

DEPARTMENT OF ENERGY**Office of Energy Efficiency and Renewable Energy****10 CFR Part 430**

[Docket No. EE-RM/TP-97-600]

RIN 1904-AA71

Energy Conservation Program for Consumer Products: Test Procedures and Certification Requirements for Plumbing Products; and Certification Requirements for Residential Appliances

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

ACTION: Notice of proposed rule and public hearing.

SUMMARY: The Energy Policy and Conservation Act, as amended (EPCA), requires the Department of Energy (DOE or the Department) to administer an energy and water conservation program for certain major household appliances and commercial equipment, including certain plumbing products. This proposed rule would codify water conservation standards and test procedures established in EPCA for plumbing products, incorporate by reference water conservation standard and test procedures for faucets and test procedures for showerheads revised by the American Society of Mechanical Engineers/American National Standards Institute (ASME/ANSI), and provide for certification of compliance with plumbing product standards. This proposed rule would also clarify the certification requirements applicable to all residential appliances.

DATES: The Department will accept comments, data, and information regarding the proposed issues of this notice no later than May 6, 1997.

The public hearing will be held on March 31, 1997 in Washington, DC. Requests to speak at the hearing must be received by the Department no later than 4:00 p.m., March 21, 1997. Ten (10) copies of statements to be given at the public hearing must be received by the Department no later than 4:00 p.m., March 21, 1997.

ADDRESSES: Written comments and requests to speak at the public hearing should be labeled "Test Procedures and Requirements for Plumbing Products; and Certification Requirements for Residential Appliances, Docket No. EE-RM/TP-97-600" and submitted or hand-delivered to: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Office of Codes and

Standards, Mail Stop EE-43, Room 1J-018, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585-0121. Telephone: (202) 586-7140; Fax: (202) 586-4617.

The hearing will begin at 9:30 a.m., on March 31, 1997, and will be held in Room 1E-245 at the U.S. Department of Energy, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC.

Copies of the transcript of the public hearing and public comments received may be read in the Freedom of Information Reading Room (Room No. 1E-190) at the U.S. Department of Energy, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except Federal holidays.

The proposed rule would incorporate by reference ASME/ANSI standards (which are documents that contain both test procedures and water usage standards) as follows: American Society of Mechanical Engineers/American National Standards Institute Standard A112.19.6-1990, "Hydraulic Requirements for Water Closets and Urinals;" and American Society of Mechanical Engineers/American National Standards Institute Standard A112.18.1M-1994, "Plumbing Fixture Fittings."

Copies of these standards may be viewed at the Department of Energy's Freedom of Information Reading Room at the address stated above. Copies of the ASME/ANSI Standards may also be obtained by request from the American Society of Mechanical Engineers, 345 East 47th Street, New York, N.Y. 10017, or the American National Standards Institute, 1430 Broadway, New York, N.Y. 10018. For more information concerning public participation in this rulemaking proceeding, see section IV, "Public Comment," of this notice.

FOR FURTHER INFORMATION CONTACT: William W. Hui, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Mail Stop EE-43, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585-0121, (202) 586-9145.

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I. Introduction

A. Authority

Part B of Title III of the Energy Policy and Conservation Act of 1975, Pub. L. 94-163, as amended, (EPCA), by the National Energy Conservation Policy Act of 1978 (NECPA), Pub. L. 95-619, the National Appliance Energy Conservation Act (NAECA) of 1987, Pub. L. 100-12, the National Appliance Energy Conservation Amendments of 1988 (NAECA 1988), Pub. L. 100-357, and the Energy Policy Act of 1992 (EPAAct), Pub. L. 102-486, created the Energy Conservation Program for Consumer Products other than Automobiles (Program). The products covered under this program include faucets, showerheads, water closets, and urinals—the subjects of today's notice of proposed rulemaking.

This Program consists essentially of three parts: testing, labeling, and energy and water conservation standards. In the case of faucets, showerheads, water closets, and urinals, the test procedures measure water use or estimated annual operating cost of these covered products during a representative average use cycle or period of use, as determined by the Secretary, and shall not be unduly burdensome to conduct. EPCA, § 323(b)(3), 42 U.S.C. § 6293(b)(3).

Effective 180 days after a test procedure applicable to a covered product is prescribed or established, no manufacturer may make a representation with respect to water usage of such products unless such products have been tested in accordance with such test procedures and such representation fairly discloses the results of such testing. EPCA, § 323(c)(2), 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. EPCA, § 323(c)(3), 42 U.S.C. § 6293(c)(3).

EPCA states that the procedures for testing and measuring the water use of faucets and showerheads, and water closets and urinals shall be ASME/ANSI Standards A112.18.1M-1989, and A112.19.6-1990, respectively, but that if ASME/ANSI revises these requirements, the Secretary shall adopt such revisions if they conform to the basic statutory requirements for test procedures. EPCA, § 323(b)(7) and 323(b)(8), 42 U.S.C. § 6293(b)(7) and § 6293(b)(8).

EPCA prescribes water conservation standards for faucets, showerheads, water closets and urinals. It further provides that if the requirements of ASME/ANSI Standard A112.18.1M-1989 or ASME Standard A112.19.6-

1990 are amended to improve the efficiency of water use, the Secretary shall publish a final rule establishing an amended uniform national standard unless the Secretary determines that adoption of such a standard at the level specified is not (i) technologically feasible and economically justified, (ii) consistent with the maintenance of public health and safety; or (iii) consistent with the purposes of this Act. EPCA, § 325(j) and 325(k), 42 U.S.C. § 6295(j) and § 6295(k).

B. Background

EPCA requires that DOE amend the plumbing products test procedures and standards established by statute to conform with revisions to standards by ASME/ANSI if certain requirements are met. The applicable faucet standard and the test procedures for faucets and showerheads, as prescribed by EPCA, were in ASME/ANSI Standard A112.18.1M-1989. On September 15, 1994, ASME/ANSI Standard A112.18.1M-1994 was issued and DOE initiated a review as required.

The Department held a public workshop with representatives from the Plumbing Manufacturers Institute (PMI), its manufacturer members, Federal and state agencies, and water conservation organizations in Washington, DC on June 15, 1995. The following issues were discussed: (a) definitions of "basic model" for faucets, showerheads, water closets, and urinals; (b) statistical sampling plans for certification testing; (c) certification reporting requirements for plumbing products; and (d) whether multiple-user "sprayheads" are considered covered products, and if so, how the faucet standards are to be applied. Subsequently, various attendees at the workshop filed comments. Several comments covered the issue of enforcement which will be addressed in section (II)(B)(8).

Four letters from the industry (W/C Technology Corporation, July 14, 1993; Plumbing Manufacturers Institute, February 7, 1994; and Bradley Corporation, February 9, 1994, and August 12, 1994) concerning issues relating to today's notice (e.g., definition for "electromechanical hydraulic toilet," and multiple-user sprayheads) were submitted to DOE prior to the June 15, 1995, public workshop. The Department will consider these as part of the public comment received.

The Department held a second public meeting in Washington, DC on February 28, 1996, to further discuss the statistical sampling plans that would be used to certify compliance, and new issues concerning: (a) incorporation of the test procedure requirements for

faucets and showerheads, and standard for faucets contained in ASME/ANSI Standard A112.18.1M-1994; (b) an effective date to allow manufacturers to test and make initial compliance certification submissions after such requirements are published in a final rule; and (c) a uniform mathematical rounding method and how it is to be used to convert test data into final results for the purpose of determining compliance. Four comments (Eljer Industries (Eljer), Mr. R. Michael Martin, and two from PMI) were received subsequent to the second public meeting.

II. Discussion

A. Statutory Plumbing Requirements

DOE is proposing to codify into the Code of Federal Regulations statutory requirements with respect to plumbing products—including test procedures, water conservation standards, and definitions. EPCA also requires that if specified ASME or ASME/ANSI standards or test procedures are amended, DOE must amend the regulatory requirements to conform with the revisions if certain requirements are met.

Comment is invited on those provisions of the proposed water conservation standards and test procedures that differ from the current statutory standards. Comments on standards or test procedures established by statute will not be considered.

1. Test Procedures

The Department proposes to add the following descriptors as measures of water usage for faucets, showerheads, water closets, and urinals: maximum permissible water use (in gallons and liters per minute or cycle, and gallons and liters per flush), at 10 CFR sections 430.23(s)-430.23(v), respectively. The test procedures for measuring water usage are discussed below.

(a) *Faucets and showerheads.* EPCA states that test procedures for showerheads and faucets shall be the test procedures specified in ASME A112.18.1M-1989 for such products but if ANSI revises these requirements, the Secretary shall adopt such revisions if they conform to the basic statutory requirements for test procedures. EPCA, § 323(b)(7), 42 U.S.C. § 6293 (b)(7).

The test procedure requirements for faucets and showerheads in ASME/ANSI Standard A112.18.1M-1989 were revised and issued as ASME/ANSI Standard A112.18.1M-1994 on September 15, 1994. These revised test procedures appear to be reasonably designed to produce test results which

measure water use or estimated annual operating cost of a covered product during a representative average use cycle and appear not to be unduly burdensome to conduct. See EPCA, § 323(b)(3), 42 U.S.C. § 6293(b)(3). Therefore, the Department proposes to incorporate by reference, section 6.5, "Flow Capacity Test in ASME/ANSI Standard A112.18.1M-1994, for testing faucets and showerheads at Appendix S of Title 10 CFR Part 430, Subpart B.

(b) *Water closets and urinals.* EPCA states that the test procedures for water closets and urinals shall be the test procedures specified in ASME A112.19.6-1990 but if ANSI revises these requirements, the Secretary shall adopt such revisions if they conform to the basic statutory requirements for test procedures. EPCA, § 323(b)(8), 42 U.S.C. § 6293(b)(8). The test procedure requirements for water closets and urinals in ASME/ANSI Standard A112.19.6-1990 have not been revised. DOE proposes to incorporate by reference all applicable sections in ASME/ANSI Standard A112.19.6-1990 for testing water closets and urinals at Appendix T of Title 10 CFR Part 430, Subpart B.

The test procedures for testing water closets include section 7.1.2, "Test Apparatus and General Instructions;" and subsections 7.1.2.1, 7.1.2.2, 7.1.2.3, and 7.1.6, "Water Consumption and Hydraulic Characteristics."

The test procedures for urinals include sections 8.2, "Test Apparatus and General Instructions;" and subsections 8.2.1, 8.2.2, 8.2.3, and section 8.5, "Water Consumption."

2. Water Conservation Standards

EPCA prescribed statutory water conservation standards for faucets, showerheads, water closets and urinals and specified that if specified ASME or ASME/ANSI standards are amended to improve the efficiency of water use, the Secretary shall publish a final rule establishing an amended uniform national standard unless the Secretary determines that adoption of such a standard at the level specified is not (i) technologically feasible and economically justified, (ii) consistent with the maintenance of public health and safety; or (iii) consistent with the purposes of this Act. EPCA, § 325(j) and § 325(k), 42 U.S.C. § 6295(j) and § 6295(k).

(a) *Faucets.* EPCA specifies that after January 1, 1994, it would be unlawful to manufacture lavatory or kitchen faucets, or lavatory or kitchen replacement aerators that exceed 2.5 gallons per minute (gpm); or metering faucets that exceed 0.25 gallons per cycle, when

measured at a flowing water pressure of 80 pounds per square inch (psig). EPCA, § 325(j)(2), 42 U.S.C. § 6295(j)(2). On September 15, 1994, the water conservation standard for faucets was amended to 2.2 gpm at 60 psig in ASME/ANSI Standard A112.18.1M-1994.

At the second workshop held on February 28, 1996, the issue of whether to incorporate the revised ASME/ANSI Standard A112.18.1M-1994 was discussed. PMI claimed that all manufacturers are currently designing and manufacturing faucets to be in conformity with this revised standard and therefore, requested that it be incorporated. This position was supported by the workshop participants, including, Mr. R. Michael Martin, the American Water Works Association (AWWA), Delta Faucet Company (Delta), Kohler Company (Kohler), American Standard Inc., and Sloan Valve. Four additional comments submitted following the public meeting reiterated support for incorporation of the 1994 ASME/ANSI standard. (PMI, No. 1 at 1; PMI, No. 2 at 2; Eljer, No. 3 at 1; and R. Michael Martin, No. 4 at 1).

DOE does not believe the revised standard for faucets constitutes an improvement in water efficiency and therefore incorporation of the revised standard would not be necessary. The revised standard (2.2 gpm at 60 psig) is equivalent theoretically to the statutory requirement (2.5 gpm at 80 psig) per Bernoulli's equation of fluid mechanics which states that the ratio of water flow through a fixed orifice at different pressures is equivalent to the square root of the ratio of the pressures.

However, the Department believes that there might be a burden on the industry if DOE does not incorporate the standard for faucets contained in ASME/ANSI Standard A112.18.1M-1994. Comments indicated that industry is presently designing and manufacturing fixture fittings that meet the flow capacity requirements contained in EPCA and in ASME/ANSI Standard A112.18.1M-1994 and the coexistence of both standards would cause confusion in the market place if not brought into conformity. In addition, Mexico and Canada are planning to adopt faucet standards equivalent to those in ASME/ANSI Standard A112.18.1M-1994 so U.S. adoption of that standard would be consistent with the policy of promoting harmonization in North America. Therefore, the Department proposes to incorporate the revised applicable faucet standard in ASME/ANSI

Standard A112.18.1M-1994 at 10 CFR § 430.32(o) in today's rulemaking.

(b) *Showerheads.* EPCA specifies that the maximum water use allowed for any showerhead manufactured after January 1, 1994, is 2.5 gpm when measured at a flowing water pressure of 80 psig. EPCA also requires that such showerheads meet the requirement of ASME/ANSI Standard A112.18.1M-1989, 7.4.3(a). EPCA, § 325(j)(1), 42 U.S.C. § 6295(j)(1). This requirement specifies that if a flow control insert is used as a component part of a showerhead, then it must be manufactured such that a pushing or pulling force of 8 lb or more is required to remove the insert. Note that section 7.4.3(a) in ASME/ANSI Standard A112.18.1M-1989 was redesignated as section 7.4.4(a) in ASME/ANSI Standard A112.18.1M-1994.

The standard for showerheads in ASME/ANSI Standard A112.18.1M-1994 are at the level prescribed in EPCA. The proposed rule would codify this standard, 2.5 gpm at 80 psig, in the Code of Federal Regulations and incorporate by reference, section 7.4.4(a) in ASME/ANSI Standard A112.18.1M-1994 at 10 CFR 430.32(p). Codification of this statutory standard does not invoke the requirements specified in section 325(j)(3) of EPCA, 42 U.S.C. § 6295(j)(3).

(c) *Water closets and urinals.* EPCA specifies that the maximum water use allowed for gravity tank-type toilets, flushometer tank toilets, and electromechanical hydraulic toilets, is 1.6 gallons per flush (gpf), and for blowout toilets and commercial gravity tank-type 2-piece toilets is 3.5 gpf, if manufactured after January 1, 1994. For commercial gravity tank-type 2-piece, the maximum water use of 3.5 gpf is applicable until January 1, 1997, after which the standard is 1.6 gpf. For flushometer valve toilets, other than blowout toilets, the maximum water use is 1.6 gpf, if manufactured after January 1, 1997. The maximum water use allowed for any urinal manufactured after January 1, 1994, is 1.0 gpf. EPCA, § 325(k)(1) and 325(k)(2), 42 U.S.C. § 6295(k)(1) and § 6295(k)(2).

The standards for water closets and urinals in ASME/ANSI Standard A112.19.6-1990 have not been revised. Accordingly, the proposed rule would codify the statutory water conservation standards for water closets and urinals in 10 CFR §§ 430.32(q) and 430.32(r), respectively.

3. Definitions

EPCA prescribes statutory definitions for terms applicable to the administration of plumbing products.

DOE believes it would be more convenient for the readers if these definitions were incorporated in the Code of Federal Regulations. Therefore, the proposed rule would incorporate the amended statutory definitions for the terms "consumer product," "energy conservation standard," and "estimated annual operating cost" in EPCA, § 321(1), § 321(6) and § 321(7), 42 U.S.C. § 6291(1), § 6291(6) and § 6291(7); and the new statutory definitions for the terms "ANSI," "ASME," "blowout," "faucet," "flushometer tank," "flushometer valve," "low consumption," "showerhead," "urinal," "water closet," and "water use" in EPCA, § 321(31)(A)–§ 321(31)(H), 42 U.S.C. § 6291(31)(A)–§ 6291(31)(H), in 10 CFR § 430.2.

B. Supplementary Plumbing Requirements

The proposed provisions to supplement the statutory requirements to facilitate the monitoring and administration of compliance for plumbing products are discussed below.

1. Metric Equivalents

Section 205b of the Metric Conversion Act, 15 U.S.C. 205b, states that the metric measurement system is the preferred system of weights and measures in the United States. It also requires Federal agencies to use the metric system of measurement in all procurements, grants, and other business-related activities, except to the extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to United States firms. These requirements are also expressed in Executive Order 12770 of July 25, 1991. 56 FR 35801 (July 29, 1991).

EPCA specifies that the required labeling for water usage rates of covered plumbing products be expressed in terms of gallons. Metric units are used in the ASME/ANSI Standard A112.18.1M–1994 for testing faucets and showerheads, and are prescribed in ASME/ANSI Standard A112.19.6–1990 for testing water closets and urinals. In addition, they are also required on submissions to the Federal Trade Commission (FTC) concerning labeling.

To maintain consistency in testing with the ASME/ANSI standards, Section 205(b) of the Metric Conversion Act, and Executive Order 12770, the Department proposes to require the submission of metric equivalents on all plumbing products certified with DOE for compliance purposes.

2. Definitions of Basic Model

The Department is proposing to establish definitions of "basic model"

for plumbing products. It is common for a single plumbing product manufacturer to make numerous models of faucets, showerheads, water closets, and urinals covered by EPCA and each model is potentially required to be tested. Often, however, several models of faucets, for example, are essentially the same faucet except for refinements that do not significantly affect the water consumption of the faucet. One way to meet EPCA's mandate that test procedures "not be unduly burdensome to conduct," is to establish "basic models" for plumbing products.

"Basic model" is a term generally used by DOE to describe products or items of equipment with performance, design, hydraulic, and functional characteristics that are essentially the same. For plumbing products, the models that exhibit essentially identical hydraulic characteristics would be categorized into a family. Such a family would constitute a "basic model" of that particular covered product and only representative samples within the family need be tested. Components of similar design may be substituted in a basic model without requiring additional compliance certification if the represented measures of water consumption continue to satisfy applicable water usage standards.

(a) *Faucets and showerheads.* PMI and American Standard Inc. jointly proposed that "basic model" be defined by either (a) the flow control mechanism which is attached or installed within the fixture fitting, or (b) the models that have identical water-passage design features that use the same path of water in the highest-flow mode. (PMI, No. 3, at 1).

R. Michael Martin submitted a comment stating that the proposal by PMI and American Standard Inc. is adequate for faucets but believes additional words are necessary to explain how flow restrictors for showerheads are to be held for testing, because some flow restrictor could be merely a plastic disc with a single hole. (R. Michael Martin, No. 9, at 6).

The Department disagrees with Mr. Martin's comment on the need for additional language for showerheads. A flow control restrictor for showerheads, such as a plastic disc with a single hole, is not considered to be a separately supplied accessory to be tested by itself. Such a flow control mechanism is internally installed as an integral component and tested within an assembled showerhead.¹ Thus, DOE

believes it unnecessary to add explanatory language as requested by Mr. Martin.

The Department believes that the "basic model" definition for faucets and showerheads proposed by PMI and American Standard Inc. is practical and promotes the objective in Section 323(b)(3) of EPCA, 42 U.S.C. § 6293(b)(3). Therefore, the Department proposes to amend the existing definition of "basic model" to add language for fixture fittings based on the proposal submitted by PMI and American Standard Inc. in 10 CFR § 430.2.

(b) *Water closets and urinals.* PMI and American Standard Inc. also jointly proposed that "basic model" for water closets be defined as "those fixtures which have the largest volume of water within the well of the water closet as flushed by one of the following four types: (a) gravity closed-coupled; (b) gravity one-piece; (c) flushometer tank; or (d) flushometer valves and other pressurized flushing device;" and "basic model" for urinals as "those fixtures which have the largest volume of water within the well of the urinal." (PMI, No. 3, at 1–2; American Standard Inc., No. 4, at 1–2).

Two comments raised concern about defining "basic model" based on the largest volume within the well. Mr. Martin stated, "Each different size and shape should be a different basic model." (R. Michael Martin, No. 9, at 6). The National Institute of Standards and Technology (NIST) stated, "Manufacturer design, selection and installation of components for control of refill and/or overflow, can differ and may result in higher consumption, rather than lesser, even for a bowl volume that is not the largest." (NIST, No. 6, at 2).

The Department agrees with the view expressed by Mr. Martin and NIST that the proposed definition of "basic model" for water closets and urinals by PMI and American Standard Inc. are inadequate because they do not ensure that all water closets and urinals of a particular basic model will have less water usage than the unit(s) with the greatest water volume in the well. For instance, the flush mechanism of a small fixture may permit greater water volume in the well than a large fixture of the same design with a different flush mechanism.

Therefore, DOE proposes a definition of "basic model" for water closets and urinals to mean all units of a given type of covered product (or class thereof) that

¹Telephonic conversations between Bill Hui, Department of Energy, and Shahin Moinian, Moen Incorporated; Sally Remedios, Delta Faucet

Company; and Ken Hair, Price Pfister Incorporated; October 19, 1995.

are manufactured by one manufacturer and "which have hydraulic characteristics that are essentially identical, and which do not have any differing physical or functional characteristics that affect water consumption."

3. Statistical Sampling Plans for Certification Testing

The Department is proposing to establish statistical sampling plans for plumbing products in today's notice. In the case of plumbing products, compliance with water usage standards will be assured in part by having each manufacturer certify that its covered products comply with the applicable water usage standard.

In promulgating test procedures applicable to certification, one of the major goals is to provide a statistically valid approach so that there is a high probability that products which have been tested and certified as being in compliance with the applicable usage standards actually comply with those standards. Each DOE test procedure incorporates a sampling plan, and that sampling plan is designed to give reasonable assurance that the true mean performance of the product being manufactured and sold meets or conforms to the DOE water usage standard.

DOE recognizes that units of plumbing products may vary in water usage for a number of valid reasons, including differences in component parts, production and testing. The risk to the public of purchasing a non-complying product, the risk to manufacturers of selling such a product, and the burdens of performing representative testing, are reduced through the application of a statistically meaningful sampling plan and basing the certification decision on the mean water usage performance of the sampled units.

There are several critical elements of a sampling plan. One is the selection of units for testing. Units must be representative of the product, and be selected randomly from a batch or production lot. Sample size is also a critical element of a sampling plan. The result yielded by water usage performance testing of a product, consisting of tests conducted on a sample of units, will be increasingly more reliable as the size of the test sample increases. This, however, increases the testing burden on the manufacturers. Also, when the variability in performance is greater among individually tested units of a product, the reliability of the test results is less. As a result, DOE's test

procedures require sampling plans based on a one-sided confidence limit approach. This approach is designed to minimize the manufacturers' testing burden while ensuring accurate determination of compliance within a specified level of confidence.

Such statistical sampling plans are specified in section 430.24. The one-sided confidence limit method places either an upper limit or lower limit on the range or interval in which the true mean performance is likely to be found. This method offers added flexibility by allowing for the testing of fewer units and thereby reducing testing costs than would the testing of a fixed number of units.

The sampling plans utilizing one-sided confidence limits require different statements for the two types of measures of energy consumption. One type of measure includes estimated annual operating cost, energy consumption and other measures of energy consumption for which consumers would favor lower values. The other type of measure includes characteristics such as efficiency, energy factor, and other energy consumption factors for which consumers would favor higher values. In regard to water usage of plumbing products, consumers would favor lower values.

To determine the measure of water usage to be reported to DOE for compliance certification, the one-sided confidence-limit approach requires that the higher value from either (i) the mean of the sample units or (ii) the upper X percent confidence limit of the true mean divided by Y, be selected. The variable X refers to a confidence limit that ranges from 90–99 percent, and the variable Y refers to a divisor that ranges from 1.01–1.10. The confidence limits would be calculated using generally accepted methods found in statistics textbooks, based on the sample mean and sample standard deviation. DOE views the latter calculation as being a one-sided confidence interval using t-statistics, with the divisor constituting a "derating" factor. The derating factor was included to take into account variability in the performance or efficiency of products due to many factors, including manufacturing variability and variations in the material. Furthermore, this format (confidence limits divided by a derating factor) is similar to the format required for other appliance products for which DOE requires testing.

PMI and American Standard Inc. proposed an alternate sampling plan for testing fixture fittings and fixtures based on testing two samples selected at random first, and then eight additional

samples if either of the two samples exceeds the maximum water consumption. The average of all eight of the samples shall not exceed the requirements of EPCA. (PMI, No. 3, at 2; American Standard Inc., No. 4, at 2–3).

AWWA, New York State Department of Environmental Conservation (NYSDEC), NIST, and Mr. R. Michael Martin claimed that the results of a sampling plan based on a sample size of two units may not be statistically accurate and therefore opposed the above proposal. (AWWA, No. 2, at 1; NYSDEC, No. 5, at 4; NIST, No. 6, at 2; and R. Michael Martin, No. 9, at 5).

The Department agrees with the views expressed by AWWA, NYSDEC, NIST, and Mr. Martin that the two-unit sampling plan is statistically unreliable. For this reason and to maintain consistency with the existing DOE statistical sampling plans, the Department is proposing to utilize the one-sided confidence limit approach.

(a) *Sampling plan for water closets and urinals utilizing one-sided confidence limits.* AWWA and NYSDEC supported use of DOE's approach. AWWA stated there exists a "high variability in the manufacture of porcelain toilets and urinals" while NYSDEC stated that "variation of manufacture of vitreous china" warrants recognition. Therefore, they proposed a one-sided confidence limit statistical sampling plan for fixtures at 90%. (AWWA, No. 2, at 1; and NYSDEC, No. 5, at 4).

PMI stated that if DOE's approach of utilizing a one-sided confidence limit is to be used, the industry would support a confidence limit of 90% only if a corresponding divisor of 1.10 is allowed. (PMI, No. 2, at 1). To support its proposal, PMI submitted data indicating that testing at such level (90% at 1.10) would allow manufacturers to certify compliance with no more than four units whereas five units would be required if a more stringent level (90% at 1.05) was imposed instead.

DOE agrees with AWWA and NYSDEC that there is high variability in the manufacturing of vitreous china that would justify a confidence limit at 90%. DOE also agrees with PMI that a divisor lower than 1.10 would cause manufacturers additional expense while providing no additional assurances that the products tested are meeting the requirement of the law. PMI's proposal would minimize manufacturers' test burden while at the same time provide an adequate level of confidence that products certified to be in compliance are actually in compliance with applicable water conservation

standards. Therefore, the Department proposes to adopt in a statistical sampling plan for fixtures utilizing one-sided confidence limits based on the following statistical parameter (90% confidence limits with a 1.10 divisor) at 10 CFR §§ 430.24(u) and (v).

(b) *Sampling plan for faucets and showerheads utilizing one-sided confidence limits.* AWWA and NYSDEC claimed that faucets and showerheads can be manufactured to tighter tolerances than vitreous china and proposed a statistical sampling plan that utilized a higher one-sided confidence limits and corresponding divisor. (AWWA, No. 2, at 1; and NYSDEC, No. 5, at 4).

DOE recognizes that fixture fittings are typically metal-based (e.g., chrome and brass), which means that they can be machined to much greater precision and tolerances, and which in turn, warrants a higher confidence limits and corresponding derating factor as suggested by AWWA. Although DOE agrees that fixture fittings warrant a higher confidence limit and corresponding divisor than vitreous china, the Department believes that a statistical sampling plan at the apex level (99% confidence limits, 1.01 divisor (i.e., ± 1 percent tolerance))—the level typically employed for products that demonstrate low manufacturing variability—may result in a testing burden. The Department believes a statistical sampling plan at the following parameter (95% confidence limits, 1.05 divisor (± 5 percent tolerance)) may be more appropriate and reasonable for manufacturers to meet. In written comments following the February 28, 1996 public meeting, PMI stated that industry would support this statistical sampling plan for fixture fittings (faucets and showerheads). (PMI, No. 2, at 1). Moreover, Moen Incorporated submitted data indicating that testing at such level would allow it to certify compliance with no more than two units.

Based on the above considerations, the Department proposes to adopt in a statistical sampling plan for fixture fittings utilizing one-sided confidence limits at the following statistical parameter (95% confidence limits with a 1.05 divisor) at 10 CFR §§ 430.24(s) and (t). DOE believes this sampling plan will minimize test burden on manufacturers while at the same time provide an adequate level of confidence that products certified to be in compliance are actually in compliance with applicable water conservation standards.

4. Modifications to Existing Language To Include Plumbing Products in the Code of Federal Regulations

Sections 430.27, 430.31–430.33, 430.40, 430.41, 430.47, 430.49, 430.50, 430.60, 430.61, 430.63, 430.70(a)(1), and 430.73 of Title 10 of the CFR currently do not address the monitoring and administration of plumbing products in the DOE Appliance Standards Program. The Department proposes to amend these sections in the Code of Federal Regulations to extend coverage to plumbing products covered by EPCA.

5. Definition for “Electromechanical Hydraulic Toilet”

EPCA specifies the water conservation standard for “electromechanical hydraulic toilets” at 1.6 gallon per flush. EPCA, § 325(k)(1)(A), 42 U.S.C. § 6295(k)(1)(A). However, the term “electromechanical hydraulic toilets” is undefined. The Department proposes to establish a definition for this term. PMI proposed that “electromechanical hydraulic toilets” be defined as “any water closet that utilizes electrically operated devices, such as, but not limited to, air compressors, pumps, solenoids, motors, or macerators in place of, or, to aid gravity in evacuating waste from the toilet [bowl].” (PMI, No. 15, at 1).

The definition proposed by PMI provides an acceptable description of the term “electromechanical hydraulic toilet.” Therefore, the Department proposes to include this definition for “electromechanical hydraulic toilets” in 10 CFR § 430.2.

6. Certification Reporting Requirements for Plumbing Products

(a) *Types of information.* Section 430.62(a)(2) of Title 10 of CFR currently requires manufacturers of covered residential products to submit, for each basic model, certain types of data and information in their certification reports to the Department. Plumbing products were added as covered products under EPCA, but presently certification requirements do not exist for plumbing products. The Department proposes to establish certification reporting requirements for faucets, showerheads, water closets, and urinals.

PMI proposed to produce a product directory for submission to DOE which would include the following information: (a) product category, (b) model number of product, (c) water use level, (d) name and address of manufacturer, (e) name and phone number of contact at manufacturer, and (f) compliance statement. (PMI, No. 3, at 2).

The Department presently requires similar types of information for certification from manufacturers of residential products and thus believes such types of information from plumbing manufacturers would be reasonable and appropriate. Therefore, DOE proposes to include in proposed 10 CFR § 430.62(a)(4) language requiring that the certification report for each basic model shall include the product type, product class, manufacturer’s name, private labeler name(s) if applicable, the manufacturer’s model number(s), and the water usage.

(b) *Precision level of reported test results.* PMI raised an issue at the February 28, 1996, public meeting regarding the level of precision (number of digits after the decimal place) required on final results for certifying compliance and requested that DOE provide such clarification in today’s rulemaking.

DOE stated that Sections 325(j) and 325(k) of EPCA, 42 U.S.C. § 6295(j) and § 6295(k), specified maximum standard levels for faucets, showerheads, water closets, and urinals in terms of tenth of a gallon, or in the case of metering faucets, hundredth of a gallon. Thus, the Department believes that those levels should be observed in certifying compliance.

(c) *Mathematical rounding procedures.* PMI raised a second issue regarding mathematical rounding procedures, and how such procedures are to be used to convert test data into final results for the purpose of determining compliance. PMI stated that the industry subscribes to the rounding rules contained in ASME Guide SI–1, ASME Orientation and Guide for use of SI (metric) units (9th Edition, 1982), and recommended that DOE adopt these rounding rules. NIST raised a concern that the ASME rules would allow a number to be rounded such that it may potentially exceed a fixed statutory standard. (PMI, transcript, at 35; NIST, transcript, at 35–36)

The Department agrees that, based on the concern identified by NIST, it would be inappropriate to adopt the ASME rounding rules as requested to be used to convert test data into final results for the purpose of determining compliance. Instead, DOE proposes the following basic rounding rules: Five and above round up, and less than five, round down. Such rounding rules are to be applied after the final result is calculated.

R. Michael Martin and Kohler supported DOE’s view that the basic rounding rules should be used to determine compliance with the EPCA’s

water use standards. (R. Michael Martin, transcript, at 40; Kohler, transcript, at 41). PMI stated that the industry would support DOE's proposed mathematical rounding rules. (PMI, No 2, at 1).

The Department believes the proposed basic rounding rules are practical and appropriate because they are consistent with conventional rounding methods. In addition, DOE believes the proposed approach in applying the basic rounding rules is appropriate to ensure that consistency is maintained in converting test data into final results for the purpose of determining compliance.

(d) *Effective date for initial compliance certification submissions.* Section 430.62(a) states, "Each manufacturer or private labeler before distributing in commerce any basic model of a covered product subject to the applicable energy conservation standard set forth in Subpart C of this part shall certify by means of a statement of compliance and certification report that each basic model meets the requirement of that standard," and section 430.62(b) adds, "all data required by paragraph 430.62(a) of this section shall be submitted on or before the effective date of the applicable energy conservation standard as prescribed in Section 325 of the Act."

The Department's regulations authorize imposition of penalties, consistent with EPCA, for failure to make reports or provide information required to be supplied by the Act or Title 10 CFR Part 430. 10 CFR § 430.61(a)(1) and (b). Any person who knowingly violates the compliance certification requirements may be subject to assessment of a civil penalty of no more than \$100 for each violation, and each day of noncompliance shall constitute a separate violation. 10 CFR § 430.61(b).

Such submissions as described are required only after certification reporting requirements are promulgated for a covered product. DOE is proposing certification reporting requirements (see discussion in (a) of this subsection) in today's notice that when promulgated, would subject plumbing products, for which standards became effective January 1, 1994, to the requirements specified in sections 430.62(a)-(b).

American Standard Inc. raised a concern at the public meeting on February 28, 1996, that manufacturers who produce larger inventories have more models to test, that testing of certain products such as water closets are extremely labor-intensive and time-consuming, and therefore it would be unreasonable to expect manufacturers to

be able to meet the certification requirements. American Standard Inc. recommended that DOE postpone for one year the effective date for the initial compliance certification submissions, which was also supported by Kohler and PMI. (American Standard Inc., transcript, at 62; Kohler, transcript, at 66; PMI, No. 2, at 2).

DOE agrees with American Standard Inc. that certain manufacturers may be overly burdened by the task of testing to meet the compliance certification requirements once such requirements are promulgated. The Department believes that a delay of the effective date for one year, as recommended by manufacturers, would allow a reasonable amount of time for plumbing manufacturers to complete required testing and submit the initial compliance certification reports. Therefore, the Department would require, in proposed 10 CFR § 430.62(a)(2), the initial certification submissions for plumbing products not later than one year following the publication of a final rule.

7. Faucet Standards on Multiple-User Sprayheads.

A manufacturer asked whether sprayheads are covered products under EPCA. Sprayheads are fixture fittings that are installed in lavatories (known as washfountains or wash sinks) for multiple users. They have multiple orifices that can independently or collectively actuate (by pneumatic hand or foot control, mechanical metering or infrared metering control) and may be considered a type of "faucet" subject to the applicable water conservation standard. EPCA defines the term "faucet" to mean "a lavatory faucet, kitchen faucet, metering faucet, or replacement aerator for a lavatory or kitchen faucet." EPCA, § 321(31)(E), 42 U.S.C. § 6291(31)(E). However, EPCA does not further define lavatory faucets, kitchen faucets, metering faucets, lavatory replacement aerators, and kitchen replacement aerators.

DOE proposes to clarify whether sprayheads are covered product, and if so, how the faucet standards are to apply to "sprayheads."

(a) *Sprayheads as covered products.* Bradley Corporation (Bradley) recommended that the definition for "faucet" in Section 321(31)(E) of EPCA, 42 U.S.C. § 6291(31)(E), be amended to mean "a lavatory faucet, kitchen faucet, metering faucet, or replacement aerator for a lavatory or kitchen faucet, except that such term does not include multiple-user type fixtures." (Bradley, No.1, at 1-2).

R. Michael Martin stated that the term "faucet" is defined in Section 321(31)(E) of EPCA, 42 U.S.C. § 6291(31)(E), and that the term "lavatory faucet," although not defined in the statute, the regulations, or ASME A112.18.1, is defined in the California regulations as a "plumbing fitting designed to discharge into a lavatory." Mr. Martin also stated that numerous complying sprayhead-installed washfountains are currently listed in the California database. For these reasons, Mr. Martin believes that sprayheads are not exempt, and considers them to be a form of lavatory faucet and therefore a covered product. (R. Michael Martin, No. 9, at 7).

The Department has considered Bradley's recommendation, but does not have the authority to amend the statutory definition for faucet in Section 321(31)(E) of EPCA, 42 U.S.C. § 6291(31)(E). Moreover, DOE agrees with Mr. Martin's view that sprayheads are a form of lavatory faucet and thus can be considered a covered product. DOE believes that any faucet or replacement aerator used in a kitchen or lavatory capacity, or any faucet, when turned on, that gradually shuts itself off after a programmed period (metered), regardless of physical shape or design features, shall constitute a covered "faucet" subject to the water performance requirements of Section 325(j) of EPCA, 42 U.S.C. § 6295(j).

(b) *Application of faucet standards to sprayheads with independently-controlled orifices.* The Department is proposing that sprayheads be considered a covered product and that they be subject to the applicable faucet standards. Sprayheads with multiple orifices can be independently actuated by manual on/off or metering controls. EPCA prescribes a water use standard at 2.5 gpm at 80 psig for lavatory faucets and 0.25 gallons per cycle at 80 psig for metering faucets. EPCA, § 325(j)(2), 42 U.S.C. § 6295(j)(2). The Department believes that each independent orifice that manually turns on or off constitutes a separate "lavatory faucet" by itself subject to the applicable water usage standard for lavatory faucets. Moreover, DOE believes that each independent orifice of a sprayhead that actuates to deliver a pre-set volume of water before gradually shutting itself off constitute a separate "metering faucet" by itself subject to the applicable water usage standard for metering faucets.

Therefore, DOE proposes to include clarifying language to the lavatory and metering faucet standards, in 10 CFR § 430.32(o), to the effect that each orifice, depending on its mode of actuation, shall not exceed the

maximum flow rate for a lavatory or metering faucet.

(c) *Application of faucet standards to sprayheads with collectively-controlled orifices.* Sprayheads can be also centrally controlled such that all available orifices collectively actuate upon demand. The total water flow of a collectively-actuated sprayhead is dependent on the number of users at the lavatory in which the sprayhead is installed. This number is determined by the number of component lavatories that, based on the capacity criterion of a plumbing code, make up a single lavatory. DOE believes the maximum flow rate of such a sprayhead should be prorated by the number of users or component lavatories.

However, a lavatory may be defined to be equivalent to a different number of component lavatories depending on the following plumbing codes: (a) the Standard Plumbing Code,² (b) the Uniform Plumbing Code,³ (c) the National Standard Plumbing Code,⁴ (d) the National Plumbing Code,⁵ and (e) the International Plumbing Code.⁶

The 1991 Standard Plumbing Code, Section 916.1, states, "Each 18 inches of wash sink circumference (circular type) shall be equivalent to one lavatory." The 1991 Uniform Plumbing Code, Appendix C (No. 8), states, "Twenty-four (24) lineal inches (609.6 mm) of wash sink or eighteen (18) inches (457.2 mm) of a circular basin, when provided with water outlets for such space, shall be considered equivalent to one (1) lavatory." The 1993 National Standard Plumbing Code, Section 7.18, states, "Each eighteen inch unit of usable length of a rim of a multiple use lavatory shall be considered equivalent to one lavatory as it affects the drainage and water supply piping sizes and fixture usage requirements, provided hot and cold or tempered water is available for each eighteen inch interval." The 1993 National Plumbing Code, Section P.1217.1, and the 1995 International Plumbing Code, Section 417.1, both state, "Every 20 inches (508 mm) of rim space shall be considered as one lavatory."

DOE believes it is necessary to establish a single capacity criterion to be

applicable for all lavatories. Based on the considerations of all plumbing codes, the Department believes the capacity criterion defined in Section P.1217.1 of the 1993 National Plumbing Code, and Section 417.1 of the 1995 International Plumbing Code for wash sinks (i.e., every 20 inches (508 mm) of rim space shall be considered as one lavatory) would be more versatile to lavatories of various physical configurations and temperature requirements.

Therefore, DOE proposes to include clarifying language with the lavatory and metering faucet standards, in 10 CFR § 430.32(o), to the effect that: (1) the maximum flow rate of a collectively actuated multiple-orifice sprayhead that manually turns on or off shall be the product of (a) the maximum flow rate for a lavatory faucet and, (b) the number of component lavatories (rim space of the lavatory in inches (millimeters) divided by 20 inches (508 millimeters)) and, (2) the maximum flow rate of a collectively actuated multiple-orifice sprayhead that delivers a pre-set volume of water before gradually shutting itself off shall be the product of (a) the maximum flow rate for a metering faucet and, (b) the number of component lavatories (rim space of the lavatory in inches (millimeters) divided by 20 inches (508 millimeters)).

8. Enforcement

Several commenters raised the issue of enforcement of plumbing products regulations. AWWA recommended that DOE establish: (a) a protocol for verifying industry compliance with EPCA; (b) a non-compliance warning system that gives violators of EPCA an opportunity for corrective actions to avoid enforcement sanctions; and (c) a product certification and listing program to improve EPCA compliance and minimize the need for future enforcement actions against the plumbing industry. (AWWA, No. 8, at 24).

Seattle Water Department requested rules for enforcement of the national standards (particularly for imported products) and penalties for manufacture of non-conforming products. It believes the retail marketplace is currently full of nonconforming plumbing products which is unfair to complying manufacturers while robbing consumers and the nation of much needed long term water and energy savings. (Seattle Water Department, No. 7, at 4).

The Department agrees enforcement of the standards is necessary to ensure compliance of all covered products. The Department currently has an enforcement procedure at sections

430.70–430.75 and Appendix B of Title 10 CFR Part 430, Subpart F which the Department is proposing to amend, where appropriate, to include plumbing products. DOE may use these procedures to assess civil penalties under Section 333 of EPCA, 42 U.S.C. 6303. In actions involving small businesses, DOE will be guided by the small entity enforcement policy it is required to adopt by Section 223 of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121, Title II, § 223).

DOE believes that its existing enforcement procedures—which encourage industry policing, prescribe enforcement testing, and provide for civil penalties for all covered consumer products (which include imports) that violate the Federal standards—are adequate for deterring would-be violators. The Department believes that it is not necessary for it to adopt a product certification and listing to improve EPCA compliance. PMI is planning to produce a product directory which will list manufacturers and plumbing products conforming to EPCA. Such a product directory, maintained by PMI and supported by industry, would be valuable to assist consumers and others in identifying plumbing products that comply or do not comply with EPCA.

C. Clarification of Certification Reporting Requirements for Residential Appliances

DOE proposes to redesignate, revise existing language, and add new language and paragraphs as necessary in the CFR sections dealing with certification and enforcement requirements for all residential appliances.

The amendments and revisions proposed for Part 430 of Title 10 of the CFR are as follows:

1. Section 430.62(a) is redesignated as 430.62(a)(1), and revised to include the DOE address to be used for compliance certification reporting.

2. Section 430.62(a), "Compliance Certification" is added as a new section heading.

3. Section 430.62(a)(1) is redesignated as 430.62(a)(3).

4. Section 430.62(a)(2) is redesignated as 430.62(a)(4) and revised by:

(a) rearranging, alphabetically, the certification reporting requirements for refrigerators, refrigerator-freezers and freezers, water heaters, room air conditioners, central air conditioners and central air conditioning heat pumps, pool heaters, furnaces, direct heating equipment, general service

²Southern Building Codes Congress International, Inc., 900 Montclair Road, Birmingham, AL 35213–1206.

³International Association of Plumbing and Mechanical Officials, 20001 Walnut Drive South, Walnut, CA 91789–2825.

⁴National Association of Plumbing-Heating Cooling Contractors, P.O. Box 6808, Falls Church, VA 22046.

⁵Building Officials and Codes Administrators International, Inc., 4051 W. Flossmoor Road, Country Club Hills, IL 60478–5795.

⁶ibid.

fluorescent lamps and incandescent reflector lamps;

(b) amending the certification report to add, alphabetically, absent reporting requirements for kitchen ranges, ovens and microwave ovens, dishwashers, clothes washers and clothes dryers; and

(c) adding, alphabetically, new certification reporting requirements for faucets, showerheads, water closets, and urinals. [see discussion in section II(B)(6)(a)]

5. A new section, 430.62(a)(2), is added to provide a one-year delay of the effective date for compliance certification by manufacturers of faucets, showerheads, water closets, and urinals. [see discussion in section II(B)(6)(d)]

6. Section 430.62(a)(3) is redesignated as 430.62(a)(5), and referenced paragraph "(a)(2)" within the new section is redesignated as paragraph "(a)(4)."

7. Section 430.62(b), "Initial Reporting Requirements," is deleted.

8. Section 430.62(c), "New Models," is redesignated as 430.62(b), and amended by redesignating the referenced paragraph "(a)(2)" as paragraph "(a)(4)," and adding appropriate language to include plumbing products, and a mailing address to be used for submitting new model information.

9. A new section, 430.62(c), "Discontinued Models," is added to specify the information required to be submitted to DOE when models are discontinued.

10. Section 430.62(d), "Maintenance of Records," is amended by adding appropriate language to include plumbing products.

11. Section 430.62(e), "Third Party Representation," is amended by redesignating the referenced paragraph "(a)" to "(a)(4)", and adding language allowing third party representatives to submit discontinued model information on behalf of an authorizing manufacturer.

12. A new section, 430.62(f), "Amendment of Information," is added to expressly require manufacturers to submit revised compliance certification if any information contained in the prior submission has changed.

13. Section 430.70(a)(3), "Sampling," is amended by adding appropriate language to include plumbing products.

14. Section 430.70(a)(6)(i), "Testing at Manufacturer's Option," is amended by adding appropriate language to include plumbing products.

15. Appendix A to Subpart F, Title 10 CFR Part 430, is amended by adding language to include plumbing products; to identify the third party organization

officially acting as representative of the manufacturer; and to include, as an attachment, a uniform format for certification reports on new basic models of a covered products.

16. Appendix B to Subpart F, Title 10 CFR Part 430 is amended to correct typographical errors and add appropriate language to include plumbing products.

The Department believes these proposed amendments and additions are necessary and appropriate and will clarify the certification and enforcement requirements for all residential products.

III. Procedural Requirements

A. Review Under the National Environmental Policy Act of 1969

In this rule, the Department proposes provisions to implement statutorily mandated water conservation standards and test procedures for faucets, showerheads, water closets, and urinals. Implementation of this rule would not result in environmental impacts. The Department has therefore determined that this rule is covered under the Categorical Exclusion found at paragraph A.6 of appendix A to subpart D, 10 CFR Part 1021, which applies to the establishment of procedural rulemakings. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

B. Review Under Executive Order 12866, "Regulatory Planning and Review"

This regulatory action is not a significant regulatory action under Executive Order 12866, "Regulatory Planning and Review," October 4, 1993. Accordingly, this action was not subject to review under the Executive Order by the Office of Information and Regulatory Affairs.

C. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act, 5 U.S.C. § 603, requires the preparation of an initial regulatory flexibility analysis for every rule which 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. A regulatory flexibility analysis examines the impact of the rule on small entities and considers alternative ways of reducing negative impacts.

The Department used the small business size standards published on January 31, 1996 by the Small Business Administration to determine whether

any small entities would be required to comply with this proposed rule. 61 FR 3280 (to be codified at 13 CFR part 121). The size standards are listed by Standard Industrial Classification (SIC) code and industry description.

Plumbing fixtures (water closets and urinals) manufacturing is listed under the following SIC codes: (1) SIC 3088 (plastic plumbing fixtures), (2) SIC 3261 (vitreous china plumbing fixtures), and (3) SIC 3431 (enameled iron, cast iron, and pressed metal plumbing fixtures). Plumbing fixture fittings (faucets and showerheads) manufacturing is SIC 3432. To be considered a small business, a manufacturer of plastic plumbing fixtures, vitreous china plumbing fixtures, enameled iron, cast iron, and pressed metal plumbing fixtures, or plumbing fixture fittings and its affiliates may employ a maximum of 500, 750, 750, or 500 employees, respectively.

The Department estimates there are approximately 32 domestic firms and 38 foreign firms which manufacture either plastic, vitreous china, or enameled iron, cast iron, and pressed metal plumbing fixtures, or a combination of the three various types of plumbing fixtures. DOE also estimates there are 57 domestic firms and 30 foreign firms which manufacture plumbing fixture fittings covered under EPCA.⁷ Some domestic manufacturers of plumbing fixtures also manufacture plumbing fixture fittings. Moreover, many domestic manufacturers of plumbing fixtures and fixture fittings are affiliated with larger U.S. firms. The sizes of plumbing fixtures manufacturing companies and their affiliates in the U.S. range from 50 employees to 54,298 employees, and for plumbing fixture fittings manufacturing companies and their affiliates, they range from 50 employees to 51,300 employees. The Department estimates there are five to seven firms in the United States that both manufacture plumbing fixtures covered by EPCA, and have, together with their affiliates, 750 or fewer employees. DOE estimates that there are approximately 7 firms in the United States that both manufacture plumbing fixture fittings covered by EPCA, and have, together with their affiliates, 500 or fewer employees.

EPCA prescribes water conservation standards for faucets, showerheads, water closets, and urinals. The statutory water conservation standards are incorporated in the proposed rule, although the standards do not depend

⁷ *America's Corporate Families and International Affiliates*, Volume I—III, Dun & Bradstreet, Inc., 1996

on rulemaking for their implementation. The Act also requires DOE to prescribe test procedures for measuring water consumption, and it further requires the use of the test procedures in ASME/ANSI Standards A112.18.1M-1989 (for faucets and showerheads) and A112.19.6-1990 (for water closets and urinals). If the water conservation standards or the test procedures for water consumption are amended by ASME and approved by ANSI, DOE is required to amend its standards or test procedures accordingly unless to do so would not meet certain statutory criteria for standards or test procedures. The standard for faucets and test procedures for faucets and showerheads were amended on September 15, 1994 in ASME/ANSI Standard A112.18.1M-1994, and DOE is now proposing to incorporate in the CFR ASME/ANSI Standard A112.18.1M-1994.

DOE believes that complying with the proposed rule (excluding the cost of compliance with the water conservation standards and test procedures directly imposed by EPCA) would not impose significant economic costs on a substantial number of small manufacturers. The test procedure mandated by EPCA (in ASME/ANSI Standard A112.19.6-1990) and that which is proposed to be incorporated by DOE (in ASME/ANSI Standard A112.18.1M-1994) are test procedures already in general use in the industry. Manufacturers contacted by the Department stated that they currently test faucets and showerheads in accordance with ASME/ANSI Standard A112.18.1M-1994, and water closets and urinals in accordance with ASME/ANSI Standard A112.19.6-1990.

The proposed rule has been drafted to minimize the burden of testing for all manufacturers, and DOE has relied heavily on recommendations that have been provided by the plumbing products trade association, their member companies and other water conservation organizations. The proposed statistical sampling procedures are based on statistical sampling procedures established for consumer appliance products at 10 CFR § 430.24, and recommendations submitted by the Plumbing Manufacturers Institute (PMI), American Water Works Association (AWWA), and New York State Department of Environmental Conservation (NYSDEC). The sampling procedures are designed to keep the testing burden on manufacturers as low as possible, while still providing confidence that the test results of units tested can be applied to units of the same basic model. The proposed compliance reporting

requirements are based on recommendations from PMI and are consistent with the requirements for consumer appliance products at 10 CFR § 430.62.

DOE recognizes that some manufacturers may not be able to certify compliance immediately following publication of the DOE final rule. Such submissions generally are required before a basic model is allowed to be distributed in commerce. 10 CFR § 430.62(a). The proposed rule eases the burden of compliance for manufacturers of faucets, showerheads, water closets, and urinals, including small manufacturers, by providing that the certification reporting requirements for initial submissions would not take effect until 12 months after the publication of the final rule.

The Department invites public comment on its conclusion that the costs of complying with the proposed rule would neither affect a substantial number of small businesses, nor impose a significant economic impact on such businesses.

D. Review Under Executive Order 12612, "Federalism"

Executive Order 12612, "Federalism," 52 FR 41685 (October 30, 1987), requires that regulations, rules, legislation, and any other policy actions be reviewed for any substantial direct effect on States, on the relationship between the National Government and States, or in the distribution of power and responsibilities among various levels of government. If there are substantial effects, then the Executive Order requires preparation of a federalism assessment to be used in all decisions involved in promulgating and implementing a policy action.

The proposed rules published today would not regulate the States. They primarily would affect the manner in which DOE promulgates residential and commercial products, water conservation standards, test procedures, and certification of compliance by manufacturers, prescribed under the Energy Conservation and Policy Act. State regulation in this area is largely preempted by the Energy Policy and Conservation Act. The proposed rules published today would not alter the distribution of authority and responsibility to regulate in this area. Accordingly, DOE has determined that preparation of a federalism assessment is unnecessary.

E. Review Under Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights"

It has been determined pursuant to Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights," 52 FR 8859 (March 18, 1988), that this regulation would not result in any takings which might require compensation under the Fifth Amendment to the United States Constitution.

F. Review Under the Paperwork Reduction Act

Today's Notice of Proposed Rulemaking would revise compliance certification requirements applicable to manufacturers of covered consumer products that were previously approved by the Office of Management and Budget (OMB). These proposed collections of information have been submitted to the Office of Management and Budget for review and approval under the Paper Reduction Act, 44 U.S.C. 3501, et seq.

Appendix A to Subpart F of Part 430, "Compliance Statement," was previously approved by OMB and assigned OMB Control No. 1910-1400. The proposed rule would revise this form to cover certification of plumbing products; facilitate use of the form by third party representatives of covered product manufacturers; and, in an attachment, specify the format of the certification report that manufacturers currently are required to submit to DOE by 10 CFR part 430.62(a)(2). The revisions to appendix A to subpart F will make the compliance certifications more uniform and easier to complete. DOE estimates there will be no additional burden associated with these changes to the certification statement and certification report requirements in Part 430.

The proposed rule would require manufacturers of plumbing products to maintain records concerning their determinations of the water consumption of faucets, showerheads, water closets and urinals. DOE has concluded that this recordkeeping requirement is necessary for implementing and monitoring compliance with the water conservation standards, testing and certification requirements for residential and commercial faucets, showerheads, water closets and urinals mandated by EPCA.

The proposed rule also requires manufacturers to submit initial certification reports for basic models of covered faucets, showerheads, water

closets and urinals within 12 months after the publication of a final rule in the Federal Register. The initial certification reports would be a one-time submission stating that the manufacturer has determined by employing actual testing that the basic model of faucet, showerhead, water closet or urinal meets the applicable water conservation standard. After the first year, manufacturers of plumbing products would have to submit a certification report for each new basic model, or to certify compliance with a new or amended standard, before the model would be allowed to be distributed in commerce.

DOE estimates the number of covered manufacturing firms of plumbing fixtures to be approximately 70. DOE estimates the number of hours required to comply with the reporting and recordkeeping requirements in the proposed rule, after the initial year of compliance, to be approximately 4 to 16 hours per year per firm. The total annual reporting and recordkeeping burden on manufacturers of plumbing fixtures to comply with the proposed rule is expected to be from 280 to 1120 hours (70×4 – 16 hours per year). DOE estimates the number of covered manufacturing firms of plumbing fixture fittings to be approximately 87, and the number of hours required to comply with the reporting and recordkeeping requirements in the proposed rule to be approximately 4 to 8 hours per year per firm. The total annual reporting and recordkeeping burden on manufacturers of plumbing fixture fittings to comply with the proposed rule is expected to be from 348 to 696 hours (87×4 – 8 hours per year). These estimates include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the collection of information.

The collections of information contained in this proposed rule are considered the least burdensome for meeting the legal requirements and achieving the program objectives of the DOE compliance certification program for faucets, showerheads, water closets and urinals. In estimating the paperwork and recordkeeping burden, DOE considered that many manufacturers already submit this type of information to voluntary plumbing product listing services, such as the International Association of Plumbing & Mechanical Officials' (IAPMO's) Annual Directory of Listed Plumbing Products. These manufacturers should be able to comply with the certification required by the proposed rule without much additional burden.

DOE invites public comments concerning the accuracy of the estimated paperwork reporting burden. Send comments regarding the recordkeeping and reporting burden estimate, or any other aspect of this collection of information, to the Department in accordance with the instructions in the ADDRESSES section of today's notice, section IV, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for DOE."

G. Review Under Executive Order 12988, "Civil Justice Reform"

With respect to the review of existing regulations and the promulgation of new regulations, Section 3(a) of Executive Order 12988, "Civil Justice Reform," 61 FR 4729 (February 7, 1996), imposes on executive agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; and (3) provide a clear legal standard for affected conduct rather than a general standard and promote simplification and burden reduction. With regard to the review required by Section 3(a), Section 3(b) of the Executive Order 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) provide 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 the Executive Order requires Executive agencies to review regulations in light of applicable standards Section 3(a) and Section 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE reviewed today's proposed rulemaking under the standards of Section 3 of the Executive Order and determined that, to the extent permitted by law, they meet the requirements of those standards.

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

Pursuant to Section 301 of the Department of Energy Organization Act (Pub. L. 95-91), the Department of Energy is required to comply with Section 32 of the Federal Energy

Authorization Act (FEAA), as amended by Section 9 of the Federal Energy Administration Authorization Act of 1977 (Pub. L. 95-70). Section 32 provides in essence that, where a proposed rule contains or involves use of commercial standards, the notice of proposed rulemaking must inform the public of the use and background of such standards.

The rule proposed in this notice adopts one commercial standard, ASME/ANSI Standard A112.19.6-1990, and incorporates another, ASME/ANSI A112.18.1M-1994. In regard to ASME/ANSI Standard A112.19.6-1990, the Act directs adoption of this commercial standard, which provides the procedures required for measuring the water consumption of water closets and urinals. Because Congress has directed the use of the standard, Section 32 of the FEAA has no application to it. In regard to ASME/ANSI Standard A112.18.1M-1994, which provides the procedures required for measuring the water consumption of faucets and showerheads, the Department has evaluated this Standard and is unable to conclude whether it was developed in a manner which fully provides for public participation, comment, and review. However, Congress has, by statute, mandated use of the ASME/ANSI Standard unless specific findings are made.

As required by Section 32(c) of the Federal Energy Administration Act, the Department will consult with the Attorney General and the Chairman of the Federal Trade Commission concerning the impact of this standard on competition, prior to prescribing a final rule.

I. Review Under Unfunded Mandates Reform Act of 1995

Section 202 of the Unfunded Mandates Reform Act of 1995 ("Unfunded Mandates Act") requires that the Department prepare a budgetary impact statement before promulgating a rule that includes a Federal mandate that may result in expenditure by state, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more in any one year. The budgetary impact statement must include: (i) identification of the Federal law under which the rule is promulgated; (ii) a qualitative and quantitative assessment of anticipated costs and benefits of the Federal mandate and an analysis of the extent to which such costs to state, local, and tribal governments may be paid with Federal financial assistance; (iii) if feasible, estimates of the future compliance costs and of any

disproportionate budgetary effects the mandate has on particular regions, communities, non-Federal units of government, or sectors of the economy; (iv) if feasible, estimates of the effect on the national economy; and (v) a description of the Department's prior consultation with elected representatives of state, local, and tribal governments and a summary and evaluation of the comments and concerns presented.

The Department has determined that the action proposed today does not include a Federal mandate that may result in estimated costs of \$100 million or more to state, local or to tribal governments in the aggregate or to the private sector. Therefore, the requirements of Sections 203 and 204 of the Unfunded Mandates Act do not apply to this action.

IV. Public Comment.

A. Written Comment Procedures

Interested persons are invited to participate in the proposed rulemaking by submitting data, comments, or information with respect to the proposed issues set forth in sections (II)(A)(1)(a), (II)(A)(2)(a), (II)(B), and (II)(C) of this notice to the address indicated at the beginning of the notice.

Comments should be identified both on the envelope and on the documents as "Test Procedures and Certification Requirements for Plumbing Products; and Certification Requirements for Residential Appliances, Docket No. EE-RM/TP-97-600." Ten (10) copies are requested to be submitted. In addition, the Department requests that an electronic copy (3½" diskette) of the comments on WordPerfect™ 6.1 be provided. All submittals received by the date specified at the beginning of this notice will be considered by the Department in developing the final rule.

Pursuant to the provisions of Title 10 CFR 1004.11, any person submitting information which he or she believes to be confidential and exempt by law from public disclosure should submit one complete copy of the document and ten (10) copies, if possible, from which the information believed to be confidential has been deleted. The Department of Energy will make its own determination with regard to the confidential status of the information and treat it according to its determination.

Factors of interest to the Department when evaluating requests to treat as confidential information that has been submitted include: (1) a description of the items; (2) an indication as to whether and why such items are customarily treated as confidential

within the industry; (3) whether the information is generally known by or available from other sources; (4) whether the information has previously been made available to others without obligation concerning its confidentiality; (5) an explanation of the competitive injury to the submitting person which would result from public disclosure; (6) an indication as to when such information might lose its confidential character due to the passage of time; and (7) why disclosure of the information would be contrary to the public interest.

B. Public Hearing

1. Procedures for Submitting Requests to Speak

The time and place of the public hearing are indicated at the beginning of this notice of proposed rulemaking. The Department invites any person who has an interest in today's notice of proposed rulemaking, or who is a representative of a group or class of persons that has an interest in these proposed issues, to make a request for an opportunity to make an oral presentation. Such requests should be directed to the address or telephone number indicated at the beginning of this notice. Requests may be hand delivered to such address between the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday, except Federal holidays. Requests should be labeled "Test Procedures and Certification Requirements for Plumbing Products; and Certification Requirements for Residential Appliances, Docket No. EE-RM/TP-97-600," both on the document and on the envelope.

The person making the request should briefly describe the interest concerned and state why he or she, either individually or as a representative of a group or class of persons that has such an interest, is an appropriate spokesperson, and give a telephone number where he or she may be contacted.

Each person selected to be heard is requested to submit an advance copy of his or her statement prior to the hearing as indicated at the beginning of this notice. In the event any persons wishing to testify cannot meet this requirement, that person may make alternative arrangements with the Office of Hearings and Dockets in advance by so indicating in the letter requesting to make an oral presentation.

2. Conduct of Hearing

The Department of Energy reserves the right to select the persons to be heard at the hearing, to schedule the

respective presentations, and to establish the procedures governing the conduct of the hearing. The length of each presentation is limited to 20 minutes.

A DOE official will be designated to preside at the hearing. The hearing will not be a judicial or an evidentiary-type hearing, but will be conducted in accordance with 5 U.S.C. 553 and Section 336 of the Act. At the conclusion of all initial oral statements at each day of the hearing, each person who has made an oral statement will be given the opportunity to make a rebuttal statement, subject to time limitations. The rebuttal statements will be given in the order in which the initial statements were made. The official conducting the hearing will accept additional comments or questions from those attending, as time permits.

Any further procedural rules needed for the proper conduct of the hearing will be announced by the presiding official.

A transcript of the hearing will be made, and the entire record of this rulemaking, including the transcript, will be retained by the Department of Energy and made available for inspection in the Freedom of Information Reading Room, (Room No: 1E-190), at the U.S. Department of Energy, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585-0121, (202) 586-6020, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except Federal holidays. Any person may purchase a copy of the transcript from the transcribing reporter.

C. Issues Requested for Comment

The Department of Energy is interested in receiving comments and/or data concerning the feasibility, workability and appropriateness of the preceding issues proposed in today's proposed rulemaking. Also, DOE welcomes discussion on improvements or alternatives to these approaches. In particular, the Department is interested in gathering comments on the following:

- Incorporation by reference of the test procedure requirements for faucets and showerheads, and the water conservation standard for faucets, in ASME/ANSI Standard A112.18.1M-1994.
- Requirements to submit metric equivalents.
- Definitions of "basic model" for faucets, showerheads, water closets, and urinals.
- Statistical sampling plan requirements for water closets and urinals utilizing one-sided confidence limits at 90% with a 1.10 divisor, and

for faucets and showerheads, at 95% with a 1.05 divisor.

• Appropriateness of proposed modifications to existing language in the CFR and the adoption of enforcement provisions for plumbing products.

• The definition for "electromechanical hydraulic toilet."

• The types of information, precision of reported results, mathematical rounding procedures and the approach to apply such procedures for certifying compliance.

• The effective date for certification submissions.

• Inclusion of sprayheads as covered products, and application of faucet standards on independently actuating multiple-orifice sprayheads.

• The establishment of a single capacity criterion based on the 1993 National Plumbing and 1995 International Plumbing Code, to be used in defining maximum flow rate of collectively-actuating sprayheads.

• Amendments to the existing certification reporting requirements for all residential appliances.

• The likelihood that today's proposed rule would cause significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act of 1980.

• The information collection and recordkeeping burden on the industry of this proposed rule.

List of Subjects in 10 CFR Part 430

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements, Small businesses.

Issued in Washington, DC, January 22, 1997.

Brian T. Castelli, Chief of Staff Energy Efficiency and Renewable Energy.

For the reasons set forth in the preamble, Part 430 of Chapter II of Title 10, Code of Federal Regulations, is proposed to be amended as follows.

PART 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

1. The authority citation for Part 430 continues to read as follows:

Authority: 42 U.S.C. 6291-6309.

2. Section 430.2 of Subpart A is amended by revising the definitions for "consumer product," and "energy conservation standard," adding new paragraphs (17) through (20) in the

definition of "basic model," and adding new definitions for "ANSI," "ASME," "blowout," "electromechanical hydraulic toilet," "estimated annual operating cost," "faucet," "flushometer tank," "flushometer valve," "low consumption," "showerhead," "urinal," "water closet," and "water use" in alphabetical order, to read as follows:

Subpart A—General Provisions

§ 430.2 Definitions.

* * * * *

ANSI means the American National Standards Institute.

ASME means the American Society of Mechanical Engineers.

* * * * *

Basic model * * *

(17) With respect to faucets, which have the identical flow control mechanism attached to or installed within the fixture fittings, or the identical water-passage design features that use the same path of water in the highest-flow mode.

(18) With respect to showerheads, which have the identical flow control mechanism attached to or installed within the fixture fittings, or the identical water-passage design features that use the same path of water in the highest-flow mode.

(19) With respect to water closets, which have hydraulic characteristics that are essentially identical, and which do not have any differing physical or functional characteristics that affect water consumption.

(20) With respect to urinals, which have hydraulic characteristics that are essentially identical, and which do not have any differing physical or functional characteristics that affect water consumption.

* * * * *

Blowout has the meaning given such a term in ASME A112.19.2M-1990. (see § 430.22)

* * * * *

Consumer product means any article (other than an automobile, as defined in Section 501(1) of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2001(1)) of a type which in operation consumes, or is designed to consume, energy or, with respect to showerheads, faucets, water closets, and urinals, water; and which, to any significant extent, is distributed in commerce for personal use or consumption by individuals; without regard to whether such article of such type is in fact distributed in commerce for personal use or consumption by an individual, except that such item includes fluorescent lamp ballasts,

general service fluorescent lamps, incandescent reflector lamps, showerheads, faucets, water closets, and urinals distributed in commerce for personal or commercial use or consumption.

* * * * *

Electromechanical hydraulic toilet means any water closet that utilizes electrically operated devices, such as, but not limited to, air compressors, pumps, solenoids, motors, or macerators in place of or to aid gravity in evacuating waste from the toilet bowl.

Energy conservation standard means:

(1) A performance standard which prescribes a minimum level of energy efficiency or a maximum quantity of energy use, or, in the case of showerheads, faucets, water closets, and urinals, water use, for a covered product, determined in accordance with test procedures prescribed under Section 323 (42 U.S.C. 6293); or

(2) A design requirement for the products specified in paragraphs (6), (7), (8), (10), (15), (16), (17), and (19) of Section 322(a) (42 U.S.C. 6292(a)); and

(3) includes any other requirements which the Secretary may prescribe under Section 325(r) (42 U.S.C. 6295(r)).

Estimated annual operating cost means the aggregate retail cost of the energy which is likely to be consumed annually, and in the case of showerheads, faucets, water closets, and urinals, the aggregate retail cost of water and wastewater treatment services likely to be incurred annually, in representative use of a consumer product, determined in accordance with Section 323 (42 U.S.C. 6293).

* * * * *

Faucet means a lavatory faucet, kitchen faucet, metering faucet, or replacement aerator for a lavatory or kitchen faucet.

* * * * *

Flushometer tank means a device whose function is defined in flushometer valve, but integrated within an accumulator vessel affixed and adjacent to the fixture inlet so as to cause an effective enlargement of the supply line immediately before the unit.

Flushometer valve means a valve attached to a pressurized water supply pipe and so designed that when actuated, it opens the line for direct flow into the fixture at a rate and quantity to properly operate the fixture, and then gradually closes to provide trap reseal in the fixture in order to avoid water hammer. The pipe to which this device is connected is in itself of sufficient size, that when open, will allow the device to deliver water at a

sufficient rate of flow for flushing purposes.

* * * * *

Low consumption has the meaning given such a term in ASME A112.19.2M-1990. (see § 430.22)

* * * * *

Showerhead means any showerhead (including a handheld showerhead), except a safety shower showerhead.

* * * * *

Urinal means a plumbing fixture which receives only liquid body waste and, on demand, conveys the waste through a trap seal into a gravity drainage system. However, this term does not include fixtures designed for installations in prisons.

* * * * *

Water closet means a plumbing fixture that has a water-containing receptor which receives liquid and solid body waste, and upon actuation, conveys the waste through an exposed integral trap seal into a gravity drainage system. However, this term does not include fixtures designed for installation in prisons.

* * * * *

Water use means the quantity of water flowing through a showerhead, faucet, water closet, or urinal at point of use, determined in accordance with test procedures under Section 323 (42 U.S.C. 6293).

* * * * *

3. Section 430.22 of subpart B is amended by adding paragraph (a)(3)(iv) and adding item numbers 13 and 14 to paragraph (a)(4), to read as follows:

Subpart B—Test Procedures

§ 430.22 Reference Sources.

(a) * * *

(3) * * *

(iv) American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.

(4) * * *

13. ASME/ANSI Standard A112.18.1M-1994, "Plumbing Fixture Fittings."

14. ASME/ANSI Standard A112.19.6-1990, "Hydraulic Requirements for Water Closets and Urinals."

* * * * *

4. Section 430.23 of subpart B is amended by revising the section heading and adding new paragraphs (s), (t), (u), and (v), to read as follows:

§ 430.23 Test procedures for measures of energy and water consumption.

* * * * *

(s) *Faucets*. The maximum permissible water use allowed for lavatory faucets, lavatory replacement aerators, kitchen faucets, and kitchen

replacement aerators, expressed in gallons and liters per minute (gpm and L/min), shall be measured in accordance to section 2(a) of Appendix S of this subpart. The maximum permissible water use allowed for metering faucets, expressed in gallons and liters per cycle (gal/cycle and L/cycle), shall be measured in accordance to section 2(a) of Appendix S of this subpart.

(t) *Showerheads*. The maximum permissible water use allowed for showerheads, expressed in gallons and liters per minute (gpm and L/min), shall be measured in accordance to section 2(b) of Appendix S of this subpart.

(u) *Water closets*. The maximum permissible water use allowed for water closets, expressed in gallons and liters per flush (gpf and Lpf), shall be measured in accordance to section 3(a) of Appendix T of this subpart.

(v) *Urinals*. The maximum permissible water use allowed for urinals, expressed in gallons and liters per flush (gpf and Lpf), shall be measured in accordance to section 3(b) of Appendix T of this subpart.

5. Section 430.24 of subpart B is amended by adding new paragraphs (s), (t), (u), and (v), to read as follows:

§ 430.24 Units to be tested.

* * * * *

(s) For each basic model of faucet,¹ a sample of sufficient size shall be tested to ensure that any represented value of water consumption of a basic model for which consumers favor lower values shall be no less than the higher of the mean of the sample or the upper 95 percent confidence limit of the true mean divided by 1.05.

(t) For each basic model¹ of showerhead, a sample of sufficient size shall be tested to ensure that any represented value of water consumption of a basic model for which consumers favor lower values shall be no less than the higher of the mean of the sample or the upper 95 percent confidence limit of the true mean divided by 1.05.

(u) For each basic model¹ of water closet, a sample of sufficient size shall be tested to ensure that any represented value of water consumption of a basic model for which consumers favor lower values shall be no less than the higher of the mean of the sample or the upper 90 percent confidence limit of the true mean divided by 1.1.

(v) For each basic model¹ of urinal, a sample of sufficient size shall be tested to ensure that any represented value of

¹ Components of similar design may be substituted without requiring additional testing if the represented measures of energy or water consumption continue to satisfy the applicable sampling provision.

water consumption of a basic model for which consumers favor lower values shall be no less than the higher of the mean of the sample or the upper 90 percent confidence limit of the true mean divided by 1.1.

§ 430.27 [Amended]

6. Section 430.27 of subpart B is amended by:

a. Adding the words "or water" between the words "energy" and "consumption" in paragraphs: (a)(1), (b)(1)(iii), and (l) (first sentence); and

b. Revising the existing referenced section "§ 430.22" in paragraph (a)(1) to read as "§ 430.23".

7. Subpart B of Part 430 is amended by adding Appendix S and Appendix T, to read as follows:

Appendix S to Subpart B of Part 430—Uniform Test Method for Measuring the Water Consumption of Faucets and Showerheads

1. *Scope*: This Appendix covers the test requirements used to measure the hydraulic performance of faucets and showerheads.

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 6.5, Flow Capacity Test, of the ASME/ANSI Standard A112.18.1M-1994. (see § 430.22)

b. *Showerheads*—The test conditions 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 6.5, Flow Capacity Test, of the ASME/ANSI Standard A112.18.1M-1994. (see § 430.22)

Appendix T to Subpart B of Part 430—Uniform Test Method for Measuring the Water Consumption of Water Closets and Urinals

1. *Scope*: This Appendix covers the test requirements used to measure the hydraulic performances of water closets and urinals.

2. *Test Apparatus and General Instructions*:

a. The test apparatus and instructions for testing water closets shall conform to the requirements specified in section 7.1.2, Test Apparatus and General Requirements, subsections 7.1.2.1, 7.1.2.2, and 7.1.2.3 of the ASME/ANSI Standard A112.19.6-1990. (see § 430.22)

b. The test apparatus and instructions for testing urinals shall conform to the requirements specified in section 8.2, Test Apparatus and General Requirements, subsections 8.2.1, 8.2.2, and 8.2.3 of the

ASME/ANSI Standard A112.19.6-1990. (see § 430.22)

3. Test Measurement:

a. Water closets—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 7.1.6, Water Consumption and Hydraulic Characteristics, of the ASME/ANSI Standard A112.19.6-1990. (see § 430.22)

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 8.5, Water Consumption, of the ASME/ANSI Standard A112.19.6-1990. (see § 430.22)

8. The subpart heading for Subpart C is revised to read as follows:

Subpart C—Energy and Water Conservation Standards

9. Section 430.31 is revised to read as follows:

§ 430.31 Purpose and scope.

This subpart contains energy and water conservation standards for classes of covered products that are required to be administered by the Department of Energy pursuant to the Energy Conservation Program for Consumer Products Other Than Automobiles under the Energy Policy and Conservation Act, as amended (42 U.S.C.6291 *et seq.*). Basic models of covered products manufactured before the date on which an amended energy or water conservation standard becomes effective, (or revisions of such models that are manufactured after such date and have the same energy efficiency, energy use or water use characteristics), that comply with the energy or water conservation standard applicable to such covered products on the day before such date shall be deemed to comply with the amended energy or water conservation standard.

10. Section 430.32 of subpart C is amended by revising the section heading, revising the introductory paragraph, and adding paragraphs (o), (p), (q), and (r), to read as follows:

§ 430.32 Energy and water conservation standards and effective dates.

The energy and water conservation standards for the covered product classes are:

* * * * *

(o) *Faucets.* The maximum water use allowed for any of the following faucets manufactured after January 1, 1994, when measured at a flowing water pressure of 60 pounds per square inch (414 kilopascals), shall be as follows:

| Faucet type | Maximum flow rate (gpm (L/min)) or (gal/cycle (L/cycle)) |
|--------------------------------|---|
| Lavatory faucets | 2.2 gpm (8.3 L/min). ^{(1)(i) (2)(i)} |
| Lavatory replacement aerators. | 2.2 gpm (8.3 L/min). |
| Kitchen faucets | 2.2 gpm (8.3 L/min). |
| Kitchen replacement aerators. | 2.2 gpm (8.3 L/min). |
| Metering faucets | 0.25 gal/cycle (0.95 L/cycle). ^{(1)(ii) (2)(ii)} |

Note:

(1) Sprayheads with independently-controlled orifices.

(i) The maximum flow rate of each orifice that manually turns on or off shall not exceed the maximum flow rate for a lavatory faucet.

(ii) The maximum flow rate of each orifice that delivers a pre-set volume of water before gradually shutting itself off shall not exceed the maximum flow rate for a metering faucet.

Note:

(2) Sprayheads with collectively-controlled orifices.

(i) The maximum flow rate of a sprayhead that manually turns on or off shall be the product of (a) the maximum flow rate for a lavatory faucet and (b) the number of component lavatories (rim space of the lavatory in inches (millimeters) divided by 20 inches (508 millimeters)).

(ii) The maximum flow rate of a sprayhead that delivers a pre-set volume of water before gradually shutting itself off shall be the product of (a) the maximum flow rate for a metering faucet and (b) the number of component lavatories (rim space of the lavatory in inches (millimeters) divided by 20 inches (508 millimeters)).

(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 (552 kilopascals). Any such showerhead shall also meet the requirements of ASME/ANSI Standard A112.18.1M-1994, 7.4.4(a).

(q) *Water closets.* (1) The maximum water use allowed in gallons per flush for any of the following water closets manufactured after January 1, 1994, shall be as follows:

| Water closet type | Maximum flush rate (gpf (Lpf)) |
|---|--------------------------------|
| Gravity tank-type toilets | 1 1.6 (6.0) |
| Flushometer tank toilets | 1.6 (6.0) |
| Electromechanical hydraulic toilets | 1.6 (6.0) |
| Blowout toilets | 3.5 (13.2) |

¹ The maximum water use allowed for any gravity tank-type white two-piece toilet which bears an adhesive label, conspicuous upon installation, with the words "Commercial Use Only" manufactured after January 1, 1994, and before January 1, 1997, shall be 3.5 gallons per flush (13.2 liters per flush).

(2) The maximum water use allowed for flushometer valve toilets, other than blowout toilets, manufactured after

January 1, 1997, shall be 1.6 gallons per flush (6.0 liters per flush).

(r) *Urinals.* The maximum water use allowed for any urinals manufactured after January 1, 1994, shall be 1.0 gallons per flush (3.8 liters per flush).

11. Section 430.33 of subpart C is revised to read as follows:

§ 430.33 Preemption of state regulations.

Any state regulation providing for any energy or water conservation standard, or other requirement with respect to the energy efficiency, energy use, or water use of a covered product that is not identical to a Federal standard in effect under this subpart is preempted by that standard, except as provided for in sections 327 (b) and (c) of the Act.

Subpart D—Petitions To Exempt State Regulation From Preemption; Petitions To Withdraw Exemption of State Regulation

12. Section 430.40 of subpart D is revised to read as follow:

§ 430.40 Purpose and scope.

(a) This subpart prescribes the procedures to be followed in connection with petitions requesting a rule that a State regulation prescribing an energy or water conservation standard or other requirement respecting energy efficiency, energy use, or water use of a type (or class) of covered product not be preempted.

(b) This subpart also prescribes the procedures to be followed in connection with petitions to withdraw a rule exempting a State regulation prescribing an energy or water conservation standard or other requirement respecting energy efficiency, energy use, or water use of a type (or class) of covered product.

13. Section 430.41 of subpart D is revised to read as follows:

§ 430.41 Prescriptions of a rule.

(a) *Criteria for exemption from preemption.* Upon petition by a State which has prescribed an energy or water conservation standard or other requirement for a type or class of covered equipment for which a Federal energy or water conservation standard is applicable, the Secretary shall prescribe a rule that such standard not be preempted if he determines that the State has established by a preponderance of evidence that such requirement is needed to meet unusual and compelling State or local energy or water interests. For the purposes of this section, the term "unusual and compelling State or local energy or water interests" means interests which are substantially different in nature or

magnitude than those prevailing in the U.S. generally, and are such that when evaluated within the context of the State's energy or water plan and forecast, the costs, benefits, burdens, and reliability of energy or water savings resulting from the State regulation make such regulation preferable or necessary when measured against the costs, benefits, burdens, and reliability of alternative approaches to energy or water savings or production, including reliance on reasonably predictable market-induced improvements in efficiency of all equipment subject to the State regulation. The Secretary may not prescribe such a rule if he finds that interested persons have established, by a preponderance of the evidence, that the State's regulation will significantly burden manufacturing, marketing, distribution, sale or servicing of the covered equipment on a national basis. In determining whether to make such a finding, the Secretary shall evaluate all relevant factors including: the extent to which the State regulation will increase manufacturing or distribution costs of manufacturers, distributors, and others; the extent to which the State regulation will disadvantage smaller manufacturers, distributors, or dealers or lessen competition in the sale of the covered product in the State; the extent to which the State regulation would cause a burden to manufacturers to redesign and produce the covered product type (or class), taking into consideration the extent to which the regulation would result in a reduction in the current models, or in the projected availability of models, that could be shipped on the effective date of the regulation to the State and within the U.S., or in the current or projected sales volume of the covered product type (or class) in the State and the U.S.; and the extent to which the State regulation is likely to contribute significantly to a proliferation of State appliance efficiency requirements and the cumulative impact such requirements would have. The Secretary may not prescribe such a rule if he finds that such a rule will result in the unavailability in the State of any covered product (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the State at the time of the Secretary's finding. The failure of some classes (or types) to meet this criterion shall not affect the Secretary's determination of whether to prescribe a rule for other classes (or types).

(1) *Requirements of petition for exemption from preemption.* A petition from a State for a rule for exemption from preemption shall include the information listed in paragraphs (a)(1)(i) through (a)(1)(vi) of this section. A petition for a rule and correspondence relating to such petition shall be available for public review except for confidential or proprietary information submitted in accordance with the Department of Energy's Freedom of Information Regulations set forth in 10 CFR Part 1004:

(i) The name, address, and telephone number of the petitioner;

(ii) A copy of the State standard for which a rule exempting such standard is sought;

(iii) A copy of the State's energy or water plan and forecast;

(iv) Specification of each type or class of covered product for which a rule exempting a standard is sought;

(v) Other information, if any, believed to be pertinent by the petitioner; and

(vi) Such other information as the Secretary may require.

(2) [Reserved]

(b) *Criteria for exemption from preemption when energy or water emergency conditions exist within State.* Upon petition by a State which has prescribed an energy or water conservation standard or other requirement for a type or class of covered product for which a Federal energy or water conservation standard is applicable, the Secretary may prescribe a rule, effective upon publication in the Federal Register, that such State regulation not be preempted if he determines that in addition to meeting the requirements of paragraph (a) of this section the State has established that: an energy or water emergency condition exists within the State that imperils the health, safety, and welfare of its residents because of the inability of the State or utilities within the State to provide adequate quantities of gas, electric energy, or water to its residents at less than prohibitive costs; and cannot be substantially alleviated by the importation of energy or water or the use of interconnection agreements; and the State regulation is necessary to alleviate substantially such condition.

(1) *Requirements of petition for exemption from preemption when energy or water emergency conditions exist within a State.* A petition from a State for a rule for exemption from preemption when energy or water emergency conditions exist within a State shall include the information listed in paragraphs (a)(1)(i) through (a)(1)(vi) of this section. A petition shall also include the information prescribed

in paragraphs (b)(1)(i) through (b)(1)(iv) of this section, and shall be available for public review except for confidential or proprietary information submitted in accordance with the Department of Energy's Freedom of Information Regulations set forth in 10 CFR Part 1004:

(i) A description of the energy or water emergency condition which exists within the State, including causes and impacts.

(ii) A description of emergency response actions taken by the State and utilities within the State to alleviate the emergency condition;

(iii) An analysis of why the emergency condition cannot be alleviated substantially by importation of energy or water or the use of interconnection agreements; and

(iv) An analysis of how the State standard can alleviate substantially such emergency condition.

(2) [Reserved]

(c) *Criteria for withdrawal of a rule exempting a State standard.* Any person subject to a State standard which, by rule, has been exempted from Federal preemption and which prescribes an energy or water conservation standard or other requirement for a type or class of a covered product, when the Federal energy or water conservation standard for such product subsequently is amended, may petition the Secretary requesting that the exemption rule be withdrawn. The Secretary shall consider such petition in accordance with the requirements of paragraph (a) of this section, except that the burden shall be on the petitioner to demonstrate that the exemption rule received by the State should be withdrawn as a result of the amendment to the Federal standard. The Secretary shall withdraw such rule if he determines that the petitioner has shown the rule should be withdrawn.

(1) *Requirements of petition to withdraw a rule exempting a State standard.* A petition for a rule to withdraw a rule exempting a State standard shall include the information prescribed in paragraphs (c)(1)(i) through (c)(1)(vii) of this section, and shall be available for public review, except for confidential or proprietary information submitted in accordance with the Department of Energy's Freedom of Information Regulations set forth in 10 CFR Part 1004:

(i) The name, address and telephone number of the petitioner;

(ii) A statement of the interest of the petitioner for which a rule withdrawing an exemption is sought;

(iii) A copy of the State standard for which a rule withdrawing an exemption is sought;

(iv) Specification of each type or class of covered product for which a rule withdrawing an exemption is sought;

(v) A discussion of the factors contained in paragraph (a) of this section;

(vi) Such other information, if any, believed to be pertinent by the petitioner; and

(vii) Such other information as the Secretary may require.

(2) [Reserved]

§ 430.47 [Amended]

14. Section 430.47 of subpart D is amended in paragraph (a)(1), by revising the words "energy emergency condition" to read "energy or water emergency condition".

§ 430.49 [Amended]

15. Section 430.49 of subpart D is amended in paragraph (a), by adding the words "or water" after "energy" in the first sentence.

Subpart E—Small Business Exemptions

§ 430.50 [Amended]

16. Section 430.50 of subpart E is amended by adding the words "and water" after "energy" in paragraphs (a) and (b).

Subpart F—Certification and Enforcement

17. Section 430.60 of subpart F is revised to read as follows:

§ 430.60 Purpose and scope.

This subpart sets forth the procedures to be followed for certification and enforcement testing to determine whether a basic model of a covered product complies with the applicable energy or water conservation standard set forth in Subpart C of this part. Energy and water conservation standards include minimum levels of efficiency and maximum levels of consumption (also referred to as performance standards), and prescriptive energy design requirements (also referred to as design standards).

§ 430.61 [Amended]

18. Section 430.61 of subpart F is amended in paragraph (a)(4), by adding the words "or water conservation" after the words "energy efficiency" in the first sentence.

19. Section 430.62 of subpart F is revised as follows:

§ 430.62 Submission of data.

(a) *Compliance certification.* (1) Each manufacturer before distributing in commerce any basic model of a covered product subject to the applicable energy

and water conservation standard set forth in Subpart C of this part shall certify by means of a statement of compliance and certification report that each basic model meets the requirements of that standard. Each manufacturer or his representative shall send a compliance certification statement and report, by certified mail, to: Department of Energy, Office of Energy Efficiency and Renewable Energy, Office of Codes and Standards, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585-0121.

(2) The compliance certification requirements of paragraph (a)(1) of this section shall apply to manufacturers of faucets, showerheads, water closets, and urinals on [one year after publication of the Final Rule].

(3) The compliance statement, in the format set forth in appendix A of this subpart, shall certify that:

(i) The basic model complies with the applicable energy or water conservation standards;

(ii) All required testing, on which certification reports are based, is conducted in conformance with the applicable test requirements prescribed in subpart B of this part, and all test data are reported in accordance with this subpart;

(iii) All information reported in certification reports is true, accurate, and complete; and

(iv) The manufacturer is aware of the penalties associated with violations of the Act and the regulations thereunder, and 18 U.S.C. 1001 which prohibits knowingly making false statements to the Federal Government.

(4) For each basic model of a covered product, a certification report, the format for which is set forth in appendix A of this subpart, shall be submitted to DOE. The certification report shall include the product type, product class (as denoted in § 430.32), manufacturer's name, private labeler name(s), if applicable, the manufacturer's model number(s), and for:

(i) Central air conditioners, the seasonal energy efficiency ratio.

(ii) Central air conditioning heat pumps, the seasonal energy efficiency ratio and heating seasonal performance factor.

(iii) Clothes washers, the energy factor in ft³/kWh/cycle and capacity in ft³.

(iv) Clothes dryers, the energy factor in lbs/kWh, capacity in ft³, and voltage.

(v) Direct heating equipment, the annual fuel utilization efficiency in percent and capacity in Btu/hour.

(vi) Dishwashers, the energy factor in cycles/kWh and exterior width in inches.

(vii) Faucets, for each faucet, the maximum water use in gpm (L/min) rounded to one decimal place or gal/cycle (L/cycle) rounded to two decimal places, or for each flow control mechanism, the maximum water use in gpm (L/min) rounded to one decimal place or gal/cycle (L/cycle) rounded to two decimal places, with a listing of accompanied faucets by manufacturer's model numbers.

(viii) Furnaces, the annual fuel utilization efficiency in percent.

(ix) General service fluorescent lamps, the laboratory's National Voluntary Laboratory Accreditation Program (NVLAP) identification number or other NVLAP-approved accreditation identification, production date codes (and accompanying decoding scheme), the 12-month average lamp efficacy in lumens per watt, lamp wattage, and the 12-month average Color Rendering Index.

(x) Incandescent reflector lamps, the laboratory's National Voluntary Accreditation Program (NVLAP) identification number or other NVLAP-approved accreditation identification, production date codes (and accompanying decoding scheme), the 12-month average lamp efficacy in lumens per watt, and lamp wattage.

(xi) Kitchen ranges, ovens, and microwave ovens, the annual energy use in Btu/hour.

(xii) Pool heaters, the thermal efficiency in percent.

(xiii) Refrigerators, refrigerator-freezers, and freezers, the annual energy use in kWh/yr and total adjusted volume in ft³.

(xiv) Room air conditioners, the energy efficiency ratio and capacity in Btu/hour.

(xv) Showerheads, the maximum water use in gpm (L/min) rounded to one decimal place, or for each flow control mechanism, the maximum water use in gpm (L/min) rounded to one decimal place with a listing of accompanied showerheads by manufacturer's model numbers.

(xvi) Urinals, the maximum water use in gpf (Lpf) rounded to one decimal place.

(xvii) Water closets, the maximum water use in gpf (Lpf) rounded to one decimal place.

(xviii) Water heaters, the energy factor and rated storage volume in gallons.

(5) Copies of reports to the Federal Trade Commission which include the information in paragraph (a)(4) of this section meet the requirements of this paragraph (a).

(b) *New models.* All information required by paragraph (a)(4) of this section must be submitted for new

models prior to or concurrent with any distribution of such models. Any change to a basic model which affects energy or water consumption may constitute the addition of a new basic model subject to the requirements of § 430.61. If such change does not alter compliance with the applicable energy or water conservation standard for the basic model, the new model shall be considered certified and not warrant additional testing. However, all information required by paragraph (a)(4) of this section for the new model must be submitted, by certified mail, to: Department of Energy, Office of Energy Efficiency and Renewable Energy, Office of Codes and Standards, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585-0121.

(c) *Discontinued models.* A basic model is considered discontinued when its production has ceased. Such models shall be reported, by certified mail, to: Department of Energy, Office of Energy Efficiency and Renewable Energy, Office of Codes and Standards, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585-0121 within six months of being discontinued. For each basic model, this report shall include: product type, product class, the manufacturer's name, the private labeler name(s), if applicable, and the manufacturer's model number. If the reporting of discontinued models coincides with the submittal of a certification report, such models can be included in the certification report.

(d) *Maintenance of records.* The manufacturer of any covered product subject to any of the energy and water performance standards or procedures prescribed in this part shall establish, maintain, and retain the records of the underlying test data for all certification testing. Such records shall be organized and indexed in a fashion which makes them readily accessible for review by DOE upon request. The records shall include the supporting test data associated with tests performed on any test units to satisfy the requirements of this subpart. The records shall be retained by the manufacturer for a period of two years from the date that production of the applicable model has ceased.

(e) *Third party representation.* A manufacturer may elect to use a third party to submit the certification report to DOE (for example a trade association or other authorized representative). Such certification reports shall include all the information specified in paragraph (a)(4) of this section. The certification report must be submitted with a compliance statement as

specified in paragraph (a)(3) of this section. A third party representative may also submit discontinued model information on behalf of an authorizing manufacturer.

(f) *Amendment of information.* If any compliance certification information on a statement or report previously submitted to DOE has changed, the manufacturer or his representative must submit the revised information, by certified mail, to: Department of Energy, Office of Energy Efficiency and Renewable Energy, Office of Codes and Standards, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585-0121.

§ 430.63 [Amended]

20. Section 430.63 of subpart F is amended in paragraph (a), by adding the words "or water" after "energy," and revising "§ 430.23" to read "§ 430.24".

21. Section 430.70 of subpart F is amended by revising paragraphs (a)(1) introductory text, (a)(3) and (a)(6)(i), to read as follows:

§ 430.70 Enforcement.

(a) *Performance standard—(1) Test notice.* Upon receiving information in writing concerning the energy or water performance of a particular covered product sold by a particular manufacturer or private labeler which indicates that the covered product may not be in compliance with the applicable energy or water performance standard, the Secretary may conduct testing of that covered product under this subpart by means of a test notice addressed to the manufacturer in accordance with the following requirements:

* * * * *

(3) *Sampling.* The determination that a manufacturer's basic model complies with the applicable energy or water performance standard shall be based on the testing conducted in accordance with the statistical sampling procedures set forth in appendix B of this subpart and the test procedures set forth in Subpart B of this part.

* * * * *

(6) *Testing at manufacturer's option.*

(i) If a manufacturer's basic model is determined to be in noncompliance with the applicable energy or water performance standard at the conclusion of DOE testing in accordance with the double sampling plan specified in appendix B of this subpart, the manufacturer may request that DOE conduct additional testing of the model according to procedures set forth in appendix B of this subpart.

* * * * *

§ 430.73 [Amended]

22. Section 430.73 of subpart F is amended by adding the words "or water" after "energy" in the introductory paragraph.

23. Appendix A to subpart F of part 430 is revised to read as follows:

Appendix A to Subpart F of Part 430—Compliance Certification

Statement of Compliance With Energy or Water Conservation Standards for Appliances

Product: _____

Manufacturer's Name and Address _____

This compliance statement and the attached certification report are submitted pursuant to 10 CFR part 430 (Energy or Water Conservation Program for Consumer Products) and Part C of the Energy Policy and Conservation Act (Pub. L. 94-163), and amendments thereto. It is signed by a responsible official of the above named company. The basic models listed in the attached certification report comply with the applicable energy or water conservation standard. All testing on which the attached certification report is based was conducted in conformance with applicable test requirements prescribed in subpart B of 10 CFR part 430. All information reported in the attached certification report is true, accurate, and complete. The company is aware of the penalties associated with violations of the Act and the regulations thereunder, and is also aware of the provisions contained in 18 U.S.C. 1001, which prohibits knowingly making false statement to the Federal Government.

Signature of Company Official: _____

Name: _____

Title: _____

Firm or Organization: _____

Date: _____

Name of Person to Contact for Further Information: _____

Name: _____

Address: _____

Telephone Number: _____

Facsimile Number: _____

Third Party Representative:

If any part of this Compliance Certification, including the attached certification report, was prepared by a third party organization under the provisions of § 430.62 of 10 CFR 430, provide the following information for the company official who authorized third party representations:

Name: _____

Title: _____

Address: _____

Telephone Number: _____

Facsimile Number: _____

The third party organization officially acting as representative:

Third Party Organization: _____

Name: _____

Address: _____

Telephone Number: _____

Facsimile Number: _____

The third party organization officially acting as representative:

Third Party Organization: _____

Name: _____

Address: _____

Telephone Number: _____

Facsimile Number: _____

Submit Compliance Certification in writing or on a computer diskette, by Certified Mail to: Department of Energy, Office of Energy Efficiency and Renewable Energy, Office of Codes and Standards, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585-0121.

Certification Report for Basic Models

(Attachment to Statement of Compliance With Energy or Water Conservation Standards for Appliances)

Date: _____

Signature of Company Official or Third Party Representative: _____

Product Type: _____

Product Class: _____

Manufacturer: _____

Private Labeler (if applicable): _____

For New or Amended Models¹:For Discontinued Models²:

24. Appendix B to Subpart F of Part 430 is revised to read as follows:

Appendix B to Subpart F of Part 430—Sampling Plan for Enforcement Testing

I. Double Sampling

Step 1. The first sample size (n_1) must be four or more units.

Step 2. Compute the mean (\bar{x}_1) of the measured energy or water performance of the n_1 units in the first sample as follows:

$$\bar{x}_1 = \frac{1}{n_1} \left(\sum_{i=1}^{n_1} x_i \right)$$

Where (x_i) is the measured energy efficiency, energy or water consumption of unit i .

Step 3. Compute the standard deviation (s_1) of the measured energy or water performance of the (n_1) units in the first sample as follows:

$$s_1 = \sqrt{\frac{\sum_{i=1}^{n_1} (x_i - \bar{x}_1)^2}{n_1 - 1}}$$

¹ Provide specific product information including, for each basic model, the manufacturer's model numbers and the information required in § 430.62(a)(4)(i)–§ 430.62(a)(4)(xviii).

² Provide manufacturer's model number.

Step 4. Compute the standard error ($s_{\bar{x}_1}$) of the measured energy or water performance of the n_1 units in the first sample as follows:

$$s_{\bar{x}_1} = \frac{s_1}{\sqrt{n_1}}$$

Step 5. Compute the upper control limit (UCL_1) and lower control limit (LCL_1) for the mean of the first sample using the applicable DOE energy or water performance standard (EPS) as the desired mean and a probability level of 95 percent (two-tailed test) as follows:

$$LCL_1 = EPS - ts_{\bar{x}_1}$$

$$UCL_1 = EPS + ts_{\bar{x}_1}$$

Where t is a statistic based on a 95 percent two-tailed probability level and a sample size of n_1 .

Step 6a. For an Energy Efficiency Standard, compare the mean of the first sample (\bar{x}_1) with the upper and lower control limits (UCL_1 and LCL_1) to determine one of the following:

(1) If the mean of the first sample is below the lower control limit, then the basic model is in noncompliance and testing is at an end. (Do not go on to any of the steps below.)

(2) If the mean of the first sample is equal to or greater than the upper control limit, then the basic model is in compliance and testing is at an end. (Do not go on to any of the steps below.)

(3) If the sample mean is equal to or greater than the lower control limit but less than the upper control limit, then no determination of compliance or noncompliance can be made and a second sample size is determined by Step 7(a).

Step 6b. For an Energy or Water Consumption Standard, compare the mean of the first sample (\bar{x}_1) with the upper and lower control limits (UCL_1 and LCL_1) to determine one of the following:

(1) If the mean of the first sample is above the upper control limit, then the basic model is in noncompliance and testing is at an end. (Do not go on to any of the steps below.)

(2) If the mean of the first sample is equal to or less than the lower control limit, then the basic model is in compliance and testing is at an end. (Do not go on to any of the steps below.)

(3) If the sample mean is equal to or less than the upper control limit but greater than the lower control limit, then no determination of compliance or noncompliance can be made and a second sample size is determined by Step 7(b).

Step 7a. For an Energy Efficiency Standard, determine the second sample size (n_2) as follows:

$$n_2 = \left(\frac{ts_1}{0.05 \text{ EPS}} \right)^2 - n_1$$

Where s_1 and t have the values used in Steps 4 and 5, respectively. The term "0.05 EPS" is the difference between the applicable energy efficiency standard and 95 percent of the standard, where 95 percent of the standard is taken as the lower control limit. This procedure yields a sufficient combined sample size ($n_1 + n_2$) to give an estimated 97.5 percent probability of obtaining a determination of compliance when the true mean efficiency is equal to the applicable standard. Given the solution value of n_2 , determine one of the following:

(1) If the value of n_2 is less than or equal to zero and if the mean energy efficiency of the first sample (\bar{x}_1) is either equal to or greater than the lower control limit (LCL_1) or equal to or greater than 95 percent of the applicable energy efficiency standard (EES), whichever is greater, i.e., if $n_2 \leq 0$ and $(\bar{x}_1) \geq \max(LCL_1, 0.95 \text{ EES})$, the basic model is in compliance and testing is at an end.

(2) If the value of n_2 is less than or equal to zero and the mean energy efficiency of the first sample (\bar{x}_1) is less than the lower control limit (LCL_1) or less than 95 percent of the applicable energy efficiency standard (EES), whichever is greater, i.e., if $n_2 \leq 0$ and $(\bar{x}_1) < \max(LCL_1, 0.95 \text{ EES})$, the basic model is in noncompliance and testing is at an end.

(3) If the value of n_2 is greater than zero, then value of the second sample size is determined to be the smallest integer equal to or greater than the solution value of n_2 for equation (6a). If the value of n_2 so calculated is greater than $20 - n_1$, set n_2 equal to $20 - n_1$.

Step 7(b). For an Energy or Water Consumption Standard, determine the second sample size (n_2) as follows:

$$n_2 = \left(\frac{ts_1}{0.05 \text{ EPS}} \right)^2 - n_1$$

Where s_1 and t have the values used in Steps 4 and 5, respectively. The term "0.05 EPS" is the difference between the applicable energy or water consumption standard and 105 percent of the standard, where 105 percent of the standard is taken as the upper control limit. This procedure yields a sufficient combined sample size ($n_1 + n_2$) to give an estimated 97.5 percent probability of obtaining a determination of compliance when the true mean consumption is equal to the applicable standard.

Given the solution value of n_2 , determine one of the following:

(1) If the value of n_2 is less than or equal to zero and if the mean energy or water consumption of the first sample (\bar{x}_1) is either equal to or less than the upper control limit (UCL_1) or equal to or less than 105 percent of the applicable energy or water performance standard (EPS), whichever is less, i.e., if $n_2 \leq 0$ and $(\bar{x}_1) \leq \min(UCL_1, 1.05 \text{ EPS})$, the basic model is in compliance and testing is at an end.

(2) If the value of n_2 is less than or equal to zero and the mean energy or water consumption of the first sample (\bar{x}_1) is greater than the upper control limit (UCL_1) or more than 105 percent of the applicable energy or water performance standard (EPS),

whichever is less, i.e., if $n_2 \leq 0$ and $\bar{x}_1 > \min(\text{LCL}_1, 1.05 \text{ EPS})$, the basic model is in noncompliance and testing is at an end.

(3) If the value of n_2 is greater than zero, then the value of the second sample size is determined to be the smallest integer equal to or greater than the solution value of n_2 for equation (6b). If the value of n_2 so calculated is greater than $20 - n_1$, set n_2 equal to $20 - n_1$.

Step 8. Compute the combined mean (\bar{x}_2) of the measured energy or water performance of the n_1 and n_2 units of the combined first and second samples as follows:

$$\bar{x}_2 = \frac{1}{n_1 + n_2} \left(\sum_{i=1}^{n_1+n_2} x_i \right)$$

Step 9. Compute the standard error ($s_{\bar{x}_2}$) of the measured energy or water performance of the n_1 and n_2 units in the combined first and second samples as follows:

$$s_{\bar{x}_2} = \frac{s_1}{\sqrt{n_1 + n_2}}$$

Where s_1 is the value obtained in Step 3.

Step 10(a). For an Energy Efficiency Standard, compute the lower control limit (LCL_2) for the mean of the combined first and second samples using the DOE energy efficiency standard (EES) as the desired mean and a one-tailed probability level of 97.5 percent (equivalent to the two-tailed probability level of 95 percent used in Step 5) as follows:

$$\text{LCL}_2 = \text{EES} - t s_{\bar{x}_2}$$

Where the t-statistic has the value obtained in step 5.

Step 10(b). For an Energy or Water Consumption Standard, compute the upper control limit (UCL_2) for the mean of the combined first and second samples using the DOE energy or water performance standard

(EPS) as the desired mean and a one-tailed probability level of 102.5 percent (equivalent to the two-tailed probability level of 95 percent used in Step 5) as follows:

$$\text{UCL}_2 = \text{EPS} + t s_{\bar{x}_2}$$

Where the t-statistic has the value obtained in Step 5.

Step 11(a). For an Energy Efficiency Standard, compare the combined sample mean (\bar{x}_2) to the lower control limit (LCL_2) to find one of the following:

(1) If the mean of the combined sample (\bar{x}_2) is less than the lower control limit (LCL_2) or 95 percent of the applicable energy efficiency standard (EES), whichever is greater, i.e., if $(\bar{x}_2) < \max(\text{LCL}_2, 0.95 \text{ EES})$, the basic model is in noncompliance and testing is at an end.

(2) If the mean of the combined sample (\bar{x}_2) is equal to or greater than the lower control limit (LCL_2) or 95 percent of the applicable energy efficiency standard (EES), whichever is greater, i.e., if $(\bar{x}_2) \geq \max(\text{LCL}_2, 0.95 \text{ EES})$, the basic model is in compliance and testing is at an end.

Step 11(b). For an Energy or Water Consumption Standard, compare the combined sample mean (\bar{x}_2) to the upper control limit (UCL_2) to find one of the following:

(1) If the mean of the combined sample (\bar{x}_2) is greater than the upper control limit (UCL_2) or 105 percent of the applicable energy or water performance standard (EPS), whichever is less, i.e., if $\bar{x}_2 > \min(\text{UCL}_2, 1.05 \text{ EPS})$, the basic model is in noncompliance and testing is at an end.

(2) If the mean of the combined sample (\bar{x}_2) is equal to or less than the upper control limit (UCL_2) or 105 percent of the applicable energy or water performance standard (EPS), whichever is less, i.e., if $(\bar{x}_2) \leq \min(\text{UCL}_2, 1.05 \text{ EPS})$, the basic model is in compliance and testing is at an end.

II. Manufacturer-Option Testing

If a determination of non-compliance is made in Steps 6, 7 or 11, the manufacturer may request that additional testing be conducted, in accordance with the following procedures.

Step A. The manufacturer requests that an additional number, n_3 , of units be tested, with n_3 chosen such that $n_1 + n_2 + n_3$ does not exceed 20.

Step B. Compute the mean energy or water performance, standard error, and lower or upper control limit of the new combined sample in accordance with the procedures prescribed in Steps 8, 9, and 10, above.

Step C. Compare the mean performance of the new combined sample to the revised lower or upper control limit to determine one of the following:

a.1. For an Energy Efficiency Standard, if the new combined sample mean is equal to or greater than the lower control limit or 95 percent of the applicable energy efficiency standard, whichever is greater, the basic model is in compliance and testing is at an end.

a.2. For an Energy or Water Consumption Standard, if the new combined sample mean is equal to or less than the upper control limit or 105 percent of the applicable energy or water consumption standard, whichever is less, the basic model is in compliance and testing is at an end.

b.1. For an Energy Efficiency Standard, if the new combined sample mean is less than the lower control limit or 95 percent of the applicable energy efficiency standard, whichever is greater, and the value of $n_1 + n_2 + n_3$ is less than 20, the manufacturer may request that additional units be tested. The total of all units tested may not exceed 20. Steps A, B, and C are then repeated.

b.2. For an Energy or Water Consumption Standard, if the new combined sample mean is greater than the upper control limit or 105 percent of the applicable energy or water consumption standard, whichever is less, and the value of $n_1 + n_2 + n_3$ is less than 20, the manufacturer may request that additional units be tested. The total of all units tested may not exceed 20. Steps A, B, and C are then repeated.

c. Otherwise, the basic model is determined to be in noncompliance.

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