



[6450-01-P]

DEPARTMENT OF ENERGY

10 CFR Parts 429, 430, and 431

[Docket No. EERE-2011-BT-TP-0061]

RIN: 1904-AC65

Energy Conservation Program for Consumer Products and Certain Commercial and Industrial Equipment: Test Procedures for Showerheads, Faucets, Water Closets, Urinals, and Commercial Prerinse Spray Valves

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

ACTION: Final rule.

SUMMARY: On May 30, 2012, the U.S. Department of Energy (DOE) issued a notice of proposed rulemaking (NOPR) to amend the test procedures for showerheads, faucets, water closets, urinals, and prerinse spray valves. Following consideration of comments received in response to the NOPR, DOE issued a supplemental notice of proposed rulemaking (SNOPR) on April 8, 2013. The SNOPR included revisions to the definitions of showerhead and hand-held showerhead; removal of body sprays from the proposed showerhead definition; requirements pertaining to testing of showerheads that are components of shower towers; a standardized test method to be used when verifying the mechanical retention of a showerhead flow control insert when subject to 8 pounds force (lbf); clarification of permissible trim adjustments for tank-type water closets; amendments to the required static test pressures to be used when testing flushometer valve siphonic and blowout water closets; and clarifications of the definition of

basic model with respect to flushometer valve water closets and urinals, as well as associated changes to certification reporting requirements for both of these products. These proposed rulemakings serve as the basis for this action.

DATES: The effective date of this rule is **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].**

The incorporation of reference of certain publications listed in this rule was approved by the Director of the Federal Register on **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].**

ADDRESSES: 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:

www1.eere.energy.gov/buildings/appliance_standards/residential/plumbing_products.html. This web page will contain a link to the docket for this notice on the regulations.gov site. The 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 the American Society of Mechanical Engineers (ASME) standard A112.18.1-2012¹ test procedure for faucets and showerheads, ASME A112.19.2-2008 test procedure for water closets and urinals,² and American Society for Testing and Materials (ASTM) F2324-09 test procedure for prerinse spray valves. In addition, the final rule adds rounding instructions for certification reporting requirements for measures of water use for these products.

This final rule incorporates by reference into part 430 the following industry standards:

1. ASME A112.18.1-2012, (“ASME A112.18.1-2012”), Plumbing supply fittings,” section 5.4, approved December 2012.

¹ During the course of this rulemaking, ASME updated standard A112.18.1 from the 2011 version to the 2012 version. DOE has reviewed the sections incorporated by reference here and has determined that there are no changes that have an impact on this rulemaking, meaning that for DOE’s purposes the 2011 and 2012 versions of the standard are effectively identical. Unless otherwise noted, references to ASME A112.18.1 are to the 2012 version.

² Unless otherwise noted, references to ASME A112.19.2 are to the 2008 version.

2. ASME A112.19.2-2008, (“ASME A112.19.2-2008”), “Ceramic plumbing fixtures,” sections 7.1, 7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.5, 7.4, 8.2, 8.2.1, 8.2.2, 8.2.3, 8.6, Table 5, and Table 6, approved August 2008, including Update No. 1, dated August 2009, and Update No. 2, dated March 2011.

Copies of ASME standards are available from the American Society of Mechanical Engineers, Two Park Avenue, New York, NY 10016-5990, 800-843-2763 (U.S./Canada), 001-800-843-2763 (Mexico), 973-882-1170 (outside North America), or www.asme.org.

This final rule also incorporates by reference into part 431 the following industry standard:

ASTM Standard F2324-03 (Reapproved 2009), (“ASTM F2324-03 (2009)”), “Standard Test Method for Prerinse Spray Valves,” approved May 1, 2009.

Copies of ASTM standards are available from the American Society of Testing and Materials International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohoken, PA 19428-2959, 1-877-909-2786 (U.S. & Canada) and (610) 832-9585 (International), or www.astm.org.

Table of Contents

- I. Authority and Background
- II. Summary of the Final Rule
- III. Discussion
 - A. Showerheads and Faucets
 - 1. Definitions
 - 2. Test Procedure for Showerhead Flow Control Insert
 - 3. Showerhead Leakage
 - 4. Showerhead Test Pressure

5. Use of Time-Volume Test Method
6. Testing of Shower Tower Assemblies
- B. Water Closets and Urinals
 1. Dual-Flush Water Closets
 2. Static Test Pressure for Flushometer Valve Siphonic and Blowout Water Closets
 3. Water Closet and Urinal Sensor-Activated Flush Testing
 4. Test Procedure Amendments for Gravity Flush Tank Water Closet Trim Adjustments
 5. Annual Water Consumption Metric
 6. Trough Urinal Reporting Requirements
- C. Commercial Prerinse Spray Valves
- D. Incorporation by Reference of Standards
 1. ASME Standards
 2. Automatic Incorporation of Standards
 3. ASTM Standard
- E. Definition of Basic Model
- F. Statistical Sampling Plans
- G. Information To Be Provided in Certification Reports
- IV. Procedural Issues and Regulatory Review
 - A. Review Under Executive Order 12866
 - B. Review under the Regulatory Flexibility Act
 - C. Review Under the Paperwork Reduction Act of 1995
 - D. Review Under the National Environmental Policy Act of 1969
 - E. Review Under Executive Order 13132
 - F. Review Under Executive Order 12988
 - G. Review Under the Unfunded Mandates Reform Act of 1995
 - H. Review Under the Treasury and General Government Appropriations Act, 1999
 - I. Review Under Executive Order 12630
 - J. Review Under Treasury and General Government Appropriations Act, 2001
 - K. Review Under Executive Order 13211
 - L. Review Under Section 32 of the Federal Energy Administration Act of 1974
 - M. Congressional Notification
 - V. Approval of the Office of the Secretary

I. Authority and Background

Title III of the Energy Policy and Conservation Act of 1975 (42 U.S.C. 6291, et seq.; “EPCA” or “the Act”) sets forth a variety of provisions designed to improve energy efficiency. (All references to EPCA refer to the statute as amended through the American Energy Manufacturing Technical Corrections Act (AEMTCA), Pub. L. 112-210 (Dec. 18, 2012).) Part B of Title III, which for editorial reasons was redesignated as Part A upon incorporation into the U.S. Code (42

U.S.C. 6291–6309, as codified), establishes the “Energy Conservation Program for Consumer Products Other Than Automobiles,” which includes showerheads, faucets, water closets, urinals and prerinse spray valves, the subjects of this notice. (42 U.S.C. 6292(a)(15)-(18) and 42 U.S.C. 6295(dd)) Because prerinse spray valves are generally viewed as commercial equipment, in a final rule published October 18, 2005, DOE placed the regulatory provisions for prerinse spray valves in Title 10 of the Code of Federal Regulations (CFR), part 431, “Energy Efficiency Program for Certain Commercial and Industrial Equipment.”¹ 70 FR 60407, 60409.

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 test procedures that manufacturers of covered products must use as the basis for (1) certifying to DOE that their products comply with the applicable energy and water conservation standards adopted under EPCA, and (2) making representations about the efficiency of those products. Similarly, DOE must use these test procedures to determine whether the products comply with any relevant standards promulgated under EPCA.

EPCA states that the procedures for testing and measuring the water use of faucets and showerheads shall be ASME/ANSI standard A112.18.1M-1989, “Plumbing Fixture Fittings,” for faucets and showerheads, and ASME/ANSI standard A112.19.6-1990, “Hydraulic Requirements for Water Closets and Urinals,” for water closets and urinals; EPCA further specifies that if

¹ Because of the placement of prerinse spray valves in Part B of Title III of EPCA, the provisions of Part B apply to the rulemaking for commercial prerinse spray valves. The location of the provisions within the CFR does not affect either their substance or applicable procedure; DOE is placing them in the commercial portion of the CFR part as a matter of administrative convenience based on their nature or type.

ASME/ANSI revises these requirements, the Secretary shall adopt such revisions if they conform to the basic statutory requirements for test procedures. (42 U.S.C. 6293(b)(7)–(8))

EPCA states that the test procedure for measuring the flow rate for commercial prerinse spray valves “shall be based on [the] American Society for Testing and Materials (ASTM) standard F2324, entitled ‘Standard Test Method for Pre-Rinse Spray Valves.’” (U.S.C. 6293(b)(14)) In a final rule published on December 8, 2006, DOE incorporated by reference the 2003 version of ASTM standard F2324 at 10 CFR 431.263, and established it as the uniform test method for the measurement of flow rate of commercial prerinse spray valves at 10 CFR 431.264. 71 FR 71340.

DOE last amended test procedures for showerheads, faucets, water closets, and urinals in a final rule published in March 1998 (Mar. 1998 final rule), which incorporated by reference ASME/ANSI standard A112.18.1M-1996, “Plumbing Fixture Fittings,” for showerheads and faucets, and ASME/ANSI standard A112.19.6-1995, “Hydraulic Performance Requirements for Water Closets and Urinals,” for water closets and urinals. 63 FR 13308 (March 18, 1998). Since publication of the March 1998 final rule, ASME has revised both procedures and issued the most recent versions as A112.18.1-2012, “Plumbing Supply Fittings,” for showerheads and faucets in December 2012, and A112.19.2-2008, “Ceramic Plumbing Fixtures,” for water closets and urinals in August 2008.²

DOE published the proposed amendments to the test procedures for showerheads, faucets, water closets, urinals, and prerinse spray valves in a test procedure NOPR in the Federal Register on

² The term “ANSI” is no longer included in the title of the current versions of either standard. However, ASME, the organization that publishes these standards, is accredited by ANSI as a Standards Development Organization and the standards were approved by ANSI prior to publication.

May 30, 2012 (May 2012 NOPR). The NOPR proposed generally to incorporate the revised versions of the ASME standards discussed in the previous paragraph, as well as an updated version of the test standard for commercial prerinse spray valves and certain revisions and additions to the definitions of covered plumbing products in 10 CFR 430.2. On July 24, 2012, DOE held a public meeting to discuss amendments proposed in the May 2012 NOPR and provided an opportunity for interested parties to comment. DOE also received written comments from interested parties regarding the proposed amendments to the test procedures.

Upon review of the comments received in response to the May 2012 NOPR, several issues emerged that required additional clarification or information before publishing a final rule. In response to those comments, a supplemental notice of proposed rulemaking (SNOPR) was published in the Federal Register on April 8, 2013 (April 2013 SNOPR). The issues addressed in the April 2013 SNOPR included revisions to the definitions of showerhead and hand-held showerhead; clarification of the requirements pertaining to testing of shower towers; a standardized test method to be used when verifying the mechanical retention of a showerhead flow control insert when subjected to 8 pounds force (lbf); clarification of permissible trim adjustments for tank-type water closets; and amendments to the required static test pressures to be used when testing flushometer valve siphonic and blowout water closets. DOE also proposed further clarification of the definition of basic model with respect to flushometer valve water closets and urinals, as well as associated changes to certification reporting requirements for these products. DOE received written comments from interested parties regarding the amended proposals.

On July 30, 2013, DOE held an additional public meeting to receive additional comments on DOE's proposed test to verify mechanical retention of a showerhead flow control insert when subjected to 8 lbf. DOE also accepted written comments for 10 days following the public meeting, with the comment period closing on August 9, 2013. 78 FR 42719 (July 17, 2013). Because DOE has not yet been able to consider all comments raised at this meeting and during the additional comment period, DOE has not finalized this proposal and will address this issue in a separate notice.

General Test Procedure Rulemaking Process

Under 42 U.S.C. 6293, EPCA sets forth 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, water use (in the case of showerheads, faucets, water closets and urinals), 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 or energy use, or, in this case, water use, of any covered product as determined under the existing test procedure. (42 U.S.C. 6293(e)(1)) If DOE determines that the

amended test procedure would alter the measured water use of a covered product, DOE must amend the applicable water conservation standard accordingly. (42 U.S.C. 6293(e)(2))

Effective 180 days after an amended test procedure applicable to a covered product is prescribed, no manufacturer may make any representation with respect to water usage of such product unless such product has been tested in accordance with such amended test procedure and such representation fairly discloses the results of such testing. (42 U.S.C. 6293(c)(2)) However, the 180-day period may be extended for an additional 180 days if the Secretary determines that this requirement would impose an undue burden. (42 U.S.C. 6293(c)(3))

II. Summary of the Final Rule

The final rule amends the current DOE test procedures for showerheads, faucets, water closets, urinals, and prerinse spray valves. DOE has concluded that these changes will not affect measured water use of these products. Instead, they will primarily clarify the manner in which to test for compliance with the current water conservation standards. As indicated in greater detail in the “Discussion” section of this notice, these amendments apply to the current test procedures in 10 CFR part 430, appendices S and T to subpart B; to the definitions set forth in 10 CFR 430.2; and to 10 CFR part 431, subpart O. DOE is making these amendments to eliminate any potential ambiguity contained in these test procedures and clarify the regulatory text so that regulated entities fully understand the intended application and implementation of the test

procedures. DOE also notes that this rule also fulfills its obligation to periodically review its test procedures under 42 U.S.C. 6293(b)(1)(A).

III. Discussion

This section discusses the test procedures incorporated into this final rule. This section also presents the written and oral comments received in response to the May 2012 NOPR, the written and oral comments received in response to the April 2013 SNOPR, and DOE's responses to these comments. Responses to the comments address the following subject areas:

1. Showerheads and Faucets
2. Water Closets and Urinals
3. Commercial Prerinse Spray Valves
4. Incorporation by Reference of Standards
5. Basic Models
6. Statistical Sampling Plans
7. Information To Be Provided in Certification Reports

A. Showerheads and Faucets

1. Definitions

To address certain provisions of the revised ASME A112.18.1 that were not contemplated in the versions referenced by the existing DOE test procedures, and to establish greater clarity with respect to product coverage, DOE proposed in the May 2012 NOPR to adopt new definitions for

the terms “accessory,” “body spray,” “hand-held shower,” and “fitting” based on the definitions for these components in the most recent ASME standard. 77 FR 31747-48 (May 30, 2012)

In the May 2012 NOPR, DOE proposed to define a showerhead as “an accessory, or set of accessories, to a supply fitting distributed in commerce for attachment to a single supply fitting, for spraying water onto a bather, typically from the overhead position, including body sprays and hand-held showerheads, but excluding safety shower showerheads.” 77 FR at 31755 (May 30, 2013). DOE proposed a modification to the definition of the term “showerhead” based on a definition included in ASME A112.18.1.³ With the proposed modification, DOE intended to reflect that safety shower showerheads are not covered products, while hand-held showerheads are covered. The proposed definition also clarified that DOE would consider a body spray to be a showerhead for the purposes of regulatory coverage.

Kohler and Sloan Valve Company (Sloan Valve) recommended that, for consistency, DOE should use the showerhead definition found in ASME A112.18.1: “An accessory to a supply fitting for spraying water onto a bather, typically from the overhead position.” (Kohler, No. 9 at p. 4; Sloan Valve, No. 12 at p. 3)⁴

The National Resources Defense Council (NRDC) commented that a showerhead should not be defined as an accessory. (NRDC, Public Meeting Transcript, No. 11 at pp. 54–55)⁵ Plumbing

³ 10 CFR 430.2 previously defined as showerhead as “any showerhead (including a hand-held showerhead), except a safety shower showerhead.”

⁴ A notation in the form “Kohler, No. 9 at p. 4” identifies a written comment that DOE has received and included in the docket of this rulemaking. This particular notation refers to a comment: (1) submitted by Kohler; (2) in document number 9 of the docket; and (3) on page 4 of that document.

⁵ A notation in the form “NRDC, Public Meeting Transcript, No. 11 at pp. 54–55” identifies a comment that DOE has received and included in the docket of this rulemaking. This particular notation refers to a comment: (1)

Manufacturers International (PMI), Moen Incorporated (Moen), and Kohler commented that body sprays are not considered accessories since they cannot be readily added or removed by the user, and thus should not be included in the showerhead definition. (PMI, No. 8 at p. 4; Moen, No. 4 at p. 3; Kohler, No. 9 at p. 4) NRDC supported the incorporation of body sprays in the showerhead definition. (NRDC, Public Meeting Transcript, No. 11 at pp. 57–58) The International Code Council (ICC) recommended that the term “showerhead” be incorporated into the definition of body spray to clearly indicate that a body spray is considered a form of showerhead. (ICC, Public Meeting Transcript, No. 11 at pp. 55–56)

Based on these comments, DOE withdrew the proposal to include body sprays in the April 2013 SNOPR, citing a need to further study the issue. 78 FR at 20834 (Apr. 8, 2013). DOE also stated in the April 2013 SNOPR that the current ASME showerhead definition was not specific enough to address DOE’s regulatory coverage of showerheads by not specifically including hand-held showerheads or excluding safety shower showerheads. 78 FR at 20834 (Apr. 8, 2013). DOE also proposed in the April 2013 SNOPR to remove the term “accessory” from the definition of showerhead in light of comments received. 78 FR at 20834 (Apr. 8, 2013). The April 2013 SNOPR proposed the following definition for the term “showerhead”: “a component of a supply fitting, or set of components distributed in commerce for attachment to a single supply fitting, for spraying water onto a bather, typically from an overhead position, including hand-held showerheads, but excluding safety showerheads.” 78 FR at 20841 (Apr. 8, 2013). DOE notes that the term used in EPCA is “safety shower showerhead,” and DOE intended for the term in the

submitted by NRDC during the public meeting; (2) in the transcript of that public meeting, document number 11 in the docket of this rulemaking; and (3) appearing on pages 54 and 55 of the transcript.

proposed definition to refer to the same type of product. Accordingly, the finalized definition of “showerhead” in this rule uses the term “safety shower showerhead.”

DOE received additional comments in response to the revised definition of showerhead proposed in the April 2013 SNO PR. Kohler reiterated its previous comment in support of adopting the definition of showerhead contained in ASME A112.18.1. (Kohler, No. 27 at p. 1) Comments were also received from PMI, NSF International (NSF), and the International Association of Plumbing and Mechanical Officials (IAPMO), Chicago Faucets, and Moen that supported use of the definition in ASME A112.18.1. (NSF, No. 22 at pp. 1–2; PMI, No. 23 at pp. 2–3; IAPMO, No. 25 at p. 2; Chicago Faucets, No. 27 at p. 1; Moen, No. 30 at p. 1)

Additionally, a number of comments were received regarding DOE’s proposal to adopt a definition of “showerhead” that would not include the term “body spray” and, therefore, exclude body sprays from the current standard. NSF, PMI, IAPMO, Chicago Faucet, and Moen made comments in support of the adoption of the definition of showerhead currently contained in ASME A112.18.1 without edits, with all commenters, except Chicago Faucets, explicitly supporting the decision to exclude body sprays from the definition. (NSF, No. 22 at p. 2; PMI, No. 23 at pp. 2–3; IAPMO, No. 25 at p. 2; Chicago Faucets, No. 28 at p. 1; Moen, No. 30 at p. 1) On the other hand, a joint written comment submitted by NRDC and the Appliance Standards Awareness Project (ASAP) expressed regret regarding the Department’s proposal to remove body sprays from the definition of showerhead, and from regulatory coverage, and further stated that the proposal presented in the SNO PR was “muddled by the inconsistent and ambiguous use of the term ‘fitting.’” (NRDC/ASAP, No. 26 at p. 1) Maximum Performance Testing (MaP)

noted that removing the term “body spray” from the definition of showerhead is inconsistent with the general concept of a showerhead since both products serve the same basic purpose, and specifically supported coverage of body sprays as showerheads. (MaP, No. 29 at p. 1) Finally, the California Energy Commission (CEC) stated that DOE’s exclusion of the term “body spray” from the showerhead definition “created an exemption from the test procedure so broad that it encompasses showerheads as well.” CEC went on to clarify that use of the term “typically” (in the part of the proposed definition that provides that a showerhead sprays water “typically from an overhead position”) is ambiguous and “could lead to a discretionary judgment on what products can be considered not a showerhead” because any showerhead that could be placed other than overhead or positioned at lower than usual height could be called a body spray. (CEC, No. 31 at pp. 3–4)

Based on careful consideration of these comments, DOE is excluding the term “accessory” from the showerhead definition and revising the definition to accurately use the term “supply fitting” as it is defined in ASME A112.18.1. The following definition is being adopted in this final rule: “A component or set of components distributed in commerce for attachment to a single supply fitting, for spraying water onto a bather, typically from an overhead position, including hand-held showerheads, but excluding safety shower showerheads.” This final rule is not adopting a definition of body spray. Because the term “accessory” is not used in the definition of showerhead, DOE is not adopting a definition for accessory.

During the July 24, 2012 public meeting, PMI commented that it supported incorporating the definition of hand-held showerhead being developed by ASME: “An accessory to a supply

fitting, that can be hand-held or fixed in place for the purpose of spraying water onto a bather, and which is connected to a flexible hose.” (PMI, Public Meeting Transcript, No. 11 at p. 54) Written comments from Moen, PMI, Kohler, and Sloan Valve also supported adoption of ASME’s draft definition of hand-held showerhead. (Moen, No. 4 at p. 3; PMI, No. 8 at p. 4; Kohler, No. 9 at pp. 3–4; Sloan Valve, No. 12 at p. 3) In the April 2013 SNO PR, DOE proposed the following definition for “hand-held showerhead”: “A showerhead that can be hand-held or fixed in place for the purpose of spraying water onto a bather.” 78 FR at 20841. This definition removed the phrase “and which is connected to a flexible hose” from the ASME hand-held showerhead definition because DOE believed the ASME definition might not encompass all hand-held showerhead configurations in the marketplace.

Following publication of the SNO PR, DOE again received comments that expressed support for the adoption of the ASME draft definition of hand-held showerhead from NSF, PMI, IAPMO, Kohler and Moen. (NSF, No. 22 at pp. 1–2; PMI, No. 23 at pp. 2–3; IAPMO, No. 25 at p. 2; Kohler, No. 27 at p. 1; Moen, No. 30 at pp. 1–2) In response to DOE’s assertion that the ASME phrase “and which is connected to a flexible hose” is restrictive and may not cover all configurations, Moen commented that the ASME definition was developed by the ANSI consensus process and that Moen was “unaware of any hand-held shower that is connected via some means other than a hose.” (Moen, No. 30 at p. 1) No other comments were received in response to the proposed definition of hand-held showerhead.

DOE also has not identified any products that appear to be intended for use as a handheld showerhead that do not have a flexible hose, and notes that any product that otherwise meets the

definition of a showerhead would be subject to the 2.5 gpm water consumption standard regardless of whether it has a flexible hose. Therefore, the definition for hand-held showerhead adopted in this final rule is: “A showerhead that can be hand-held or fixed in place for the purpose of spraying water onto a bather and that is connected to a flexible hose.”

Finally, in the April 2013 SNO PR, DOE noted that neither EPCA nor 10 CFR 430.2 defines the term “safety shower showerhead,” which is a type of showerhead specifically excluded from coverage by EPCA. 42 U.S.C. 6291(31)(D). DOE noted that lack of a definition could cause confusion as to which products qualify for exclusion from coverage. 78 FR at 20835. DOE notes that the current Occupational Safety and Health Administration (OSHA) regulation addressing safety showers, which is located at 29 CFR 1910.151(c), does not define the term or specify required characteristics of a safety shower showerhead. However, certain State regulatory requirements that address safety showers use ANSI standard Z358.1, “Emergency Eyewash and Shower Equipment,” as a reference.⁶ This standard contains specific design and performance criteria that safety showers must meet, such as flow rate and accessibility. The ANSI standard defines an emergency shower as “a device specifically designed and intended to deliver a flushing fluid in sufficient volume to cause that fluid to cascade over the entire body.” DOE requested comments on whether a definition of safety shower showerhead is needed and, if so, whether it is appropriate to define a safety shower showerhead as “a showerhead that is designed to meet the requirements of ANSI standard Z358.1.” DOE received comments on the incorporation of a definition of safety shower showerhead consistent with the requirements of ANSI standard Z358.1 from NSF and PMI, which expressed support for inclusion of a definition

⁶ For example, see Title 8 of the California Code of Regulations, Section 5162, “Emergency Eyewash and Shower Equipment.”

of safety shower showerhead. (NSF, No. 22 at p. 2; PMI, No. 23 at p. 3) Kohler indicated it had no comments on adding a definition for safety shower showerhead. (Kohler, No. 27 at p. 1)

After considering the comments received on the NOPR in regard to this proposal, and reviewing potential definitions for “safety shower showerhead,” DOE was unable to identify a definition that would clearly distinguish these products from the showerheads covered under EPCA.

Because of the additional confusion that may be caused by adoption of an unclear definition, DOE is declining to adopt a definition for the term “safety shower showerhead” in this final rule. DOE may consider adopting a definition for this term in a future rulemaking.

2. Test Procedure for Showerhead Flow Control Insert

In addition to setting forth water conservation standards for showerheads, EPCA also provides that showerheads must comply with the design requirement of section 7.4.3(a) of ASME/ANSI standard A112.18.1M-1989 (42 U.S.C. 6295(j)(1)), which requires that if a flow control insert is used as a component of a showerhead, the showerhead must be manufactured such that a pushing or pulling force of 8 lbf or more is required to remove the insert.

The current text of 10 CFR 430.32(p) requires that all showerheads manufactured after January 1, 1994, meet the requirements of ASME/ANSI Standard A112.18.1M-1996, 7.4.4(a) (the updated version of the ASME/ANSI provision referenced by EPCA, section 7.4.3(a) of ASME/ANSI A112.18.1M-1989). As part of this final rule, DOE is incorporating this requirement directly into the text of 10 CFR 430.32(p) in place of a reference to the section 4.11.1 of ASME A112.18.1-2012, which is the updated version of the same provision in section

7.4.4(a) of ASME/ANSI A112.18.1M-1996. However, DOE has not established a test method to determine whether showerheads meet the flow control insert retention design requirement. In the May 2012 NOPR, DOE did not propose changes to the showerhead design requirement but noted that no version of ASME A112.18.1 provides a specific test procedure for verifying that a flow control insert remains mechanically retained when subjected to 8 lbf. DOE requested comments and information on prospective methods of verifying that the design requirement applicable to the flow restrictor has been met, as well as comments and information on showerhead designs that may complicate verification of the 8 lbf requirement or make verification of the design requirement unnecessary. 77 FR at 31747 (May 30, 2012).

Based on the comments received in response to the May 2012 NOPR and subsequent research, DOE proposed in the April 2013 SNO PR a test method for validating that a given showerhead meets the flow control insert design requirement. DOE received a number of comments in response to the SNO PR expressing concerns about DOE's proposed test method. (NSF, No. 22 at p. 2, PMI, No. 23 at p. 3, Kohler, No. 27 at p. 2, Chicago Faucet, No. 28 at p. 2, and Moen, No. 30 at p. 2) On July 30, 2013, DOE held a public meeting to explain the proposal in greater detail and to gather additional comments and information about the concerns of stakeholders and the practices currently used by manufacturers to verify compliance with the retention requirement. Because of the comments received during the NOPR and SNO PR comment periods and at the subsequent public meeting, DOE believes further investigation of this issue is necessary to understand clearly any prospective impacts of the proposed test procedure prior to finalizing a test method. Therefore, DOE has decided to address this proposal as part of a subsequent notice.

3. Showerhead Leakage

During the July 2012 public meeting, NRDC commented that the showerhead test procedure should clearly state that ball joint leakage from showerheads should be accounted for either by separately measuring and adding leakage to the flow rate determined per section 5.4 of ASME A112.18.1-2011 (since incorporated into the same section of ASME A112.18.1-2012), or by capturing leakage during the flow rate test itself. (NRDC, Public Meeting Transcript, No. 11 at p. 23) Joint written comments submitted by NRDC and ASAP echoed this comment.

(NRDC/ASAP, No. 14 at pp. 1–2) DOE recognizes that there can be leakage in plumbing systems and agrees that leakage from a ball joint integral to a showerhead should be captured in the overall; flow rate

In addition, DOE believes that proposed amendments to the DOE test procedure, which reference ASME A112.18.1, adequately capture ball joint leakage. ASME A112.18.1 has two optional discharge capacity test schematics allowed for testing flow rate: (1) a metered test set up that measures the flow rate through the specimen, as provided in section 5.4.2.2(c) or; (2) a time-volume test set up, which collects showerhead flow in a receiving container over a given period of time to calculate flow rate, as provided in section 5.4.2.2(d). The metered test set up measures all of the flow through the specimen and therefore will capture ball joint leakage. The time-volume test set up will account for ball joint leakage as long as the container is placed in such a way as to capture all of the flow from the showerhead. Also, DOE notes that ASME A112.18.1, section 5.3.5, sets a maximum leakage rate of 0.01 gallons per minute (gpm) from showerhead ball joints. While DOE does not require compliance with this provision, it serves as an indication that the amount of leakage expected for products that comply with current industry standards is

relatively small. Based on this information, DOE will not require a separate test procedure to measure ball joint leakage, but considers ball joint leakage a part of the total flow rate of a showerhead and has included an instruction in the showerhead test procedure in Appendix S that if the time/volume method is used, the container must be positioned as to collect all water flowing from the showerhead, including any leakage from the ball joint.

4. Showerhead Test Pressure

At the July 24, 2012 public meeting, NRDC stated that the requirement in ASME A112.18.1-2011 that showerheads be tested at 80 pounds per square inch (psi) is not representative of pressures experienced in an installation and, in fact, is excessive. (NRDC, Public Meeting Transcript, No. 11 at pp. 22–23) ICC agreed with NRDC that the 80 psi test pressure is excessive and urged DOE to “correct this obviously excessive number.” (ICC, Public Meeting Transcript, No. 11 at pp. 24–25) Although ICC presented anecdotal data at the public meeting, no one provided technical information to DOE as part of the written comments regarding pressures experienced in actual showerhead installations. Additionally, in the public meeting ICC stated that the pressure experienced by a showerhead “depends on the supply pressure and that varies significantly as you move across the country, and depends significantly on the shower valve and the plumbing system.” (ICC, Public Meeting Transcript, No. 11 at p. 26)

Currently DOE does not have sufficient data to provide a basis for revising the showerhead test pressure specified in ASME A112.18.1. Therefore, this final rule does not amend the test pressure for showerheads, but retains the 80 psi requirement present in ASME A112.18.1.

5. Use of Time-Volume Test Method

During the public meeting, NRDC questioned the efficacy of the time-volume test method for showerheads in ASME A112.18.1 and indicated that this test method may increase the amount of error in measured flow rates compared with tests using a flow meter, particularly due to leakage in the fixture and water splashing out of the receiving vessel during testing. (NRDC, Public Meeting Transcript, No. 11 at pp. 22–24) In their joint written comments, NRDC and ASAP stated that Figure 3 in the ASME A112-18.1 test procedure has shortcomings, including the following: (1) it cannot ensure that water will not splatter out of the container during the test; (2) it lacks instructions for measuring the volume of water collected; (3) it does not specify the incremental resolution of the receiving vessel; (4) it does not provide specifics for timing the test; (5) it does not state how many times the test must be repeated; and (6) it does not provide a method for weighting or averaging the results of multiple tests. NRDC and ASAP concluded that the time-volume test method set forth in ASME A112.18.1 “is not specified in sufficient detail to ensure accurate and repeatable results, and should not be part of the federal test method.” (NRDC/ASAP, No. 14 at p. 2) DOE understands the concerns of NRDC and ASAP regarding these issues. However, DOE’s review of the updated test procedure for showerheads provided no evidence that the time-volume test method in ASME A112.18.1 does not meet the statutory requirement for DOE to prescribe test procedures that are reasonably designed to produce test results that measure water use during a representative average use cycle or period of use. (42 U.S.C. 6293(b)(3)) Thus, this final rule retains the option to use the time-volume test method as specified in ASME A112.18.1.

6. Testing of Shower Tower Assemblies

In the April 2013 SNO PR, DOE sought to clarify how the requirements of the DOE test procedure apply to shower tower (also known as “shower panel”) assemblies. DOE provided context by explaining that “the term shower tower is typically used in reference to single supply fittings that are designed for attachment to one or more hot and cold water connections in a shower or bath and that are composed of at least one showerhead and one or more body sprays, but that may also include a hand-held showerhead and either a valve for selecting spraying components, a thermostatic mixing valve, or both.” 78 FR at 20835 (Apr. 8, 2013). Because DOE had proposed in the SNO PR a definition of the term “showerhead” that did not include body sprays, DOE also proposed in the SNO PR requiring parties to turn off the body spray component(s) of shower towers during testing of the integral showerhead. 78 FR 20835 (Apr. 8, 2013).

NRDC and ASAP and MaP submitted comments disagreeing with DOE’s proposal to require that body sprays be turned off when testing a shower tower. NRDC and ASAP stated that the “approach will yield test results that are not indicative of the water consumption in actual practice * * *” (NRDC/ASAP, No. 26 at p. 2) MaP stated that “there is no reason to ‘turn off’ a portion of a water using system simply because it is not considered to be included within the strict definition of a showerhead.” (MaP, No. 29 at p. 2) Conversely, Kohler and Moen agreed with DOE’s proposal to turn off body spray components of shower towers for testing. (Kohler, No. 27 at p. 1; Moen, No. 30 at p. 2)

Based on the comments received and further research into shower towers/shower panels, DOE concluded that these products contain components that are currently subject to water conservation standards, namely showerheads and hand-held showerheads. Therefore, in the final rule DOE requires that when testing shower towers/shower panels, the showerhead portion that is subject to standards must be tested in accordance with the DOE test procedure. When testing a covered product for maximum flow in accordance with Appendix S, which incorporates by reference ASME A112.18.1 section 5.4, the full flow shall be diverted to the covered component being tested. Where it is not possible to isolate the portion of the shower tower subject to the water consumption standard, all components shall be flowing at the maximum rate and the showerhead measured separately.

B. Water Closets and Urinals

1. Dual-Flush Water Closets

In the May 2012 NOPR, DOE proposed a test method to account for the reduced average water use of dual-flush water closets, which are capable of being flushed in either a full-volume flush mode (full flush) or in a reduced-volume mode (reduced flush). Under the proposed test procedure, the flush volume of the reduced flush would be measured using section 7.4 of ASME A112.19.2 in the same manner as the full flush, and the average representative water use would be calculated using the composite average of two reduced flushes and one full flush. 77 FR at 31746 (May 30, 2012). This proposed method was based upon the test method used by the Environmental Protection Agency (EPA) WaterSense program⁷ for measuring the flush volume of dual-flush water closets and used a weighted average of the full and reduced flush volumes.

⁷ WaterSense is a voluntary partnership program administered by the EPA that, among other activities, promotes water conservation by providing certification and labeling for water consuming products, including water closets, that meet certain water conservation standards. Further information is available at www.epa.gov/WaterSense/index.html.

However, since the Federal water consumption standard is based upon the maximum water use, DOE did not propose to make this test method the required means for testing dual-flush water closets for the purposes of certification in accordance with 10 CFR part 429. Rather, the intent in including this test method was to provide manufacturers with a potential means to evaluate the representative water use of these products under conditions of expected consumer use for the purposes of labeling and other representations. For products that do not have dual-flush capability, the method required for certification would remain the standard full-flush volume test procedure.

In response to the NOPR, DOE received several comments that opposed incorporation of the proposed test method for dual-flush products. The Alliance for Water Efficiency (AWE), Kohler, Moen, and Sloan Valve commented that because of DOE's statutory authority, which addresses only the maximum water use of water closets, dual-flush water closets should only be tested in full-flush mode in accordance with ASME A112.19.2. (AWE, No. 13 at p.2; Kohler, No. 9 at pp. 2–3; Moen, No. 4, p. 2; Sloan Valve, No. 12, p. 2). Also, AWE, ICC, Kohler, MaP, Moen, NRDC and ASAP, and Sloan Valve stated that the weighted-average approach was unproven and that the particular ratio required further evaluation to confirm its representativeness. (AWE, No. 13 at p. 2; ICC, Public Meeting Transcript No. 11 at pp. 36–37; Kohler, No. 9 at pp. 2– 3; MaP, No. 10 at pp. 3–4; Moen, No. 4 p. 2; NRDC/ASAP, No. 14 at pp. 3–4; Sloan Valve, Public Meeting Transcript, No. 11 at pp. 38–39) In addition, Kohler, Moen, and Sloan Valve stated that confusion in the marketplace might result if DOE were to issue a method different from the WaterSense method to determine the representative average flush volume for dual-flush water closets. (Kohler, No. 9 at pp. 2–3; Moen, No. 4 at p. 2; Sloan Valve, No. 12 at p. 2)

As a result of these comments, DOE proposed in the April 2013 SNOPR to not include a dual-flush test method in appendix T to subpart B of 10 CFR part 430, and instead to indicate specifically in §429.30 of 10 CFR part 429 that the flush volume to be reported to DOE in certifications of compliance for water closets is the full-flush volume. The California Investor Owned Utilities (CA IOUs) subsequently submitted multiple comments that revolved around the issue of adopting test procedures to accurately estimate flush volume of dual-flush water closets. Specifically, the CA IOUs commented that: (1) DOE should establish an appropriate ratio of full-volume to reduced-volume flushes that is to be used in determining a representative flush volume for dual-flush water closets; (2) there is evidence that a 2:1 ratio is too high and is variable, depending on the application; (3) DOE should conduct research to determine the appropriate ratio; (4) a nationally established representative flush volume would resolve conflicts between different test procedures adopted by states and lessen the burden on manufacturers; (5) the definition of a water closet needs to be modified to incorporate the ratio of reduced- to full-volume flushes; (6) if DOE intends to establish a standard based on effective flush volume, DOE should use this rulemaking to develop a test procedure; and (7) manufacturers should be required to certify dual-flush water closets for both flush rates. (CA IOUs, No. 24 at pp. 2–3) NRDC and ASAP stated that they believe DOE should establish a procedure for representative average flush rate for dual-flush water closets, but recommended that this be done in another rulemaking. (NRDC/ASAP, No. 26 at p. 3)

In contrast with these comments, Chicago Faucets submitted a comment that stated, “We believe that the DOE mandate is to enforce the maximum flush volume of 1.6 gallons per flush (gpf).

The best method to achieve this is to maintain the references to the test protocols of the ANSI accredited standard ASME A112.19.2/CSA B45.1. There is no justification for DOE to create a new standard.” Chicago Faucets added that it believes a 2:1 ratio of reduced- to full-volume flush is conservative, and that 3:1 or 4:1 is likely more representative of actual water use in dual-flush water closets. (Chicago Faucets, No. 28 at p. 2)

For clarification, DOE did not intend to establish through its proposal a separate standard for dual-flush products or to require separate certification requirements for these products, and emphasizes that manufacturers of any type of covered water closet are only required to certify maximum water use (see 10 CFR 429.30(b)(2)). DOE also notes that the manufacturer would not have been required under the NOPR proposal to test dual-flush toilets in both the full-flush modes and the reduced-flush modes if the manufacturer did not intend to make representations regarding average water use of dual-flush water closets.

However, based on the comments submitted, DOE has determined that it does not have sufficient evidence on which to base a test procedure for average representative water use for dual-flush water closets. Therefore, DOE is not adopting a test procedure to calculate average representative water use for dual-flush water closets.

Regardless, DOE emphasizes that because DOE is not adopting a test procedure to calculate average representative water use for dual-flush water closets, manufacturers, distributors, retailers, and private labelers are not permitted to make any representations of water use (e.g., average representative water use reflecting an average of the full and reduced flush modes) for

dual-flush water closets other than the maximum flush volume. Under 42 U.S.C. 6293(c)(1) and (2), none of these regulated parties may make any representation with respect to the water use of a water closet unless that representation is based on testing conducted in accordance with the relevant DOE test procedure. In this case, because DOE is not adopting a test procedure to calculate average representative water use, parties may not state, in writing or in any broadcast advertisement, a specific value for the average representative water use of a dual-flush water closet. Reported flush volumes may only represent the flush volume of the full-flush mode in accordance with the DOE test procedure. Parties may state that a dual-flush water closet complies with the requirements of EPA's WaterSense program, either in writing or through use of the appropriate WaterSense label, as long as such representations are made in accordance with EPA specifications and such representations do not include a specific value of average representative water use.

During the July 24, 2012 NOPR public meeting, ASAP inquired whether WaterSense would be required to use the same test procedure proposed by DOE in the NOPR for representative average water use for dual-flush water closets. (ASAP, Public Meeting Transcript, No. 11 at p. 33) This rule is not adding a test procedure for representative average water use of dual flush water closets and therefore will have no effect on the WaterSense specification. In addition, since WaterSense is a voluntary program, the specifications for labeling WaterSense products may include additional requirements that are beyond the requirements of the DOE test procedure as long as the DOE test procedure is the basis for measuring water consumption.

At the July 24, 2012 NOPR public meeting, ICC inquired whether dual-flush devices intended to retrofit single flush flushometer-style water closets are required to meet the appropriate flush volume standards. (ICC, Public Meeting Transcript, No. 11 at p. 38) (See 10 CFR 430.32(q).) Retrofit devices are not covered products because they do not meet the definition of a water closet in 10 CFR 430.2 and therefore are not required to be tested under the DOE test procedures for maximum flush volume.

2. Static Test Pressure for Flushometer Valve Siphonic and Blowout Water Closets

In written comments submitted to DOE following publication of the May 2012 NOPR, NRDC and ASAP recommended that DOE evaluate the effect of averaging test results that have been obtained at different test pressures of siphonic flushometer style water closets, which is the general method used in both ASME/ANSI A112.19.6-1995 referenced in the DOE test procedure for water closets and in the newer ASME A112.19.2-2008. (NRDC/ASAP, No. 14 at p. 2) NRDC and ASAP further suggested that DOE should require reporting of the higher water consumption value obtained by (1) averaging three tests at 80 psi and (2) averaging three tests at 35 psi for siphonic flushometer water closets and, at a minimum, should discard the 2:1 ratio of test results at the lower pressure. (NRDC/ASAP, No. 14 at p. 2) Although not specifically mentioned by NRDC and ASAP in their comments, DOE also proposed in the May 2012 NOPR to require an additional low pressure test at 45 psi for blowout flushometer water closets that would result in a 2:1 ratio of results. 77 FR at 31745.

In the April 2013 SNOPR, DOE agreed that the use of a 2:1 ratio for averaging water consumption of flushometer siphonic and blowout water closets at the pressures currently

indicated in Table 5 of ASME A112.19.2-2008 could lead to results that are not representative across a range of pressures. For this reason, DOE proposed that the test pressures for flushometer valve water closets with a siphonic bowl be 80 psi and 35 psi. For flushometer valve water closets with a blowout bowl, DOE proposed that the test pressures be 80 psi and 45 psi. According to this proposal, the test shall be run three times at each pressure as specified in section 7.4.3, “Procedure,” of ASME A112.19.2-2008. 78 FR at 20842.

In comments on the April 2013 SNO PR, NSF, PMI, IAPMO, Kohler, and Chicago Faucet stated that the requirements in Table 5 of ASME A112.19.2-2008 were published incorrectly. (NSF, No. 22 at p. 3; PMI, No. 23 at pp. 5–6; IAPMO, No. 25 at p. 2; Kohler, No. 27 at pp. 2–3; Chicago Faucet, No. 28 at p. 2) The commenters stated that the ASME A112 committee has addressed the error and in 2013 will publish a revision to the standard mirroring DOE’s April 2013 SNO PR proposal.⁸

NRDC and ASAP re-stated their recommendation that, in order to ensure that test reporting does not obscure efficiency actually experienced by building owners, DOE “should require reporting of the higher water consumption value obtained by the average of three tests at 80 psi and the average of three tests at 35 psi. At a minimum, these values should be reported separately even if averaging is permitted to demonstrate compliance.” (NRDC/ASAP, No. 26 at p. 3)

Based on the comments received in response to the SNO PR, DOE, in this final rule, adopts the requirement that water consumption tests be conducted at two static pressures, with three tests at

⁸ At the time of this final rule, ASME A112.19.2-2013 had just been published. Because DOE did not have sufficient time in which to review the revised version, DOE was unable to incorporate the revised version by reference in this rule. DOE will consider adoption of the 2013 version of A112.19.2 in a future rulemaking.

each pressure (i.e., six total tests, rather than nine). For flushometer valve water closets with a siphonic bowl, DOE requires that the test pressures be 80 psi and 35 psi. For flushometer valve water closets with a blowout bowl, DOE requires that the test pressures be 80 psi and 45 psi. According to this amendment, the water consumption test shall be run three times at each pressure as specified in section 7.4.3, “Procedure,” of ASME A112.19.2-2008. The recorded flush volume for each tested unit shall be the average of the total flush volumes obtained over the range of pressures specified above.

3. Water Closet and Urinal Sensor-Activated Flush Testing

NRDC and ASAP commented that water closet and urinal flush valves that are activated automatically by a sensor are not adequately tested under the ASME test procedures. NRDC and ASAP claimed that these types of sensor-activated flush valves can cause “phantom flushing” (i.e., unintended flushing by the sensed-valve) and lead to excessive water use. NRDC and ASAP requested that DOE develop test procedures to address this issue. (NRDC/ASAP, No. 14 at p. 3) While DOE understands that such phantom flushing may be a concern, the DOE water consumption standards for water closets and urinals, found at 10 CFR sections 430.32(q) and 430.32(r), respectively, are measured in gallons per flush and do not include annual water consumption. While phantom flushes affect the annual water consumption of these products, they do not affect the water use of a single flush. The test procedures for flush valves for water closets and urinals are only intended to measure the flush volume of a single flush. The purpose of this rulemaking is to update the DOE test procedures. Introduction of a new test procedure for sensor-activated flush valves is outside of the scope of this rulemaking.

4. Test Procedure Amendments for Gravity Flush Tank Water Closet Trim Adjustments

In written comments submitted to DOE and in oral comments made during the July 24, 2012 NOPR public meeting, NRDC and ASAP urged DOE to consider requiring manufacturers to adjust the tank trim components to the maximum flush volume setting during testing. (NRDC, Public Meeting Transcript, No. 11 at pp. 70–71; NRDC/ASAP, No. 14 at p. 3) The term “tank trim” refers to the components in the tank that can be adjusted by the consumer such as the water level, fill valve timing, and related components. While DOE’s current test procedure does not address this issue, ASME A112.19.2–2008, section 7.1.2, specifies that for gravity flush tank water closets, the water level in the tank and fill time shall be adjusted in accordance with the manufacturer’s instructions and specifications at each test pressure. Table 5 in ASME A112.19.2–2008 specifies that “[a]djustments to tank trim components shall be permitted only when changes to test pressures are indicated” and that “[n]o adjustments shall be allowed between tests employing like pressures.” These provisions ensure that once the trim is set to the manufacturer’s specifications, the water level and fill time adjustments remain the same for tests that use like pressures, which simulates how water closets are used in real-world application.

After receiving comments from NRDC and ASAP, DOE investigated water closet manufacturers’ instructions on gravity flush tank trim adjustments. Based upon a review of installation instructions for representative models from eight separate manufacturers, which represent a significant sampling of major manufacturers of tank-type water closets currently on the market, DOE believes it to be likely that the majority of manufacturers’ installation instruction manuals for gravity flush tank water closets specify the tank water level and also provide directions on adjusting the tank’s water level. However, DOE found that few

manufacturers provide information on the recommended adjustment of other trim components, such as the flapper valve or fill valve. Section 7.1.2 of ASME A112.19.2–2008 only specifies adjustments made to the tank water level and fill time and does not specify adjustments made to other trim components such as the flapper valve. Taking into account the variety of water closet designs on the market, it is unclear whether the impact on flush volume of trim adjustments that are not specified in manufacturer’s instructions or in ASME A112.19.2–2008 is significant.

Based on these findings, in the April 2013 SNO PR, DOE proposed to amend the test procedures for gravity flush tank toilets to require that, at each test pressure specified in Table 5 of ASME A112.19.2–2008, trim components of gravity flush tank water closets that can be adjusted to cause an increase in flush volume, including (but not limited to) the flapper valve, fill valve, and tank water level, be set in accordance with the printed installation instructions supplied by the manufacturer. For products with instructions that do not specify trim setting adjustments, DOE proposed to require that these trim components be adjusted to the maximum water use setting so that the maximum flush volume is produced without causing the water closet to malfunction or leak. In this context, DOE interprets “malfunction or leak” to mean that the product is otherwise unable to meet the requirements of the ASME A112.19.2 standard for basic functionality. In addition, the water level in the tank would be set to the maximum level indicated in the printed installation instructions supplied by the manufacturer or the water line indicated on the tank itself, whichever is higher. DOE also proposed to require that if the product’s installation instructions or the water closet tank do not indicate a water level, the water level must be adjusted to 1 ± 0.1 inches below the top of the overflow tube or 1 ± 0.1 inches below the top rim of

the water-containing vessel (for gravity flush tank water closets that do not contain an overflow tube) for each designated pressure specified in Table 5 of ASME A112.19.2–2008.

In response to this proposal in the SNOPR, American Standard, NSF, PMI, and Chicago Faucets submitted comments stating that trim adjustments to gravity tank water closets are already covered in ASME A112.19.2-2008, and that there is no need to deviate from this national standard. These comments also stated that any adoption of changes to trim adjustments should be managed by ASME through a consensus process. (American Standard, No. 21 at p. 1; NSF, No. 22 at p. 3; PMI, No. 23 at p. 5; Chicago Faucets, No. 28 at p. 2) American Standard argued that consumers would be less satisfied with the proposed adjustments because of the reduced water pressure brought about by a lower water level. (American Standard, No. 21 at p. 1)

Chicago Faucets specifically commented that proposed trim adjustments will not reduce water consumption in water closets and “adjusting the time of the fill valve in a wash down gravity flush water closet does not affect the flush volume * * *. If the valves are not adjustable then the instructions are not relevant.” (Chicago Faucets, No. 28 at p. 2)

Comments received from Kohler and IAPMO agreed with DOE’s proposed gravity tank water closet trim adjustments and states that a majority of manufacturers provide adequate instructions pertaining to proper tank component settings at the intended flush volumes. (Kohler, No. 27 at pp. 2–3; IAPMO, No. 25 at p. 2)

Based on comments received and research conducted, DOE has concluded the specifications in ASME A112.19.2-2008 may not be adequate to ensure that manufacturers test gravity tank water closets at the maximum flush volume. DOE does not believe that trim adjustments will cause consumers to be less satisfied with the water closet performance. The water closet design should provide a proper flush performance that does not exceed the maximum flush volume, and the tank water level and other component settings (such as the flapper valve) should be adequate in meeting this requirement. Therefore, in this final rule, DOE is establishing a requirement that at each test pressure specified in Table 5 of ASME A112.19.2–2008, trim components of gravity flush tank water closets that can be adjusted to cause an increase in flush volume, including (but not limited to) the flapper valve, fill valve, and water tank level, shall be set in accordance with the printed installation instructions supplied by the manufacturer. For products with instructions that do not specify trim setting adjustments, trim components shall be adjusted to the maximum water use setting so that the maximum flush volume is produced without causing the water closet to malfunction or leak. In this context, DOE interprets “malfunction or leak” to mean that the product is otherwise unable to meet the requirements of the ASME A112.19.2-2008 standard for basic functionality. In addition, the water level in the tank shall be set to the maximum level indicated in the printed installation instructions supplied by the manufacturer or the water line indicated on the tank itself, whichever is higher. If the product’s installation instructions or the water closet tank do not indicate a water level, the water level shall be adjusted to 1 ± 0.1 inches below the top of the overflow tube or 1 ± 0.1 inches below the top rim of the water-containing vessel (for gravity flush tank water closets that do not contain an overflow tube) for each designated pressure specified in Table 5 of ASME A112.19.2–2008.

MaP, NRDC and ASAP, and PMI recommended that DOE follow the WaterSense specification for gravity tank water closet trim adjustments and stated that the WaterSense specification is a validated procedure that has been used on thousands of products. (MaP, No. 29 at p. 2; NRDC/ASAP, No. 26 at pp. 2–3; PMI, No. 23 at p. 5) Specifically, NRDC and ASAP stated, “field adjustability is a significant cause of excessive water consumption by nominally compliant tank-type water closets at the point of use and the US EPA WaterSense specification for tank-type toilets incorporates specific language on field adjustability, and limits the effects of adjustability to 0.4 gallons per flush in additional consumption.” NRDC and ASAP went on to state, “Although the specific allowance of 0.4 gpf used by WaterSense should be examined further by DOE before incorporation into the federal test procedure, the frame developed by WaterSense is one that the Department should consider in this rule-making.” (NRDC/ASAP, No. 26 at pp. 2–3)

After consideration of these comments, DOE will not adopt the WaterSense specifications for gravity tank water closet trim adjustments. The WaterSense specification provides a special allowance to address field adjustments to trim settings, which are outside the scope of the water consumption test required by DOE and which may add confusion to compliance with Federal requirements if added to the regulations. Specifically, the WaterSense specification permits the maximum volume of water that can be discharged by the water closet when field adjustment of the tank trim is set at the maximum use setting to be as high as the following values: 1.68 gpf for single-flush water closets and 2.00 gpf for dual-flush water closets in the full-flush mode. (See EPA WaterSense Specification for Tank-Type Toilets version 1.1, section 5.2, available at http://www.epa.gov/WaterSense/docs/revised_het_specification_v1.1_050611_final508.pdf, or

DOE Docket Number EERE-2011-BT-TP-0061, No. 1, p. 3) DOE views the water level and trim settings identified by the manufacturer through the printed instructions supplied with the water closet and marked on the tank as the settings for expected consumer use, and would require use of the maximum settings only in cases where the manufacturer has provided no instructions or markings regarding these settings. Because the allowances in the WaterSense specification address water consumption under conditions outside of those which DOE has previously determined to be representative of expected consumer use, DOE declines to adopt these specifications. DOE notes that any basic model that, under the DOE test procedure, must be tested using the maximum trim setting must meet the applicable Federal standard when tested using that maximum trim setting.

5. Annual Water Consumption Metric

During the July 24, 2012 NOPR public meeting and in written comments, NRDC and ASAP proposed that DOE consider the use of an annual water consumption metric and associated test procedure for water closets, reasoning that “if all new water closets were required to certify an annual consumption rate that incorporated a reasonable limitation on losses due to leakage, the federal efficiency standard would more effectively encourage the use of designs and materials that eliminate leakage altogether.” (NRDC, Public Meeting Transcript, No. 11 at pp. 72–73; NRDC/ASAP, No. 14 at p. 4) More specifically, NRDC and ASAP recommended the incorporation by reference of ASME A112.19.5-2011, “Flush valves and spuds for water closets, urinals, and tanks,” which addresses leakage for those products. (NRDC/ASAP, No. 14 at p. 4)

DOE notes that the purpose of the current rulemaking is to update the existing DOE test procedures, which are prescribed primarily for measuring the maximum flush volume of water closets and for verifying compliance with the applicable Federal water consumption standards. The Federal standard does not include a limit on annual water use, nor do DOE's test procedures include a measurement of annual water use. Further, in accordance with EPCA, DOE is required to consider the most current version of industry standards, which do not address annual water use of these products. 42 U.S.C. 6293(b)(8) Finally, DOE does not currently have enough data to develop a test procedure for quantifying annual water use of water closets. Development of such a metric would likely require consideration of issues such as usage patterns for the products, flushing patterns of sensor-operated valves, and leakage. Thus, introduction of an annual water use metric is outside of the scope of the current rulemaking.

6. Trough Urinal Reporting Requirements

In the April 2013 SNO PR, DOE noted that the reporting requirement for trough urinals in §429.31(b)(2) requires reporting of water consumption for these products in gallons per minute (gpm). DOE stated that the appropriate unit of measurement for reporting water consumption of trough-type urinals should be gpf in accordance with the Federal standard contained in 10 CFR 430.32(r) and proposed to update the requirement in §429.31(b)(2) to reflect that the water consumption of urinals be reported in gpf. 78 FR at 20841.

In response, three interested parties provided feedback on the proposal. PMI, IAPMO, and Kohler all commented that trough-type urinals are not equipped with a flushing mechanism and

therefore water consumption cannot be measured using gpf. (PMI, No. 23 at p. 6; IAPMO, No. 25 at p. 2; Kohler, No. 27 at p. 3)

Based on these comments, DOE reviewed the requirements of 10 CFR sections 429.31(b)(2) and 430.32(r) and found that it was in error in the April 2013 SNO PR. DOE water conservation standards for trough urinals are based on maximum flow rate (i.e., gallons per minute, not gallons per flush). Therefore, DOE withdraws the proposal set forth in the April 2013 SNO PR to require water consumption for trough-type urinals to be reported in gallons per flush. The language currently contained in 10 CFR 429.31(b)(2) regarding the reporting of water consumption of trough-type urinals will remain unchanged.

C. Commercial Prerinse Spray Valves

In the May 2012 NOPR, DOE proposed to update its test procedures to adopt the industry standard for prerinse spray valve testing to ASTM standard F2324-2009. DOE noted in the NOPR that no changes had been made to the standard, and that only the date had been updated from 2003 to 2009. 77 FR 31746 (May 30, 2012). MaP, NRDC, and Chicago Faucets commented that test procedures for prerinse spray valves in ASTM standard F2324-09 were being updated to reflect new performance tests that correlate with user satisfaction. (MaP, No. 10 at p. 5; NRDC, Public Meeting Transcript, No. 11 at pp. 43–44; Chicago Faucets, Public Meeting Transcript, No. 11 at pp. 44–45) DOE notes that it has statutory authority only as it relates to maximum flow rate of prerinse spray valves and does not have statutory authority over product performance as it relates to user satisfaction. DOE also notes that the revised test procedure does not change the maximum flow rate for prerinse spray valves. The new version of

ASTM standard F2324 has not been finalized at the time of this final rule, and DOE cannot incorporate by reference a draft test procedure. Thus, this final rule incorporates by reference ASTM standard F2324-09 for testing of commercial prerinse spray valves.

D. Incorporation by Reference of Standards

1. ASME Standards

In the May 2012 NOPR, DOE proposed to adopt the updated ASME standard (ASME A112.18.1M-2011) to align the DOE test procedures for faucets and showerheads with industry practice. 77 FR 31746 (May 30, 2012). DOE received comments from Moen and Kohler supporting the incorporation of the updated ASME standard (Moen, No. 4 at p. 1; Kohler, No. 9 at p. 1). PMI, Sloan Valve, and AWE also commented in favor of DOE adopting the updated reference to ASME A112.18.1, but included a statement that the standard should be incorporated in its entirety without edits, modifications, or exceptions. (PMI, No. 8 at p. 2; Sloan Valve, No. 12 at p. 1; AWE, No. 13 at p. 1) NSF and PMI submitted similar comments following publication of the April 2013 SNOPR. (NSF, No. 22 at pp. 2–3; PMI, No. 23 at pp. 2–3) DOE did not receive any comments objecting to the proposal.

Subsequently, ASME A112.18.1-2012, which is identical to ASME A112.18.1-2011 in the sections referenced by DOE, has been reviewed by the American National Standards Institute (ANSI) and was approved in December 2012. Furthermore, ASME A112.18.1-2012 has been adopted by the Canadian Standards Association (CSA) as CSA B125.1. DOE has reviewed ASME A112.18.1-2012 and finds that it meets the requirements of 42 U.S.C. 6293(b)(7)(B). In response to the comment that the entire standard should be incorporated, DOE is only

incorporating those sections relevant to measurement of the flow rate of these covered products. Therefore, this final rule incorporates by reference section 5.4, Flow Rate, of ASME A112.18.1-2012, “Plumbing Supply Fittings,” for faucets and showerheads.

In the May 2012 NOPR, DOE also proposed to adopt the updated ASME standard (ASME A112.19.2-2008) to align the DOE test procedures for water closets and urinals with industry practice. 77 FR 31746 (May 30, 2012). ASME A112.19.2-2008 has been reviewed by ANSI and was approved on August 1, 2008. Furthermore, ASME A112.19.2-2008 has been adopted by CSA as CSA B45.1-08. Moen and Kohler submitted comments supporting the incorporation of the updated standard (Moen, No. 4 at p. 2; Kohler, No. 9 at p. 2). PMI, Sloan Valve, and AWE also commented in favor of DOE adopting the updated reference to ASME A112.19.2-2008, but included a statement that the standard should be incorporated in its entirety without edits, modifications, or exceptions. (PMI, No. 8 at p. 3; Sloan Valve, No. 12 at p. 2; AWE, No. 13 at p. 2) NSF and PMI submitted similar comments following publication of the April 2013 SNOPR (NSF, No. 22 at p. 3; PMI, No. 23 at p. 5). In response to the comment that the entire standard should be incorporated, DOE is only incorporating those sections relevant to measurement of the water consumption of these covered products. DOE has reviewed ASME A112.19.2-2008 and finds it meets the requirements of 42 U.S.C. 6293(b)(7)(B).

Therefore, this final rule incorporates by reference section 7.1, “General,” and subsections 7.1.1, 7.1.2, 7.1.3, 7.1.4, and 7.1.5 as well as section 7.4, “Water Consumption Test,” of ASME A112.119.2-2008, “Ceramic Plumbing Fixtures,” for water closets. For the testing of urinals, this final rule incorporates by reference section 8.2, “Test Apparatus and General Instructions,”

subsections 8.2.1, 8.2.2, and 8.2.3 as well as section 8.6, “Water Consumption Test,” of ASME A112.19.2-2008, “Ceramic Plumbing Fixtures.”

2. Automatic Incorporation of Standards

Moen and Kohler recommended that DOE eliminate a reference to a specific version of the ASME standards and instead incorporate language in the CFR that requires compliance with the latest revision of the applicable ASME standard within two years after its publication by ASME. (Moen, No. 4 at pp. 1–2; Kohler, No. 9 at pp. 1–2) EPCA specifies that if the test procedure requirements of ASME/ANSI standard A112.18.1M-1989 and ASME/ANSI standard A112.19.6-1995 are revised at any time and approved by ANSI, the Secretary shall amend the test procedures to conform to such revised ASME/ANSI requirements unless the Secretary determines by rule that to do so would not meet the requirements of paragraph 42 U.S.C. 6293(b)(3). 42 U.S.C. 6293(b)(7)(B)-(8)(B) EPCA directs that any test procedure prescribed or amended by DOE shall be reasonably designed to produce test results that measure water use or estimated annual operating cost of a covered product during a representative average use cycle or period of use, as determined by the Secretary, and shall not be unduly burdensome to conduct. 42 U.S.C. 6293(b)(3)(B) Automatically updating the Code of Federal Regulations (CFR) to the latest published version of the ASME standard does not allow DOE to review the changes made to ensure that the revisions meet the requirements in 42 U.S.C. 6293(b)(3) regarding representativeness of measurements and the associated test burden of the procedure. It also would not address the requirement in EPCA for DOE to review test procedures for all covered products every 7 years. 42 U.S.C. 6293(b)(1)(A). Further, the Administrative Procedure Act requires that any substantive amendment to an existing rule be subject to prior notice and an

opportunity for public comment. Therefore, DOE is not adopting the recommendation from Moen and Kohler.

3. ASTM Standard

In the May 2012 NOPR, DOE proposed to adopt the updated ASTM standard F2324-09 to align the DOE test procedures for prerinse spray valve maximum flow rate measurement with industry practice. 77 FR 31746 (May 30, 2012). Moen, PMI, MaP, and AWE all commented in favor of DOE adopting the updated reference to ASTM standard F2324-09. (Moen, No. 4 at p. 2; PMI, No. 8 at p. 3; PMI, Public Meeting Transcript, No. 11 at pp. 42–43; MaP, No. 10 at p. 5; AWE, No. 13 at p. 2) DOE has reviewed ASTM standard F2324-09 and finds that it meets the requirements of 42 U.S.C. 6293(b)(7)(B). Therefore, this final rule incorporates by reference ASTM standard F2324-09, “Standard Test Method for Prerinse Spray Valves.”

E. Definition of Basic Model

In the May 2012 NOPR, DOE provided information on the water closet and urinal basic model definition and requested comments on the interpretation of the current definition of a basic model and factors that DOE should consider in clarifying the definition of basic model. DOE considered evaluation of this issue to be of importance since the water consumption of some types of water closets and urinals, particularly those that use a flushometer valve, must be measured by combining a flushing mechanism and bowl that are distributed in commerce separately, which could complicate the identification of basic models for the purposes of testing and certification. During the July 24, 2012 public meeting, NRDC commented that it is unclear how DOE expects the valve/bowl pairing combination to work in practice with respect to the

basic model definition. To illustrate the lack of clarity, NRDC pointed to DOE's own language indicating that different valve and bowl combinations could result in different flush volumes. (NRDC, Public Meeting Transcript, No. 11 at pp. 60–61) In follow-up written comments submitted jointly, NRDC and ASAP stated that DOE's explanation in the NOPR of how the compliance certification accounts for all possible combinations of a valve and bowl failed to "clarify how a fixture manufacturer can establish that its bowl cannot be paired with a flushing device that would provide a higher flush volume and still function properly." (NRDC/ASAP, No. 14 at p. 6) NRDC stated that because DOE is aware of the variability of flush volume based on the valve/bowl combination, it must find a way to verify that products shipped to commerce can reliably meet the standard. Finally, NRDC and ASAP suggested that DOE consider expanding the definition of "tested combination" in 10 CFR 430.2 to include information specific to water closets and urinals along with their associated flushing devices. (NRDC/ASAP, No. 14 at p. 6) NRDC and ASAP also inquired as to whether new valves shipped into commerce that are not paired with a bowl are covered products and require certification. (NRDC, Public Meeting Transcript, No. 11 at p. 62; ASAP, Public Meeting Transcript, No. 11 at p. 64)

Based on the comments received, DOE further investigated the issues revolving around the basic model definition and certification of water closets and urinals. In the April 2013 SNO PR, DOE provided information on the definitions of water closet and urinal contained in ASME A112.19.2 and 10 CFR 430.2, which both state that these products are receiving vessels that, upon actuation, convey waste through a trap to a drainage system. The flushing device, such as a flushometer valve, does not meet the definition of a water closet or urinal, and therefore is not itself a covered produce under DOE's regulations. 78 FR at 20838 (Apr. 8, 2013). DOE noted

that manufacturers are only required to certify the water closet bowl or urinal body, but for proper operation, the receiving vessel must be paired with a valve during testing and operation. 78 FR at 20839 (Apr. 8, 2013). Additionally, water closet bowls and urinal bodies are designed for specified flush volumes and must be paired with a valve designed to deliver that volume to ensure proper operation.

In order to clarify the requirement for pairing a valve and bowl together for testing, DOE proposed to incorporate by reference section 7.1.5.2 of ASME A112.19.2-2008, which clearly states that a flushometer valve must be connected to the test bowl, and specifies that while conducting the water consumption test the valve is required to maintain a peak flow rate. 78 FR at 20839 (Apr. 8, 2013). A similar provision for flushometer urinals was proposed to be incorporated in the May 2012 NOPR. 77 FR at 31745 (May 30, 2012). DOE further proposed to modify the certification requirements in 10 CFR 429.30(b)(2) for water closets and 429.31(b)(2) for urinals to require manufacturers to identify the flushometer valve that was used during the water consumption test.

Following the April 2013 SNO PR, NRDC and ASAP again commented on the definition of basic model and certification requirements. NRDC and ASAP stated that the proposal fails to require the valve that is actually shipped to be tested and certified and also points out that there is no way to establish that the flush volume rating of the valve used in the test represents the valve flush volume that will be paired with the covered product because other valves are not subject to federally recognized testing and certification. The comment lists other key attributes that NRDC and ASAP believe DOE's proposal fails to account for, which include the following: (1) the

product category for flushometer water closets and urinals should encompass the valve and the china because neither alone would meet the product definition; (2) flushometer valves are commonly shipped separately from the china; (3) water closet bowls and urinal bodies are often shipped without a valve; and (4) ASME A112.19.2-2008 is essentially a test of the valve. (NRDC/ASAP, No. 26 at pp. 3–4). NRDC and ASAP restated their previous proposal that DOE include language in 10 CFR 430.2, “Tested Combination” to include language and procedures specific to water closets and urinals and their associated flushing devices.

DOE also received comments from NSF, PMI and IAPMO that supported the definition of basic model proposed by DOE in the April 2013 SNO PR as well as the incorporation of ASME A112.19.2-2008, Section 7.1.5.2. (NSF, No. 22 at p. 4; PMI, No. 23 at p. 6; IAPMO, No. 25 at p. 2) Kohler requested clarification that the “valve” is meant to refer to a flushometer valve and not a flush valve housed in a toilet tank. Kohler further stated that standard industry practice “is such that if a specific flushing device is required to be used with a fixture, this requirement is indicated on the fixture specification sheet. In the event the fixture specification sheet does not indicate a specific flushing device, any flushing device that operates at the rated marking on the fixture can be used.” (Kohler, No. 27 at p. 3)

In response to these comments, DOE notes that the purpose of the information presented in both the May 30, 2012 NOPR and April 8, 2013 SNO PR was not to change the existing definition of a basic model of a water closet or urinal, but to clarify for manufacturers how individual models could be grouped together as a single basic model for the purposes of testing and reporting water consumption in accordance with 10 CFR 429.12. Reported consumption must be based on the

maximum flow for a given valve/china combination. When a manufacturer certifies a given pairing as a basic model, an assurance is provided to DOE that the rating, based on the basic model pair, represents the maximum flush volume that the basic model pair is designed to provide.

Therefore, in this final rule, DOE retains the existing definition of basic model for water closets and urinals, and incorporates by reference section 7.1.5.2 of ASME A112.19.2-2008, which clearly states that a flushometer valve must be connected to the test bowl and specifies that while conducting the water consumption test for water closets, the valve is required to maintain a peak flow rate. However, because the addition of new items to the existing reporting requirements requires separate review that is not being conducted as part of this rulemaking, DOE declines to adopt the requirement that the flushometer valve used during the water consumption testing of water closets and urinals be included on the certification report, and will address that proposal as part of a separate rulemaking.

F. Statistical Sampling Plans

In the May 2012 NOPR, DOE requested comment on the provisions of the statistical sampling plans for faucets, showerheads, water closets, urinals, and commercial prerinse spray valves specified in 10 CFR sections 429.28, 429.29, 429.30, 429.31, and 429.51, including the confidence limits and potential revisions to the respective sampling plans that might better reflect the level of repeatability that is achievable for each test. 77 FR 31746 (May 30, 2012). Moen, PMI, Kohler, Sloan Valve, and AWE all supported retaining the existing statistical sampling plans and no dissenting comments were received. (Moen, No. 4 at p. 4; PMI, No. 8 at pp. 4–5;

Kohler, No. 9 at p. 4; Sloan Valve, No. 12 at p. 3; AWE, No. 13 at p. 3) Therefore, in this final rule DOE retains the existing statistical sampling plans without change.

G. Information To Be Provided in Certification Reports

In the May 2012 NOPR, DOE proposed to retain the existing general reporting requirements as they are listed in 10 CFR 429.12, as well as product-specific requirements in 10 CFR 429.28 (for faucets), 429.29 (for showerheads), 429.30 (for water closets), 429.31 (for urinals), and 429.51 (for commercial prerinse spray valves). DOE also proposed to move the rounding provisions for all five products to 10 CFR part 429 to clarify that rounding of the final rated value of water consumption for a basic model should occur after application of the sampling statistics. 77 FR 31749. No comments were received in response to this proposal.

In the April 2013 SNOPR, DOE proposed to change the certification requirements in 10 CFR 429.30(b)(2) for water closets and 429.31 (b)(2) for urinals to require manufacturers to identify in their certification reports the flushometer valve used during the water consumption test. 78 FR 20839. Under this proposal, the flushometer valve listed on the certification report must represent the flush volume of the water closet and urinal if used with any other valve with the same flush volume rating or less, and must represent the maximum design flush volume of the water closet or urinal.

PMI and IAPMO commented that there was no objection to the reporting of the flushometer valve used during testing provided there was no implication that only the test valve listed could be used with each tested water closet bowl or urinal body. (PMI, No. 23 at p. 6; IAPMO, No. 25

at p. 2) No comments were received opposing the proposal to require reporting of the flushometer valve used during testing in certification reports.

Based on the comments received, DOE intends to adopt a requirement for the flushometer valve used during the water consumption testing of water closets and urinals to be included on the certification report. However, because the addition of new items to the existing reporting requirements requires separate review that is not being conducted as part of this rulemaking, DOE is not adopting this requirement in this final rule and will revisit this proposal as part of a future rulemaking.

H. Changes in Measured Water Use

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 or energy use, or, in the case of this rulemaking, water use, of any covered product as determined under the existing test procedure. (42 U.S.C. 6293(e)(1)) If DOE determines that the amended test procedure would alter the measured water use of a covered product, DOE must amend the applicable water conservation standard accordingly. (42 U.S.C. 6293(e)(2))

In this final rule, DOE incorporates by reference updated versions of ASME A112.18.1-2012, test procedure for faucets and showerheads; ASME A112.19.2-2008, test procedure for water closets and urinals; and ASTM F2324-09, test procedure for prerinse spray valves. The updated industry standards incorporate minor adjustments in test methodology, such as changes in

temperatures and inclusion of instrument tolerances that were not previously specified and, DOE has determined, do not alter the measured water consumption.

In addition, the final rule adds rounding instructions for certification reporting requirements for measures of water use for these products. Similarly, the addition of the rounding instructions for certification reporting does not affect the measured water consumption.

Therefore, based on a consideration of the above, DOE determines that the amended test procedure would not alter the measured water use of a covered product and that revisions to the water conservation standards due to the amended test procedure are not warranted under 42 U.S.C. 6293(e)(2).

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Order 12866

The Office of Management and Budget 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 (Oct. 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.*) requires preparation of an initial regulatory flexibility analysis (IRFA) for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on

a substantial number of small entities. 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 at 7990. DOE has made its procedures and policies available on the Office of the General Counsel’s website: <http://www.gc.doe.gov/gc/office-general-counsel>.

DOE reviewed the amendments to the test procedures for plumbing equipment including showerheads, faucets, water closets, urinals and commercial prerinse spray valves under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003. DOE certifies that the amendments would not result in significant economic impacts on small entities. The factual basis for this certification is set forth in this rulemaking.

For the plumbing equipment manufacturing industry, the Small Business Administration (SBA) has set a size threshold, which defines those entities classified as “small businesses” for the purpose of the statute. DOE used the SBA’s size standards to determine whether any small entities would be required to comply with the rule. The size standards are codified at 13 CFR part 121. The standards are listed by North American Industry Classification System (NAICS) code and industry description and are available at www.sba.gov/idc/groups/public/documents/sba_homepage/serv_sstd_tablepdf.pdf. Plumbing equipment manufacturers are classified under NAICS 332913, “Plumbing Fixture Fitting and Trim Manufacturing,” and NAICS 327111, “Vitreous China Plumbing Fixture and China and Earthenware Bathroom Accessories Manufacturing.” The SBA sets a threshold of 500 employees

or less for NAICS 332913, and 750 employees or less for NAICS 327111, for an entity to be considered a small business within these categories.

DOE conducted a focused inquiry into small business manufacturers of products covered by this rulemaking. During its market survey, DOE used all available public information to identify potential small manufacturers. DOE's research involved the review of industry trade association membership directories (including the American Society of Plumbing Engineers), product databases (e.g., Federal Trade Commission (FTC), the Thomas Register®, California Energy Commission (CEC), and ENERGY STAR databases), individual company websites, and marketing research tools (e.g., Dun and Bradstreet reports, and Manta) to create a list of companies that manufacture or sell plumbing products covered by this rulemaking. Using these sources, DOE identified 83 manufacturers of showerheads, faucets, water closets, urinals, and commercial prerinse spray valves.

DOE then reviewed this data to determine whether the entities met the SBA's definition of a small business manufacturer of covered plumbing products and screened out companies that do not offer products covered by this rulemaking, do not meet the definition of a "small business," or are foreign owned and operated. Based on this review, DOE has identified 48 manufacturers that would be considered small businesses that would be affected by this rulemaking. Through this analysis, DOE determined the expected impacts of the rule on affected small businesses and whether an IRFA was needed (i.e., whether DOE could certify that this rulemaking would not have a significant economic impact on a substantial number of small entities).

Table IV.1 stratifies the small businesses according to their number of employees. The smallest company has 4 employees and the largest company 375 employees. The majority of the small businesses affected by this rulemaking (88 percent) have fewer than 100 employees. Annual revenues associated with these small manufacturers were estimated at \$492.5 million (\$10.3 million average annual sales per small manufacturer). According to DOE’s analysis, small entities constitute 58 percent of the entire plumbing equipment manufacturing industry covered by the rule.

Table IV.1 Small Business Size by Number of Employees

Number of Employees	Number of Small Businesses	Percentage of Small Businesses	Relative Percentage
1–10	8	16.7%	16.7%
11–20	10	20.8%	37.5%
21–30	3	6.3%	43.8%
31–40	11	22.9%	66.7%
41–50	3	6.3%	72.9%
51–60	1	2.1%	75.0%
61–70	0	0.0%	75.0%
71–80	5	10.4%	85.4%
81–90	0	0.0%	85.4%
91–100	1	2.1%	87.5%
101–110	0	0.0%	87.5%
111–120	0	0.0%	87.5%
121–130	0	0.0%	87.5%
131–140	0	0.0%	87.5%
141–150	0	0.0%	87.5%
151–200	2	4.2%	91.7%
201–300	2	4.2%	95.8%
301–400	2	4.2%	100.0%
401–500	0	0.0%	100.0%
Total	48		

As noted in the Background and Summary sections (I and II) of this rule, EPCA requires that DOE review its test procedures for covered products at least once every 7 years and to amend them if the Secretary determines that to do so would provide test procedures that would more accurately or completely measure water use and that are not unduly burdensome to conduct. (42 U.S.C. 6293(b)(1)) To comply with EPCA, this rule incorporates amendments to ASME test

procedures, which have been updated for faucets, showerheads, water closets and urinals.

Additionally, EPCA prescribes use of the ASTM standard F2324 for commercial prerinse spray valves, which is a product that is also covered in this rulemaking.

Showerheads and Faucets

DOE is updating its test procedures for showerheads and faucets by incorporating by reference AMSE standard A112.18.1-2012. These incorporated changes involve minor adjustments in test methodology, such as changes in temperatures and inclusion of instrument tolerances that were not previously specified, none of which would require any additional equipment and are not expected to lengthen the time required to complete the test. Because there are no major changes in testing the test procedures, calculation methodology or certification requirements associated with these amendments, DOE has determined there is no incremental cost burden to small entities associated with this change.

Water Closets and Urinals

DOE is updating its water closet and urinal test procedures from those set forth in ASME/ANSI standard A112.19.6-1995 to ASME standard A112.19.6-2008. The changes involve minor adjustments in test setup, the specification of certain instrumentation tolerances, and minor adjustment to test pressures, none of which would require additional equipment or lengthen the time required to complete the test. Because there are no major changes in the test procedures or requirements for these products, DOE incorporates this change by reference. The changes adopted in this rule will not alter current testing procedures, calculation methodologies, or

enforcement. Therefore, DOE has concluded there is no incremental cost burden to small manufacturers associated with the non-substantive changes in this rule.

Commercial Prerinse Spray Valves

DOE currently requires that commercial prerinse spray valves be tested according to the ASTM “Standard Test Method for Prerinse Spray Valves” (ASTM F2324-03). This rule does not make any alterations to this test, as it has not been updated since the 2003 version that DOE incorporated in the CFR. 70 FR 60407 (Oct. 18, 2005). Thus, DOE determines there is no incremental cost burden to manufacturers of commercial prerinse spray valves associated with this rule.

As indicated in the discussion associated with small business listed in Table IV.1, DOE has analyzed the manufacturing industry for showerheads, faucets, water closets, urinals, and commercial prerinse spray valves and has determined that 58 percent of all plumbing equipment manufacturers could be classified as small entities according to the SBA classification. Although 58 percent of the market is a significant portion of the overall industry, these manufacturers would not be significantly affected by this rule because there are no incremental costs to any entity due to its implementation. In the absence of potential cost impacts, the rule by definition would not have disproportionate effects on small businesses.

Based on the criteria outlined above, DOE has determined that the proposed testing procedure amendments would not have a “significant economic impact on a substantial number of small entities,” and the preparation of an IRFA is not warranted. DOE will transmit the 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 showerheads, faucets, water closets, urinals, and commercial prerinse spray valves must certify to DOE that their products comply with any applicable water conservation standards. In certifying compliance, products must be tested according to the DOE test procedures for showerheads, faucets, water closets, urinals, and commercial prerinse spray valves, 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 showerheads, faucets, water closets, urinals, and commercial prerinse spray valves. 76 FR 12422 (March 7, 2011). The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (PRA). Public reporting burden for the certification is estimated to average 20 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. This requirement has been approved by OMB under OMB control number 1910-1400.

D. Review Under the National Environmental Policy Act of 1969

In this final rule, DOE amends its test procedure for showerheads, faucets, water closets and urinals to improve the ability of DOE's procedures to more accurately account for the water consumption of these products. 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 water 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 at 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 according to 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 (Feb. 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. 104-4, 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://www.gc.doe.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 (Feb. 22, 2002), and DOE’s guidelines were published at 67 FR 62446 (Oct. 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 (FEAA), 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 procedures addressed by this action incorporate testing methods contained in section 5.4 of commercial standard ASME A112.18.1-2012 and sections 7.1, 7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.4, 8.2, 8.2.1, 8.2.2, 8.2.3, 8.6, Table 5, and Table 6 of commercial standard ASME A112.19.2-2008. DOE has evaluated these two versions of these standards and is unable to conclude whether they fully comply with the requirements of section 32(b) of the FEAA (i.e., whether they were developed in a manner that fully provides for public participation, comment, and review.) DOE has consulted with both the Attorney General and the Chairman of the FTC about the impact on competition of using the methods contained in these standards and has received no comments objecting to their use.

M. 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, Imports, Intergovernmental relations, Small businesses.

10 CFR Part 430

Administrative practice and procedure, Confidential business information, Energy conservation, Imports, Incorporation by reference, Intergovernmental relations, Small businesses.

10 CFR Part 431

Administrative practice and procedure, Confidential business information, Energy conservation, Imports, Incorporation by reference, Intergovernmental relations, Small businesses.

Issued in Washington, DC, on September 30, 2013.

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, 430, 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. Section 429.28 is amended by revising paragraph (b)(2) to read as follows:

§ 429.28 Faucets.

* * * * *

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: For non-metering faucets, the maximum water use in gallons per minute (gpm) rounded to the nearest 0.1 gallon; for metering faucets, the maximum water use in gallons per cycle (gal/cycle) rounded to the nearest 0.01 gallon; and for all faucet types, the flow water pressure in pounds per square inch (psi).

3. Section 429.29 is amended by revising paragraph (b)(2) and removing paragraph (b)(3).

The revision reads as follows:

§ 429.29 Showerheads.

* * * * *

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The maximum water use in gallons per minute (gpm) rounded to the nearest 0.1 gallon, the maximum flow water pressure in pounds per square inch (psi), and a declaration that the showerhead meets the requirements of §430.32(p) pertaining to mechanical retention of the flow-restricting insert, if applicable.

4. Section 429.30 is amended by revising paragraph (b)(2) to read as follows:

§ 429.30 Water closets.

* * * * *

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The maximum water use in gallons per flush (gpf), rounded to the nearest 0.01 gallon. For dual-flush water closets, the maximum water use to be reported is the flush volume observed when tested in the full-flush mode.

5. Section 429.31 is amended by revising paragraph (b)(2) to read as follows:

§ 429.31 Urinals.

* * * * *

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The maximum water use in gallons per flush (gpf), rounded to the nearest 0.01 gallon, and for trough-type urinals, the maximum flow rate in gallons per minute (gpm), rounded to the nearest 0.01 gallon, and the length of the trough in inches (in).

6. Section 429.51 is amended by revising paragraph (b)(2) to read as follows:

§ 429.51 Commercial prerinse spray valves.

* * * * *

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report shall include the following public product-specific information: The maximum flow rate in gallons per minute (gpm), rounded to the nearest 0.1 gallon.

PART 430 -- ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

7. The authority citation for part 430 continues to read as follows:

Authority: 42 U.S.C. 6291–6309; 28 U.S.C. 2461 note.

8. Section 430.2 is amended by removing the definition for “Blowout”; adding, in alphabetical order, definitions for “Blowout toilet,” “Dual-flush water closet,” “Fitting,” and “Hand-held showerhead;” and by revising the definitions of “Low consumption” and “Showerhead” to read as follows:

§ 430.2 Definitions.

* * * * *

Blowout toilet means a water closet that uses a non-siphonic bowl with an integral flushing rim, a trap at the rear of the bowl, and a visible or concealed jet that operates with a blowout action.

* * * * *

Dual-flush water closet means a water closet incorporating a feature that allows the user to flush the water closet with either a reduced or a full volume of water.

* * * * *

Fitting means a device that controls and guides the flow of water.

* * * * *

Hand-held showerhead means a showerhead that can be held or fixed in place for the purpose of spraying water onto a bather and that is connected to a flexible hose.

* * * * *

Low consumption has the meaning given such a term in ASME A112.19.2-2008. (*see* § 430.3)

* * * * *

Showerhead means a component or set of components distributed in commerce for attachment to a single supply fitting, for spraying water onto a bather, typically from an overhead position, excluding safety shower showerheads.

* * * * *

9. Section 430.3 is amended by revising paragraphs (g)(1) and (2) to read as follows:

§ 430.3 Materials incorporated by reference.

* * * * *

(g) * * *

(1) ASME A112.18.1-2012, (“ASME A112.18.1-2012”), “Plumbing supply fittings,” section 5.4, approved December, 2012, IBR approved for appendix S to subpart B.

(2) ASME A112.19.2-2008, (“ASME A112.19.2-2008”), “Ceramic plumbing fixtures,” sections 7.1, 7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.5, 7.4, 8.2, 8.2.1, 8.2.2, 8.2.3, 8.6, Table 5, and Table 6 approved August 2008, including Update No. 1, dated August 2009, and Update No. 2, dated March 2011, IBR approved for §430.2 and appendix T to subpart B.

* * * * *

10. Appendix S to subpart B of part 430 is amended by adding a note after the appendix heading and revising section 2, “Flow Capacity Requirements,” to read as follows:

**APPENDIX S TO SUBPART B OF PART 430--UNIFORM TEST METHOD FOR MEASURING THE
WATER CONSUMPTION OF FAUCETS AND SHOWERHEADS**

Note: After [INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], any representations made with respect to the water consumption of showerheads or faucets must be made in accordance with the results of testing pursuant to this appendix.

Manufacturers conducting tests of showerheads or faucets [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] and prior to [INSERT DATE

180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], must conduct such test in accordance with either this appendix or appendix S as it appeared at 10 CFR part 430, subpart B, appendix S, in the 10 CFR parts 200 to 499 edition revised as of January 1, 2013. Any representations made with respect to the water consumption of such showerheads or faucets must be in accordance with whichever version is selected. Given that after **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** representations with respect to the water consumption of showerheads and faucets must be made in accordance with tests conducted pursuant to this appendix, manufacturers may wish to begin using this test procedure as soon as possible.

* * * * *

2. Flow Capacity Requirements

a. Faucets – The test procedures to measure the water flow rate for faucets, expressed in gallons per minute (gpm) and liters per minute (L/min), or gallons per cycle (gal/cycle) and liters per cycle (L/cycle), shall be conducted in accordance with the test requirements specified in section 5.4, Flow Rate, of ASME A112.18.1-2012 (incorporated by reference, *see* § 430.3).

Measurements shall be recorded at the resolution of the test instrumentation. Calculations shall be rounded off to the same number of significant digits as the previous step. The final water consumption value shall be rounded to one decimal place for non-metered faucets, or two decimal places for metered faucets.

b. Showerheads – The test procedures to measure the water flow rate for showerheads, expressed in gallons per minute (gpm) and liters per minute (L/min), shall be conducted in accordance with the test requirements specified in section 5.4, Flow Rate, of the ASME A112.18.1-2012 (incorporated by reference, *see* § 430.3). Measurements shall be recorded at the resolution of the

test instrumentation. Calculations shall be rounded off to the same number of significant digits as the previous step. The final water consumption value shall be rounded to one decimal place. If the time/volume method of section 5.4.2.2(d) is used, the container must be positioned as to collect all water flowing from the showerhead, including any leakage from the ball joint.

11. Appendix T to subpart B of part 430 is amended by adding a note after the appendix heading; and revising section 2, “Test Apparatus and General Instructions,” and section 3, “Test Measurement,” to read as follows:

APPENDIX T TO SUBPART B OF PART 430--UNIFORM TEST METHOD FOR MEASURING THE WATER CONSUMPTION OF WATER CLOSETS AND URINALS

Note: After **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, any representations made with respect to the water consumption of water closets or urinals must be made in accordance with the results of testing pursuant to this appendix.

Manufacturers conducting tests of water closets or urinals after **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and prior to **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, must conduct such test in accordance with either this appendix or appendix T as it appeared at 10 CFR part 430, subpart B, appendix S, in the 10 CFR parts 200 to 499 edition revised as of January 1, 2013. Any representations made with respect to the water consumption

of such water closets or urinals must be in accordance with whichever version is selected. Given that after **[INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** representations with respect to the water consumption of water closets and urinals must be made in accordance with tests conducted pursuant to this appendix, manufacturers may wish to begin using this test procedure as soon as possible.

* * * * *

2. Test Apparatus and General Instructions

a. The test apparatus and instructions for testing water closets shall conform to the requirements specified in section 7.1, General, subsections 7.1.1, 7.1.2, 7.1.3, 7.1.4, and 7.1.5 of ASME A112.19.2-2008 (incorporated by reference, *see* § 430.3). The flushometer valve used in the water consumption test shall represent the maximum design flush volume of the water closet. Measurements shall be recorded at the resolution of the test instrumentation. Calculations of water consumption for each tested unit shall be rounded off to the same number of significant digits as the previous step.

b. The test apparatus and instructions for testing urinals shall conform to the requirements specified in section 8.2, Test Apparatus and General Instructions, subsections 8.2.1, 8.2.2, and 8.2.3 of ASME A112.19.2-2008 (incorporated by reference, *see* § 430.3). The flushometer valve used in the water consumption test shall represent the maximum design flush volume of the urinal. Measurements shall be recorded at the resolution of the test instrumentation. Calculations of water consumption for each tested unit shall be rounded off to the same number of significant digits as the previous step.

3. Test Measurement

a. Water closets:

(i) The measurement of the water flush volume for water closets, expressed in gallons per flush (gpf) and liters per flush (Lpf), shall be conducted in accordance with the test requirements specified in section 7.4, Water Consumption Test, of ASME A112.19.2-2008 (incorporated by reference, *see* § 430.3). For dual-flush water closets, the measurement of the water flush volume shall be conducted separately for the full-flush and reduced-flush modes and in accordance with the test requirements specified section 7.4, Water Consumption Test, of ASME A112.19.2-2008.

(ii) Static pressure requirements: The water consumption tests of siphonic and blowout water closets shall be conducted at two static pressures. For flushometer valve water closets with a siphonic bowl, the test pressures shall be 80 psi and 35 psi. For flushometer valve water closets with a blowout bowl, the test pressures shall be 80 psi and 45 psi. The test shall be run three times at each pressure as specified in section 7.4.3 “Procedure,” of ASME A112.19.2-2008 (incorporated by reference, *see* § 430.3). The final measured flush volume for each tested unit shall be the average of the total flush volumes recorded at each test pressure as specified in section 7.4.5 “Performance,” of ASME A112.19.2-2008.

(iii) Flush volume and tank trim component adjustments: For gravity flush tank water closets, trim components that can be adjusted to cause an increase in flush volume, including (but not limited to) the flapper valve, fill valve, and tank water level, shall be set in accordance with the printed installation instructions supplied by the manufacturer. If the installation instructions for the model to be tested do not specify trim setting adjustments, these trim components shall be adjusted to the maximum water use setting so that the maximum flush volume is produced without causing the water closet to malfunction or leak. The water level in the tank shall be set to the maximum water line designated in the printed installation instructions supplied by the

manufacturer or the designated water line on the tank itself, whichever is higher. If the printed installation instructions or the water closet tank do not indicate a water level, the water level shall be adjusted to 1 ± 0.1 inches below the top of the overflow tube or 1 ± 0.1 inches below the top rim of the water-containing vessel (for gravity flush tank water closets that do not contain an overflow tube) for each designated pressure specified in Table 5 of ASME A112.19.2-2008 (incorporated by reference, *see* § 430.3).

b. Urinals – The measurement of water flush volume for urinals, expressed in gallons per flush (gpf) and liters per flush (Lpf), shall be conducted in accordance with the test requirements specified in section 8.6, Water Consumption Test, of ASME A112.19.2-2008 (incorporated by reference, *see* § 430.3). The final measured flush volume for each tested unit shall be the average of the total flush volumes recorded at each test pressure as specified in section 8.6.4 “Performance,” of ASME A112.19.2-2008.

12. Section 430.32 is amended by revising paragraph (p) to read as follows:

§ 430.32 Energy and water conservation standards and their effective dates.

* * * * *

(p) Showerheads. The maximum water use allowed for any showerheads manufactured after January 1, 1994, shall be 2.5 gallons per minute (9.5 liters per minute) when measured at a flowing pressure of 80 pounds per square inch gage (552 kilopascals). When used as a component of any such showerhead, the flow-restricting insert shall be mechanically retained at the point of manufacture such that a force of 8.0 pounds force (36 Newtons) or more is required

to remove the flow-restricting insert, except that this requirement shall not apply to showerheads for which removal of the flow-restricting insert would cause water to leak significantly from areas other than the spray face.

* * * * *

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

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

Authority: 42 U.S.C. 6311-6317.

14. Section 431.263 is revised to read as follows:

§ 431.263 Materials incorporated by reference.

(a) DOE incorporates by reference the following standard into part 431. The material listed has been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Any subsequent amendment to a standard by the standard-setting organization will not affect the DOE regulations unless and until amended by DOE. Material is incorporated as it exists on the date of the approval and a notice of any change in the material will be published in the Federal Register. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, this material is available for inspection at U.S. Department of Energy, Office of Energy

Efficiency and Renewable Energy, Building Technologies Program, 6th Floor, 950 L'Enfant Plaza SW., Washington, DC 20024, (202) 586-2945, or go to:

http://www1.eere.energy.gov/buildings/appliance_standards. This standard can be obtained from the source below.

(b) ASTM. American Society for Testing and Materials International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, (610) 832-9585, or got to <http://www.astm.org>.

(1) ASTM Standard F2324-03 (Reapproved 2009), (“ASTM F2324-03 (2009)”), Standard Test Method for Prerinse Spray Valves, approved May 1, 2009; IBR approved for § 431.264.

(2) [Reserved].

15. Section 431.264(b) is revised to read as follows:

§ 431.264 Uniform test method for the measurement of flow rate for commercial prerinse spray valves.

* * * * *

(b) Testing and Calculations. The test procedure to determine the water consumption flow rate for prerinse spray valves, expressed in gallons per minute (gpm) or liters per minute (L/min), shall be conducted in accordance with the test requirements specified in sections 4.1 and 4.2 (Summary of Test Method), 5.1 (Significance and Use), 6.1 through 6.9 (Apparatus) except 6.5, 9.1 through 9.5 (Preparation of Apparatus), and 10.1 through 10.2.5. (Procedure), and calculations in accordance with sections 11.1 through 11.3.2 (Calculation and Report) of ASTM F2324-03 (2009), (incorporated by reference, see § 431.263). Perform only the procedures pertinent to the measurement of flow rate. Record measurements at the resolution of the test

instrumentation. Round off calculations to the same number of significant digits as the previous step. Round the final water consumption value to one decimal place as follows:

- (1) A fractional number at or above the midpoint between two consecutive decimal places shall be rounded up to the higher of the two decimal places; or
- (2) A fractional number below the midpoint between two consecutive decimal places shall be rounded down to the lower of the two decimal places.

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