supply requirement of ASTM Standard F2324–13, 60 ± 2 psi.

Specifically, DOE is incorporating by reference the following sections of ASTM Standard F2324–13: 6.1–6.9, 9.1–9.5.3.2, 10.1–10.2.5, 10.3.1–10.3.8, 11.3.1 (replacing the plural "nozzles" with "nozzle"), and excluding references to "Annex A1."

In the 2015 CPSV TP NOPR, DOE proposed replacing the plural "nozzles" with "nozzle" because "nozzles" refers to Section 8.1 of the ASTM Standard F2324–13, which requires three representative production units to be selected for all performance testing. DOE did not receive any comments regarding this proposal, therefore DOE is incorporating this change in this final rule. DOE also clarifies in this final rule that the term "nozzle" means a CPSV unit. Also, DOE is retaining the existing CPSV sampling

[6] The water pressure sensitivity analysis is available at regulations.gov under docket number EERE-2014-BT-TP-0055.

plan at 10 CFR 429.51(a), and therefore is not incorporating by reference Section 8.1 of ASTM Standard F2324-13. Section III.E of this document provides more details on the selection of units to test.

DOE is also excluding any references to "Annex A1" from incorporation by reference because the annex provides a procedure for determining the uncertainty in reported test results. DOE's required statistical methods for determination of the representative value of flow rate for each basic model is in 10 CFR 429.51(a)(2). Therefore, DOE is not incorporating by reference Annex A1 in this test procedure, and any references to the annex in the incorporated ASTM Standard F2324−13 sections are invalid. The referenced sections describe the testing apparatus, test method, and calculations pertaining to flow-rate measurement.

1. Clarifications

In analyzing ASTM Standard F2324–13 and DOE's proposed test provisions when responding to comments submitted by interested parties and formulating the final test procedure adopted in this document, DOE noticed several minor inconsistencies and sources of ambiguity in the proposed test procedure and industry standard. As such, in this final rule, DOE is also clarifying several minor issues regarding terminology and conducting the amended DOE test procedure, so as to improve the repeatability and consistency of the test procedure.

Throughout ASTM F2324–13, various terms are used to refer to flow rate: water consumption flow rate, water consumption, water flow rate, flow rate, and nozzle flow rate. Additionally, regulatory text in 10 CFR 429.51, 10 CFR 431.264, and 10 CFR 431.266 refers to flow rate using both the terms water consumption flow rate and flow rate. For this final rule, DOE is clarifying that all of the aforementioned terms are equivalent to the term flow rate.

Section 9.1 of ASTM Standard F2324–13, instructs the test lab to attach the prerinse spray valve to a 36-inch, spring-style (flex tubing) prerinse spray valve in accordance with the manufacturer's instructions. DOE is clarifying that the second instance of "prerinse spray valve" refers to the spring-style deck-mounted prerinse unit that is previously defined in section 6.8 of ASTM F2324–13. DOE is also clarifying that it does not believe that using the manufacturer's instructions or packaging are necessary to connect the nozzle for testing as the manufacturer's instructions typically describe how to install the entire prerinse spray valve, not just the nozzle.

Section 10.1.1 of ASTM Standard F2324–13 directs the test lab to record the water temperature (°F), dynamic water pressure (psi), time (min) and the flow rate (gpm) for each run of every test. For this final rule, DOE is clarifying that water temperature and dynamic water pressure values must be recorded one time at the start of each run when testing for both flow rate and spray force. The time is measured throughout the flow rate test and recorded after the test to indicate the duration of testing. DOE clarifies

that the flow rate is calculated afterwards using the normalized weight of the carboy, as discussed in the next paragraph, and the measured time of testing.

In section 10.2.4 of ASTM F2324–13, the flow rate test requires that the water flow be stopped at the end of one minute. However, section 6.9 of ASTM F2324–13 requires time measurement instruments accurate ± 0.1 second and it will likely be difficult for an operator to stop the stopwatch and CPSV at precisely 1:00.0 min every test. Therefore, DOE is clarifying that the recorded weight of the water will be normalized to 60.0 seconds for every test, to ensure that each flow rate is calculated using the same time period. Normalize the weight using Equation 1, where $W_{water}$ is the weight normalized to a 1 minute time period, $W_1$ is the weight of the water in the carboy at the conclusion of the flow rate test, and $t_1$ is the total recorded time of the flow rate test.

$$W_{water} = W_1 \, x \, \frac{60 \, s}{t_1} \quad (1)$$

C. Additional Test Methods

1. Adding Test Method to Measure Spray Force

In the 2015 CPSV TP NOPR, DOE proposed a test procedure for measuring the spray force of a commercial prerinse spray valve. DOE discussed how the test is conducted, the apparatus used, a review of the procedure, the applicable sections of ASTM F2324−13 to incorporate by reference. DOE also explained that it proposed the test to support the forthcoming proposed revisions to the CPSV product class structure in the ongoing energy conservation standard for commercial prerinse spray valves (Docket No. EERE-2014-BT-STD-0027). 80 FR 35874, 35879 (June 23, 2015).

As discussed previously in this final rule, DOE received several written comments about using spray force to define product classes. Specifically, in a joint comment submitted by ASE, ASAP, and NRDC and in the CA IOUs joint comment, the parties stated that they support incorporating provisions of ASTM Standard F2324–13 pertaining to spray force into the DOE test procedure, including test methods and definitions. The commenters additionally supported a requirement to measure and report spray force. (EERE-2014-BT-STD-0027, ASE, ASAP, NRDC, No. 32 at p. 2; EERE-2014-BT-STD-0027, CA IOUs, No. 34 at p. 3)

In this final rule, DOE clarifies how to record average spray force. Section 10.3.6 of ASTM F2324–13 requires the average spray force to be recorded over a 15-second time period after the prerinse spray valve has flowed for at least 5 seconds. DOE interprets "average" spray force to require at least two spray force readings during the test. Therefore, in this final rule, DOE clarifies that this requires recording at least two spray force readings to calculate the average spray force over the 15-second time period.

2. Multiple Spray Settings: Adding a Requirement to Measure Flow Rate and Spray Force of Each Spray Setting

In the 2015 CPSV TP NOPR, DOE proposed adding a requirement at 10 CFR 431.264(b)(3) to measure and record each available spray pattern if a sample unit has

multiple spray patterns or spray settings. DOE identified several commercial prerinse spray valves on the market with multiple spray patterns that can be selected by the end user. Additionally, section 10.3.7 of ASTM Standard F2324–13, which DOE proposed in the 2015 CPSV TP NOPR to incorporate by reference, specifies that force shall be tested for each mode (i.e., spray setting). 80 FR 35873, 35880 (June 23, 2015).

In this final rule, DOE intended the term "spray pattern" mean a user-selectable setting on a commercial prerinse spray valve; however, DOE realizes that some people might interpret the term "spray pattern" to mean the shape of the water spray as it exits the unit, such as shower, knife, solid stream, etc. For this final rule, DOE clarifies that the term "spray pattern" refers to a user-selectable setting on a commercial prerinse spray valve and uses the term "spray setting" instead of "spray pattern." Although DOE used the term "spray pattern" in the 2015 CPSV TP NOPR, for clarity, DOE is using the term "spray setting" throughout this discussion of comments received in response to the 2015 CPSV TP NOPR and in the regulatory text.

During the NOPR public meeting, Chicago Faucet sought clarification related to testing of multiple settings. Specifically, Chicago Faucet asked whether each setting on a model with multiple settings would need to be tested and meet a minimum spray force value. (Chicago Faucet, Public Meeting Transcript, No. 3, pp. 25 – 26) DOE clarified during the public meeting that DOE was not proposing mandatory minimum spray force requirements, but rather was proposing to use the spray force measurement to define product classes. DOE further confirmed that a unit with multiple settings would need to

be tested at each spray setting, and each spray setting would need to meet the applicable flow rate requirements.

In its written comments, AWE agreed that all of the emitters of a valve must comply with maximum allowable flow requirements. AWE added that it is only necessary for at least one of the emitters to meet a minimum spray force requirement. AWE stated that requiring all emitters to meet a certain minimum spray force will likely result in excessive water use when used in applications that do not require high force. (AWE, No. 6, p. 3) As previously mentioned, DOE is not establishing a mandatory minimum spray force requirement but, rather, has proposed using the spray force measurement to define product classes. Further discussion on how DOE proposed to use spray force to define product classes is presented in the forthcoming CPSV standards rulemaking final rule (Docket No. EERE-2014-BT-STD-0027).

T&S Brass stated that if the "suitable for use" language in DOE's proposed definition (based on suitability) were finalized, only one of the spray patterns would need to be tested and meet the requirements of a commercial prerinse spray valve. According to T&S Brass, one setting on the spray valve could meet the proposed definition even though the rest of the spray pattern selections may be non-compliant. T&S Brass also recommended that all spray modes of the commercial prerinse spray valve be tested for compliance. (T&S Brass, No. 7 at p. 2)

As stated in the 2015 CPSV TP NOPR, DOE is aware that some commercial prerinse spray valves may have multiple flow rate settings (which may or may not have the same water spray shape) or multiple, exchangeable faces to alter the spray force and flow rate of the product. 80 FR 35873, 35880 (June 23, 2015). In this final rule, DOE adopts its proposal in the 2015 CPSV TP NOPR to require testing of spray force and flow rate for each of the spray settings in CPSVs with multiple settings. Similarly, in this final rule, DOE is also adopting a definition of basic model to clarify how spray settings can be grouped for the purposes of making representations and certifying compliance to the Department. The basic model definition allows manufacturers to group spray settings within a given product class as long as the individual spray settings have similar physical and functional (or hydraulic) characteristics that affect water consumption or water efficiency for the purposes of testing and certifying compliance with the applicable standard. DOE also notes that consistent with DOE's basic model grouping provisions discussed in the certification, compliance, and enforcement final rule, manufacturers may elect to certify multiple spray settings under the same basic model, provided that (1) all individual spray settings identified as the same basic model have the same certified flow rate, (2) all representations are based on the tested performance of the least efficient individual model in that basic model, and (3) all spray settings are in the same product class. 76 FR 12422, 12429 (March 7, 2011). Specifically, for commercial prerinse spray valves, manufacturers may certify a CPSV unit with multiple spray settings as a single basic model if all the spray settings fall into the same product class and all representations regarding the performance of that basic model are based on the most consumptive spray setting. In such a case, manufacturers may not make differing

representations regarding the performance of different spray settings for those individual models within the basic model. However, to the extent manufacturers wish to make representations regarding the spray force or flow rate at spray settings other than the most consumptive flow rate, manufacturers may instead elect to certify individual spray settings as unique basic models.

In addition, if the spray settings on a CPSV unit fall into multiple product classes, manufacturers must certify separate basic models for each product class and may only group individual spray settings into basic models within each product class. In the ongoing energy conservation standard rulemaking (Docket No. EERE-2014-BT-STD-0027), DOE proposed to adopt amended standards for commercial prerinse spray values and establish different product classes and standards for commercial prerinse spray valves as a function of spray force. 80 FR 39486 (July 9. 2015). As such, a commercial prerinse spray value that contains multiple spray settings, or is sold with multiple spray faces, may fall into different product classes. In such a case, the commercial prerinse spray valve would meet both product class definitions and, as such, would be required to meet an appropriate energy conservation standard for both product classes. For example, if product classes were differentiated at 5-ozf and 8-ozf, the maximum flow rate setting with a spray force below 5-ozf would have to meet the standard associated with a spray force below 5-ozf, and the maximum flow rate setting between 5- and 8-ozf would have to meet the standard associated with a spray force between 5- and 8-ozf. This is consistent with DOE's treatment of other products and equipment that fall into multiple product classes or equipment categories. For example, dual-temperature commercial

refrigeration equipment that can operate as both a commercial refrigerator and a commercial freezer must be tested as, and meet the energy conservation standard for, both equipment categories. 77 FR 10292 (February 21, 2012). Similarly, if a spray valve has at least one setting that meets the definition of a commercial prerinse spray valve, then the entire unit is a commercial prerinse spray valve and all settings must meet the flow rate standard.

D. Rounding Requirements

1. Flow Rate

In the 2015 CPSV TP NOPR, DOE proposed to change the rounding requirements for recording flow rate measurements from one decimal place to two decimal places. 80 FR 35873, 35880 (June 23, 2015). During the NOPR public meeting, T&S Brass agreed with this proposal and stated that the WaterSense program also requires flow rate to be rounded to two decimal places. (T&S Brass, Public Meeting Transcript, No. 3 at p. 23) DOE did not receive any comments objecting to this proposal. Therefore, DOE amends the flow rate measurement rounding requirements to two decimal places in 10 CFR 431.264(b)(1).

2. Spray Force

In the 2015 CPSV TP NOPR, DOE proposed to adopt Section 11.4.2 of the ASTM Standard F2324–13 that specifies that the spray force be rounded to one decimal place. 80 FR 35873, 35880 (June 23, 2015). DOE received no comments related to this

proposal. Therefore, DOE adopts spray force rounding requirements of one decimal place in 10 CFR 431.264(b)(2).

E. Sampling Plan for Representative Values

In the 2015 CPSV TP NOPR, DOE proposed retaining the existing CPSV sampling plan at 10 CFR 429.51(a). 80 FR 35874, 35880 (June 23, 2015). Although Section 8.1 of ASTM Standard F2324–13 requires three representative production units to be selected for all performance testing, in the 2015 CPSV TP NOPR, DOE proposed not to adopt this requirement. DOE only proposed to adopt the testing methodology (i.e., applicable to testing of a unit) – not the rating methodology (i.e., applicable to a basic model) – found in ASTM Standard F2324–13. However, DOE notes that the DOE test procedure for commercial prerinse spray valves adopted in this final rule incorporates by reference ASTM F2324−13, which requires performing three test runs on each unit and the measured flow rate or spray force to be calculated as the average of the flow rate or spray force value determined during each of the three runs. DOE is retaining this requirement as is it improves the accuracy and precision of the test. The representative value of flow rate and spray force for each CPSV model is then calculated as the values determined from each test, subject to the sampling plan and rounding requirements presented in at 10 CFR 431.51(a) and 10 CFR 431.264(b)(2).

CPSV testing is subject to DOE's general certification regulations at 10 CFR 429.11. These require a manufacturer to randomly select and test a sample of sufficient size to ensure that the represented value of water consumption adequately represents

performance of all of the units within the basic model, but no fewer than two units. (10 CFR 429.11(b)) The purpose of these requirements is to achieve a realistic representation of the water consumption of the basic model, and to mitigate the risk of noncompliance, without imposing undue test burden. DOE did not receive any comments related to this proposal.

In the 2015 CPSV TP NOPR, DOE proposed to revise the statistical methods for determination of the representative value of flow rate for each basic model of commercial prerinse spray valve in 10 CFR 429.51(a)(2). 80 FR 35874, 35880 (June 23, 2015). Specifically, DOE proposed to remove the lower confidence limit (LCL) formula from the sampling plan for the selection of units for testing and retain only the provision for an upper confidence limit (UCL) under 10 CFR 429.51(a)(2)(i). The original statistical methods allowed for two options that were exclusive; however, because the energy conservation standard for commercial prerinse spray valves specifies a maximum water flow rate, only the UCL provision is used for certification and compliance purposes. DOE received no comments related to this proposal. Therefore, DOE removes the LCL formula from the sampling plan in this final rule and retains the remainder of the sampling plan at 10 CFR 429.51(a).

## IV. Procedural Issues and Regulatory Review

### A. Review Under Executive Order 12866

The Office of Management and Budget (OMB) has determined that test procedure rulemakings do not constitute "significant regulatory actions" under section 3(f) of

Executive Order 12866, Regulatory Planning and Review, 58 FR 51735 (October 4, 1993). Accordingly, this action was not subject to review under the Executive Order by the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB).

B. Review under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq., as amended by the Small Business Regulatory Fairness Act of 1996) requires preparation of an initial regulatory flexibility analysis (IRFA) for any rule that by law must be proposed for public comment and a final regulatory flexibility analysis (FRFA) for any such rule that an agency adopts as a final rule, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. A regulatory flexibility analysis examines the impact of the rule on small entities and considers alternative ways of reducing negative effects. As required by Executive Order 13272. "Proper Consideration of Small Entities in Agency Rulemaking," 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003 to ensure that the potential impacts of its rules on small entities are properly considered during the DOE rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's website: http://energy.gov/gc/office-general-counsel.

DOE reviewed this final rule under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003. DOE has concluded

that the rule would not have a significant impact on a substantial number of small entities. The factual basis for this certification is as follows.

The Small Business Administration (SBA) considers a business entity to be a small business, if, together with its affiliates, it employs less than a threshold number of workers specified in 13 CFR part 121. These size standards and codes are established by the North American Industry Classification System (NAICS). The threshold number for NAICS classification code 332919, which applies to "other metal valve and pipe fitting manufacturing" and includes CPSV manufacturers, is 500 employees.[7]

Based on a search of DOE's Compliance and Certification Database, individual company websites, and various marketing research tools (e.g., Dun and Bradstreet reports, Manta, and Hoovers), DOE identified 13 manufacturers of commercial prerinse spray valves, of which 9 are domestic small businesses. Table IV.1 lists the eight small businesses that DOE identified, according to the number of employees.

**Table IV.1 Small Business Size by Number of Employees**

| Number of Employees | Number of Small Businesses | Percentage of Small Businesses* |
|---|---|---|
| 1–50 | 3 | 33% |
| 51-100 | 3 | 33% |
| 101-150 | 1 | 11% |
| 151-250 | 1 | 11% |

[7] U.S. Small Business Administration Table of Small Business Size Standards Matched to North American Industry Classification System Codes See www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf (last accessed September 10, 2015)

| | | |
|---|---|---|
| 251-500 | 1 | 11% |
| * Note: Because of rounding, the values in this column do not sum to 100%. | | |

DOE estimated the labor burden associated with testing, in view of the 2012 (most recent) median annual pay for (1) environmental engineering technicians ($45,350), (2) mechanical engineering technicians ($51,980), and (3) plumbers, pipefitters, and steamfitters ($49,140) for an average annual salary of $48,823.[8,9] DOE divided the average by 1,920 hours per year (40 hours per week for 48 weeks per year) to develop an hourly rate of $25.43. DOE adjusted the hourly rate by 31-percent to account for benefits, resulting in an estimated total hourly rate of $33.31.[10,11] DOE used this hourly rate to assess the labor costs for testing units according to the amendments to the test procedures.

Currently, 10 CFR 431.264 prescribes measurements for flow rate and requires commercial prerinse spray valves with multiple spray settings to comply with the applicable Federal energy conservation standard. DOE is clarifying in this final rule that CPSV models with multiple spray patterns must demonstrate compliance through

[8] U.S. Department of Labor Bureau of Labor Statistics. Occupational Outlook Handbook, Architecture and Engineering. www.bls.gov/ooh/Architecture-and-Engineering/home.htm (last accessed September 10, 2015).
[9] U.S. Department of Labor Bureau of Labor Statistics. Occupational Outlook Handbook, Construction and Extraction Occupations. www.bls.gov/ooh/construction-and-extraction/home.htm (last accessed September 10, 2015).
[10] Bureau of Labor Statistics. News Release: Employer Cost For Employee Compensation. www.bls.gov/news.release/ecec.nr0.htm. (last accessed September 10, 2015).
[11] Additional benefits include paid leave, supplemental pay, insurance, retirement and savings, Social Security, Medicare, unemployment insurance, and workers compensation.

certifying each discrete spray pattern or through the application of the basic model concept (see section III.C.2).

The amendments to the test procedures adopted in today's final rule do not modify the time or burden associated with conducting the CPSV test procedure, except for including an additional test for spray force. During the NOPR public meeting, T&S Brass commented that only the manufacturers participating in the WaterSense program typically perform this test. (T&S Brass, Public Meeting Transcript, No. 3 at pp. 24 – 25) Out of 13 total CPSV manufacturers that DOE identified, only 2 currently participate in the WaterSense program. DOE concludes, therefore, that most manufacturers do not currently test for spray force. DOE estimates that an additional hour of labor time per basic model is required to conduct the spray force test.

In addition to the labor time, DOE assumed that manufacturers would have to either construct or purchase an apparatus to measure spray force. DOE researched the materials necessary for the spray force test and estimates the cost of these materials to be $575.

Another amendment to the test procedure includes clarifying that all spray settings must be tested on units that offer multiple spray settings. While CPSV models with multiple spray settings are currently required to demonstrate compliance, which requires testing of all spray settings, DOE understands that testing multiple spray settings requires more testing time than testing units with only one spray setting and that some

manufacturers may not have been testing each spray setting. Therefore, DOE is also estimating the cost associated with testing units with multiple spray settings. DOE's review of commercial prerinse spray valves with multiple spray settings indicates that these units have an average of three settings. DOE estimated that the time to measure both flow rate and spray force for all three spray settings is greater than 2 hours but typically less than 3 hours.

Based on this analysis, DOE estimated that up to 3 hours of total testing time is required for each basic model. Therefore, up to 6 hours of total testing time might be required to test two production units per basic model in the final test procedure, which results in a total labor cost of $199.88. As previously stated, DOE estimated that the cost of complying with the current test procedure is $66.63. Therefore, the amended test procedure reflects an increase in cost of $133.25 per basic model, and an additional one-time equipment setup cost of $575, compared to the current test procedure.

AWE commented that the additional manufacturer cost burden for requiring multiple spray force tests would negatively affect product innovation and consumer choice. (AWE, No. 6, p. 3). As described earlier, DOE has accounted for the multiple spray force tests costs by determining the added cost for increased testing time, labor, and purchase of equipment for the spray force test.

DOE's analysis determined that 69-percent of all CPSV manufacturers could be classified as small entities according to SBA classification guidelines. DOE believes that

small manufacturers would not be differentially affected by the proposed amendments to the test procedure. In fact, DOE does not believe the amendments adopted in today's final rule as they relate to testing will result in any significant differential impact as compared to the testing currently required by DOE's regulations. Therefore, DOE concludes that the cost effects accruing from the final rule would not have a "significant economic impact on a substantial number of small entities," and that the preparation of an FRFA is not warranted. DOE has submitted a certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review under 5 U.S.C. 605(b).

C. Review Under the Paperwork Reduction Act of 1995

Manufacturers of commercial prerinse spray valves must certify to DOE that their products comply with any applicable energy conservation standards. To certify compliance, manufacturers must first obtain test data for their products according to the DOE test procedures, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including commercial prerinse spray valves. See generally 10 CFR part 429. The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (PRA). This requirement has been approved by OMB under OMB control number 1910-1400. Public reporting burden for the certification is estimated to average 30 hours per response including the time for reviewing instructions,

searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

D. Review Under the National Environmental Policy Act of 1969

In this final rule, DOE amends its test procedure for commercial prerinse spray valves. DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and DOE's implementing regulations at 10 CFR part 1021. Specifically, this rule amends an existing rule without affecting the amount, quality or distribution of energy usage, and, therefore, will not result in any environmental impacts. Thus, this rulemaking is covered by Categorical Exclusion A5 under 10 CFR part 1021, subpart D, which applies to any rulemaking that interprets or amends an existing rule without changing the environmental effect of that rule. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

E. Review Under Executive Order 13132

Executive Order 13132, "Federalism," 64 FR 43255 (August 4, 1999), imposes certain requirements on agencies formulating and implementing policies or regulations

that preempt State law or that have Federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE examined this final rule and determined that it will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of this final rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) No further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

Regarding the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, "Civil Justice Reform," 61 FR 4729 (February 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; (3) provide a clear legal standard for affected conduct rather than a general standard; and (4) promote simplification and burden reduction. Section 3(b) of

Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this final rule meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. Pub. L. No. 104-4, sec. 201 (codified at 2 U.S.C. 1531). For a regulatory action resulting in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by

elected officers of State, local, and Tribal governments on a proposed "significant intergovernmental mandate," and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820; also available at http://energy.gov/gc/office-general-counsel. DOE examined this final rule according to UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure of $100 million or more in any year, so these requirements do not apply.

H. Review Under the Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This final rule will not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review Under Executive Order 12630

DOE has determined, under Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights" 53 FR 8859 (March 18, 1988), that this regulation will not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

J. Review Under Treasury and General Government Appropriations Act, 2001

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (February 22, 2002), and DOE's guidelines were published at 67 FR 62446 (October 7, 2002). DOE has reviewed this final rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review Under Executive Order 13211

Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use," 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OMB, a Statement of Energy Effects for any significant energy action. A "significant energy action" is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that: (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For any significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use if the regulation is implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

This regulatory action is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as a significant energy action by the Administrator of OIRA. Therefore, it is not a significant energy action, and, accordingly, DOE has not prepared a Statement of Energy Effects.

L. Review Under Section 32 of the Federal Energy Administration Act of 1974

Under section 301 of the Department of Energy Organization Act (Pub. L. 95–91; 42 U.S.C. 7101), DOE must comply with section 32 of the Federal Energy Administration Act of 1974, as amended by the Federal Energy Administration Authorization Act of 1977. (15 U.S.C. 788; FEAA) Section 32 essentially provides in relevant part that, where a proposed rule authorizes or requires use of commercial standards, the notice of proposed rulemaking must inform the public of the use and background of such standards. In addition, section 32(c) requires DOE to consult with the Attorney General and the Chairman of the Federal Trade Commission (FTC) concerning the impact of the commercial or industry standards on competition.

The modifications to the test procedure addressed by this action incorporate testing methods contained in the following commercial standards: ASTM F2324–13, Standard Test Method for Prerinse Spray Valves, sections 6.1 - 6.9, 9.1 – 9.5.3.2, 10.1 – 10.2.5, 10.3.1 – 10.3.8, 11.3.1 (replacing “nozzles” with “nozzle”), and disregarding references to Annex A1. DOE has evaluated these standards and is unable to conclude

whether they fully comply with the requirements of section 32(b) of the FEAA (i.e., that they were developed in a manner that fully provides for public participation, comment, and review). DOE has consulted with the Attorney General and the Chairman of the FTC concerning the impact of these test procedures on competition and has received no comments objecting to their use.

M. Description of Materials Incorporated by Reference

In this final rule, DOE incorporates by reference the test standard published by ASTM, titled, "Standard Test Method for Prerinse Spray Valves," ASTM Standard F2324–13. ASTM Standard F2324−13 is an industry-accepted test procedure that measures water flow rate and spray force for prerinse spray valves, and is applicable to products sold in North America. ASTM Standard F2324–13 specifies testing conducted in accordance with other industry accepted test procedures (already incorporated by reference). The test procedure in this final rule references various sections of ASTM Standard F2324–13 that address test setup, instrumentation, test conduct, and calculations. ASTM Standard F2324–13 is readily available at ASTM's website at www.astm.org/Standard/standards-and-publications.html.

N. Congressional Notification

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of this rule before its effective date. The report will state that it has been determined that the rule is not a "major rule" as defined by 5 U.S.C. 804(2).

## V. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this final rule.

**List of Subjects**

**10 CFR Part 429**

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Reporting and recordkeeping requirements.

**10 CFR Part 431**

Administrative practice and procedure, Confidential business information, Energy conservation test procedures, Incorporation by reference, and Reporting and recordkeeping requirements.

Issued in Washington, DC, on December 18, 2015.

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

For the reasons stated in the preamble, DOE amends parts 429 and 431 of Chapter II of Title 10, Code of Federal Regulations as set forth below:

## PART 429 -- CERTIFICATION, COMPLIANCE, AND ENFORCEMENT FOR CONSUMER PRODUCTS AND COMMERCIAL AND INDUSTRIAL EQUIPMENT

1. The authority citation for part 429 continues to read as follows:

**Authority**: 42 U.S.C. 6291-6317.

2. In § 429.51, paragraph (a) is revised to read as follows:

**§429.51 Commercial pre-rinse spray valves.**

(a) Sampling plan for selection of units for testing. (1) The requirements of §429.11 apply to commercial prerinse spray valves; and

(2) For each basic model of commercial prerinse spray valve, a sample of sufficient size must be randomly selected and tested to ensure that any represented value of flow rate must be greater than or equal to the higher of:

(i) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

and, $\bar{x}$ is the sample mean;

n is the number of samples; and

$x_i$ is the $i^{th}$ sample; Or,

(ii) The upper 95-percent confidence limit (UCL) of the true mean divided by 1.10, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

and, $\bar{x}$ is the sample mean;

s is the sample standard deviation;

n is the number of samples; and

$t_{0.95}$ is the t statistic for a 95-percent two-tailed confidence interval with n-1 degrees of freedom (from Appendix A of this subpart).

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**PART 431--ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT**

3. The authority citation for part 431 continues to read as follows:

**Authority**: 42 U.S.C. 6291-6317.

4. Section 431.262 is revised to read as follows:

**§ 431.262 Definitions**.

As used in this subpart:

Basic model means all spray settings of a given class manufactured by one manufacturer, which have essentially identical physical and functional (or hydraulic) characteristics that affect water consumption or water efficiency.

Commercial prerinse spray valve means a handheld device that has a release-to-close valve and is suitable for removing food residue from food service items before cleaning them in commercial dishwashing or ware washing equipment.

Spray force means the amount of force exerted onto the spray disc, measured in ounce-force (ozf).

5. Section 431.263 is amended by revising paragraph (b)(1) to read as follows:

**§431.263 Materials incorporated by reference.**

* * * * *

(b) * * *

(1) ASTM Standard F2324–13, ("ASTM F2324–13"), Standard Test Method for Prerinse Spray Valves, approved June 1, 2013; IBR approved for §431.264.

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6. Section 431.264 is revised to read as follows:

**§431.264 Uniform test method to measure flow rate and spray force of commercial prerinse spray valves.**

(a) Scope. This section provides the test procedure to measure the flow rate and spray force of a commercial prerinse spray valve.

(b) Testing and calculations for a unit with a single spray setting—(1) Flow rate. (i) Test each unit in accordance with the requirements of sections 6.1 through 6.9 (Apparatus) (except 6.4 and 6.7), 9.1 through 9.4 (Preparation of Apparatus), and 10.1 through 10.2.5 (Procedure) of ASTM F2324−13, (incorporated by reference, see §431.263). Precatory language in the ASTM F2324–13 is to be treated as mandatory for the purpose of testing. In section 9.1 of ASTM F2324–13, the second instance of "prerinse spray valve" refers to the spring-style deck-mounted prerinse unit defined in section 6.8. In lieu of using manufacturer installation instructions or packaging, always connect the commercial prerinse spray valve to the flex tubing for testing. Normalize the weight of the water to calculate flow rate using Equation 1, where $W_{water}$ is the weight normalized to a 1 minute time period, $W_1$ is the weight of the water in the carboy at the conclusion of the flow rate test, and $t_1$ is the total recorded time of the flow rate test.

$$W_{water} = W_1 \, x \, \frac{60 \, s}{t_1} \qquad \text{(Eq. 1)}$$

(ii) Perform calculations in accordance with section 11.3.1 (Calculation and Report). Record the water temperature (°F) and dynamic water pressure (psi) once at the start for each run of the test. Record the time (min), the normalized weight of water in the carboy (lb) and the resulting flow rate (gpm) once at the end of each run of the test. Record flow rate measurements of time (min) and weight (lb) at the resolutions of the test instrumentation. Perform three runs on each unit, as specified in section 10.2.5 of ASTM

F2324−13, but disregard any references to Annex A1. Then, for each unit, calculate the mean of the three flow rate values determined from each run. Round the final value for flow rate to two decimal places and record that value.

(2) Spray force. Test each unit in accordance with the test requirements specified in sections 6.2 and 6.4 through 6.9 (Apparatus), 9.1 through 9.5.3.2 (Preparation of Apparatus), and 10.3.1 through 10.3.8 (Procedure) of ASTM F2324−13. In section 9.1 of ASTM F2324–13, the second instance of "prerinse spray valve" refers to the spring-style deck-mounted prerinse unit defined in section 6.8. In lieu of using manufacturer installation instructions or packaging, always connect the commercial prerinse spray valve to the flex tubing for testing. Record the water temperature (°F) and dynamic water pressure (psi) once at the start for each run of the test. In order to calculate the mean spray force value for the unit under test, there are two measurements per run and there are three runs per test. For each run of the test, record a minimum of two spray force measurements and calculate the mean of the measurements over the 15-second time period of stabilized flow during spray force testing. Record the time (min) once at the end of each run of the test. Record spray force measurements at the resolution of the test instrumentation. Conduct three runs on each unit, as specified in section 10.3.8 of ASTM F2324−13, but disregard any references to Annex A1. Ensure the unit has been stabilized separately during each run. Then for each unit, calculate and record the mean of the spray force values determined from each run. Round the final value for spray force to one decimal place.

(c) Testing and calculations for a unit with multiple spray settings. If a unit has multiple user-selectable spray settings, or includes multiple spray faces that can be installed, for each possible spray setting or spray face:

(1) Measure both the flow rate and spray force according to paragraphs (b)(1) and (2) of this section (including calculating the mean flow rate and mean spray force) for each spray setting; and

(2) Record the mean flow rate for each spray setting, rounded to two decimal places. Record the mean spray force for each spray setting, rounded to one decimal place.

7. Section 431.266 is revised to read as follows:

**§431.266 Energy conservation standards and their effective dates.**

Commercial prerinse spray valves manufactured on or after January 1, 2006, shall have a flow rate of not more than 1.6 gallons per minute. For the purposes of this standard, a commercial prerinse spray valve is a handheld device designed and marketed for use with commercial dishwashing and ware washing equipment that sprays water on dishes, flatware, and other food service items for the purpose of removing food residue before cleaning the items.

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