verifier must verify that inhibitors were used with 100 percent of synthetic N application on all field(s) or management unit(s) where the practice was implemented. For timing practices (no fall application or split in-season application), the third-party verifier must verify application timing through management records.

William Hohenstein,

Director, Office of Energy and Environmental Policy, Office of the Chief Economist.

[FR Doc. 2025–00975 Filed 1–16–25; 8:45 am]

BILLING CODE 3410–GL–P

DEPARTMENT OF HOMELAND SECURITY

8 CFR Part 106

[CIS No. 2801–25; DHS Docket No. USCIS 2021–0010]

RIN 1615–AC68

U.S. Citizenship and Immigration Services Fee Schedule and Changes to Certain Other Immigration Benefit Request Requirements; Second Correction

AGENCY: U.S. Citizenship and Immigration Services (USCIS), Department of Homeland Security (DHS).

ACTION: Correcting amendment.

SUMMARY: On January 31, 2024, the Department of Homeland Security (DHS) published a final rule to adjust certain immigration and naturalization benefit request fees charged by USCIS, add fee exemptions, and make changes to certain other immigration benefit request requirements. The rule took effect on April 1, 2024. In this notice, we are correcting a technical error made in that rule.

DATES: This correcting amendment is effective January 17, 2025.

FOR FURTHER INFORMATION CONTACT: Carol Cribbs, Deputy Chief Financial Officer, U.S. Citizenship and Immigration Services, Department of Homeland Security, 5900 Capital Gateway Dr., Camp Springs, MD 20746; telephone 240–721–3000 (this is not a toll-free number).

SUPPLEMENTARY INFORMATION:

Background

On January 31, 2024, the Department of Homeland Security (DHS) published a final rule in the **Federal Register** at 89 FR 6194 changing immigration and naturalization benefit request fees charged by U.S. Citizenship and Immigration Services (USCIS), fee exemptions and fee waiver requirements, premium processing time limits, and intercountry adoption processing. DHS published a correction to the final rule at 89 FR 20101 on March 24, 2024. DHS has identified an error in the regulatory text.

Need for Correction

As codified by DHS in the final rule, 8 CFR 106.3(a)(3)(ii)(A) erroneously associates the E–2C classification with Form I–129CW. Petitioners for E–2C classification do not submit Form I–129CW. Form I–129CW petitioners may request a fee waiver when petitioning for a CW–1, CNMI-only transitional worker (see 8 CFR 214.2(w)), but the fee waiver provision as codified does not include a CW–1, CNMI-only transitional worker. Therefore, this notice corrects that error by removing ''E–2 CNMI investor'' and replacing it with ''CW–1, CNMI-only transitional worker'' in the first sentence of 8 CFR 106.3(a)(3)(ii)(A) to include the correct nonimmigrant classification. DHS is correcting the second sentence of 8 CFR 106.3(a)(3)(ii)(A) by removing ''a E–2 CNMI investor'' and replacing it with ''an employer petitioning for a CW–1, CNMI-only transitional worker,'' to clarify that the employer petitioning for a CW–1, CNMI-only transitional worker must pay any fees in 8 CFR 106.2(c) that may apply, not an E–2 CNMI investor.

List of Subjects in 8 CFR Part 106

Citizenship and naturalization, Fees, Immigration.

Correction

Accordingly, for the reasons set out in the preamble, chapter I of title 8 of the Code of Federal Regulations is corrected by making the following correcting amendment:

PART 106—USCIS FEE SCHEDULE

■ 1. The authority citation for part 106 continues to read as follows:

Authority: 8 U.S.C. 1101, 1103, 1254a, 1254b, 1304, 1356; Pub. L. 107–609; 48 U.S.C. 1806; Pub. L. 107–296, 116 Stat. 2135 (6 U.S.C. 101 note); Pub. L. 115–218, 132 Stat. 1547; Pub. L. 116–159, 134 Stat. 709.

■ 2. Section 106.3 is amended by revising paragraph (a)(3)(ii)(A) to read as follows:

§ 106.3 Fee waivers and exemptions.

(a) * * *

(3) * * *

(ii) * * *

(A) Petition for a CNMI-Only Nonimmigrant Transitional Worker (Form I–129CW) for a CW–1, CNMI-only transitional worker. Waiver of the fee for Form I–129CW does not waive the requirement for an employer petitioning for a CW–1, CNMI-only transitional worker to pay any fees in § 106.2(c) that may apply.

* * * * *

Christina E. McDonald,

Associate General Counsel for Regulatory Affairs.

[FR Doc. 2025–01386 Filed 1–16–25; 8:45 am]

BILLING CODE 9111–97–P

DEPARTMENT OF ENERGY

10 CFR Part 430

[EERE–2024–BT–TP–0009]

RIN 1904–AF68

Energy Conservation Program: Test Procedures for Residential and Commercial Clothes Washers and Consumer Clothes Dryers

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

ACTION: Final rule.

SUMMARY: In this final rule, the U.S. Department of Energy (''DOE'') is amending the test procedures for residential and commercial clothes washers and consumer clothes dryers to update the test cloth specifications. DOE is also reorganizing the test procedures for improved readability. DOE is conducting this rulemaking to address specific issues and to make minor corrections to the current test procedures. This rulemaking does not satisfy the statutory requirement that, at least once every 7 years, DOE review the test procedures for clothes washers and consumer clothes dryers.

DATES: The effective date of this rule is February 18, 2025. The amendments will be mandatory for product testing starting July 16, 2025. The incorporation by reference of certain material listed in the rule was approved by the Director of the Federal Register as of July 1, 2022.

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

A link to the docket web page can be found at *www.regulations.gov/docket/EERE-2024-BT-TP-0009*. The docket web page contains instructions on how

to access all documents, including public comments, in the docket.

For further information on how to review the docket contact the Appliance and Equipment Standards Program staff at (202) 287–1445 or by email: *ApplianceStandardsQuestions@ee.doe.gov.*

FOR FURTHER INFORMATION CONTACT:

Dr. Carl Shapiro, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE–5B, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 287–5649. Email: *ApplianceStandardsQuestions@ee.doe.gov.*

Mr. Uchechukwu ''Emeka'' Eze, U.S. Department of Energy, Office of the General Counsel, GC–33, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 586–4798. Email: *uchechukwu.eze@hq.doe.gov.*

SUPPLEMENTARY INFORMATION:

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I. Authority and Background

Consumer (residential) clothes washers (''RCWs''), commercial clothes washers (''CCWs''), and consumer clothes dryers are included in the list of ''covered products/equipment'' for which DOE is authorized to establish and amend energy conservation standards and test procedures. (42 U.S.C. 6292(a)(7)–(8); 42 U.S.C. 6311(1)(H)) DOE's test procedures for RCWs are currently prescribed in the Code of Federal Regulations (''CFR'') at 10 CFR 430.23(j) and at 10 CFR part 430, subpart B, appendices J (''appendix J'') and J2 (''appendix J2''). The test procedures for CCWs must be the same as those established for RCWs. (42 U.S.C. 6314(a)(8)) DOE's test procedures for consumer clothes dryers are currently prescribed at 10 CFR 430.23(d) and at 10 CFR part 430, subpart B, appendices D1 (''appendix D1'') and D2 (''appendix D2''). DOE also prescribes specifications for the test cloth to be used for testing clothes washers at appendix J3 to subpart B (''appendix J3''). The following sections discuss DOE's authority to establish and amend test procedures for RCWs, CCWs, and consumer clothes dryers and relevant background information regarding DOE's consideration of test procedures for these products.

A. Authority

The Energy Policy and Conservation Act, Public Law 94–163, as amended (''EPCA''),[1] authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317, as codified) Title III, Part B of EPCA [2] established the Energy Conservation Program for Consumer Products Other Than Automobiles, which sets forth a variety of provisions designed to improve energy efficiency. These products include RCWs and consumer clothes dryers. (42 U.S.C. 6292(a)(7)–(8)) Title III, Part C of EPCA,[3] added by Public Law 95–619, Title IV, section 441(a), established the Energy Conservation Program for Certain Industrial Equipment which sets forth a variety of provisions designed to improve energy efficiency. This equipment includes CCWs. (42 U.S.C. 6311(1)(H)) RCWs, CCWs, and consumer clothes dryers are the subject of this document.

The energy conservation program under EPCA consists essentially of four parts: (1) testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6291; 42 U.S.C. 6311), test procedures (42 U.S.C. 6293; 42 U.S.C. 6314), labeling provisions (42 U.S.C. 6294; 42 U.S.C. 6315), energy conservation standards (42 U.S.C. 6295; 42 U.S.C. 6313), and the authority to require information and reports from manufacturers (42 U.S.C. 6296; 42 U.S.C. 6316).

The Federal testing requirements consist of test procedures that manufacturers of covered products/equipment must use as the basis for: (1) certifying to DOE that their products comply with the applicable energy conservation standards adopted under EPCA (42 U.S.C. 6295(s); 42 U.S.C. 6316(a)), and (2) making other representations about the efficiency of those products/equipment (42 U.S.C. 6293(c); 42 U.S.C. 6314(d)). Similarly, DOE must use these test procedures to determine whether the products comply with any relevant standards promulgated under EPCA. (42 U.S.C. 6295(s); 42 U.S.C. 6316(a)).

Federal energy efficiency requirements for covered products and equipment established under EPCA generally supersede State laws and regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6297; 42 U.S.C. 6316(a) and (b)) DOE may, however, grant waivers of Federal preemption for particular State laws or regulations, in accordance with the procedures and other provisions of EPCA. (42 U.S.C. 6297(d); 42 U.S.C. 6316(a)).

Under 42 U.S.C. 6293 and 42 U.S.C. 6314, EPCA sets forth the criteria and procedures DOE must follow when prescribing or amending test procedures for covered products/equipment. EPCA requires that any test procedures prescribed or amended under this section shall be reasonably designed to produce test results which measure energy efficiency, energy use or estimated annual operating cost of a covered product during a representative average use cycle (as determined by the Secretary) or period of use and shall not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(3); 42 U.S.C. 6314(a)(2)).

[1] All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116–260 (Dec. 27, 2020), which reflect the last statutory amendments that impact Parts A and A–1 of EPCA.

[2] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

[3] For editorial reasons, upon codification in the U.S. Code, Part C was redesignated Part A–1.

EPCA also requires that, at least once every 7 years, DOE evaluate test procedures for each type of covered product and equipment, including RCWs, CCWs and consumer clothes dryers, to determine whether amended test procedures would more accurately or fully comply with the requirements for the test procedures to not be unduly burdensome to conduct and be reasonably designed to produce test results that reflect energy efficiency, energy use, and estimated operating costs during a representative average use cycle or period of use. (42 U.S.C. 6293(b)(1)(A); 6314(a)(1)).

If the Secretary determines, on his or her own behalf or in response to a petition by any interested person, that a test procedure should be prescribed or amended, the Secretary shall promptly publish in the **Federal Register** proposed test procedures and afford interested persons an opportunity to present oral and written data, views, and arguments with respect to such procedures. The comment period on a proposed rule to amend a test procedure shall be at least 60 days and may not exceed 270 days. In prescribing or amending a test procedure, the Secretary shall take into account such information as the Secretary determines relevant to such procedure, including technological developments relating to energy use or energy efficiency of the type (or class) of covered products involved. (42 U.S.C. 6293(b)(2)).[4] If DOE determines that test procedure revisions are not appropriate, DOE must publish its determination not to amend the test procedures.

In addition, EPCA requires that DOE amend its test procedures for all covered products to integrate measures of standby mode and off mode energy consumption into the overall energy efficiency, energy consumption, or other energy descriptor, unless the current test procedure already incorporates the standby mode and off mode energy consumption, or if such integration is technically infeasible. (42 U.S.C. 6295(gg)(2)(A)(i)–(ii)) [5] If an integrated test procedure is technically infeasible, DOE must prescribe separate standby mode and off mode energy use test procedures for the covered product, if a separate test is technically feasible. (42 U.S.C. 6295(gg)(2)(A)(ii)) Any such amendment must consider the most current versions of the International Electrotechnical Commission (IEC) Standard 62301 [6] and IEC Standard 62087 [7] as applicable. (42 U.S.C. 6295(gg)(2)(A)).

EPCA requires the test procedures for CCWs to be the same as the test procedures established for RCWs. (42 U.S.C. 6314(a)(8)) As with the test procedures for RCWs, EPCA requires that DOE evaluate, at least once every 7 years, the test procedures for CCWs to determine whether amended test procedures would more accurately or fully comply with the requirements for the test procedures to not be unduly burdensome to conduct and be reasonably designed to produce test results that reflect energy efficiency, energy use, and estimated operating costs during a representative average use cycle. (42 U.S.C. 6314(a)(1)).

DOE is publishing this final rule to address specific issues and to make minor corrections to the current test procedures that are required for certification of compliance with applicable energy conservation standards. As DOE has not conducted a comprehensive review of the current test procedures, this rulemaking does not satisfy the EPCA requirement that, at least once every 7 years, DOE review the test procedures for RCWs, CCWs, and consumer clothes dryers. (42 U.S.C. 6293(b)(1)(A); 6314(a)(1)(A)).

B. Background

As discussed, DOE's existing test procedures for clothes washers are prescribed at appendix J and appendix J2,[8] and DOE's existing test procedures for consumer clothes dryers are prescribed at appendix D1 and appendix D2.[9]

Additionally, DOE's existing test procedure at appendix J3 provides specifications for the test cloth to be used for testing clothes washers; procedures for pre-conditioning new test cloth; procedures for verifying that new lots [10] of test cloth meet the defined material specifications; and procedures for developing a set of correction coefficients that correlate the measured remaining moisture content (''RMC'') values of each new test cloth lot with a set of standard RMC values established as a historical reference point. These correction coefficients are applied to the RMC measurements performed during testing according to appendix J or appendix J2, ensuring consistency in the final corrected RMC measurement across different test cloth lots used for testing.

Although the test cloth specifications and qualification procedures in appendix J3 are nominally applicable to clothes washer testing, DOE understands that manufacturers and test laboratories use the same test cloth for testing clothes dryers as well. As discussed further in section III.B of this document, the test cloth specifications for clothes washer testing and clothes dryer testing have historically been aligned. Furthermore, as discussed further in section III.D.3 of this document, test cloth that satisfies the requirements of appendix J3 for clothes washer testing also satisfies the requirements codified in appendices D1 and D2 for clothes dryer testing.

The Association of Home Appliance Manufacturers (''AHAM'') has established a Test Cloth Task Force (''AHAM task force'') that, among other responsibilities, reviews and recommends new lots of test cloth for industry use; identifies and secures suppliers for manufacturing test cloth; conducts research and investigations to recommend continuous improvements to the test cloth specifications and qualification procedures; and addresses any industry-wide concerns that may arise regarding the test cloth. DOE representatives participate in the AHAM task force.

On May 31, 2024, DOE received a letter from AHAM (''May 2024 AHAM Letter'') urging DOE to allow the use of alternate test cloth material for clothes washer and clothes dryer testing.[11] The May 2024 AHAM Letter also made further requests for DOE to amend certain test cloth specifications based on

[4] For commercial equipment, if the Secretary determines that a test procedure amendment is warranted, the Secretary must publish proposed test procedures in the **Federal Register**, and afford interested persons an opportunity (of not less than 45 days' duration) to present oral and written data, views, and arguments on the proposed test procedures. (42 U.S.C. 6314(b)).

[5] EPCA does not contain an analogous provision for commercial equipment.

[6] IEC 62301, *Household electrical appliances—Measurement of standby power* (Edition 2.0, 2011–01).

[7] IEC 62087, *Audio, video and related equipment—Methods of measurement for power consumption* (Edition 1.0, Parts 1–6: 2015, Part 7: 2018).

[8] Manufacturers must use the results of testing under appendix J2 to determine compliance with the current relevant standards for RCWs at 10 CFR 430.32(g)(1) and for CCWs at 10 CFR 431.156(b). Manufacturers must use the results of testing under appendix J to determine compliance with the relevant standards for RCWs manufactured on or after March 1, 2028, specified at 10 CFR 430.32(g)(2) and with any amended standards for CCWs provided in 10 CFR 431.156 that are published after January 1, 2022.

[9] The test procedures in appendix D1 or appendix D2 must be used to determine compliance with the current relevant standards for consumer clothes dryers at 10 CFR 430.32(h)(3). Manufacturers must use the test procedure in appendix D2 to determine compliance with the relevant standards for consumer clothes dryers manufactured on or after March 1, 2028, specified at 10 CFR 430.32(h)(4).

[10] The term ''lot'' refers to a quantity of cloth that has been manufactured with the same batches of cotton and polyester during one continuous process. Section 2 of appendix J3.

[11] Document available at *www.regulations.gov/document/EERE-2024-BT-TP-0009-0001*.

the results of recent investigations by the AHAM task force. (*Id.*)

DOE published a notice of proposed rulemaking (''NOPR'') on November 5, 2024 (''November 2024 NOPR''), presenting DOE's proposals to amend the test procedures for residential and commercial clothes washers and consumer clothes dryers to update the test cloth specifications. 89 FR 87803.

DOE received comments in response to the November 2024 NOPR from the interested parties listed in Table I.1.[12]

TABLE I.1—LIST OF COMMENTERS WITH WRITTEN SUBMISSIONS IN RESPONSE TO THE NOVEMBER 2024 NOPR

Commenter(s)	Reference in this final rule	Comment No. in the docket	Commenter type
Michael Ravnitzky	Ravnitzky	5	Individual.
Anonymous	Anonymous	6	Individual.
Northwest Energy Efficiency Alliance	NEEA	8	Advocacy Organization.
Association of Home Appliance Manufacturers	AHAM	10	Trade Organization.

Ravnitzky, NEEA, and AHAM submitted comments generally supportive of DOE's proposals in the November 2024 NOPR. (Ravnitzky, No. 5 at p. 1; NEEA, No. 8 at pp. 1–2; AHAM, No. 10 at p. 1) An anonymous commenter expressed support for test cloth specifications in order to achieve results that identify the most efficient clothes washers. (Anonymous, No 6 at p. 1) Comments from these stakeholders regarding specific topics addressed in the November 2024 NOPR are discussed in the relevant sections of this document.

A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.[13]

C. Deviation From Process Rule

In accordance with section 3(a) of 10 CFR part 430, subpart C, appendix A (''Process Rule''), DOE noted in the November 2024 NOPR that it was deviating from section 8(b)(2) of the Process Rule, which states that there will be not less than 60 days for public comment on the NOPR, with at least one public hearing or workshop. As stated in the November 2024 NOPR, DOE found it appropriate to forgo a public hearing given the limited scope of issues addressed in the proposal, but also stated that DOE would hold a public meeting on the November 2024 NOPR if one was requested. DOE did not receive any comments requesting a public meeting. DOE also determined in the November 2024 NOPR that 30 days was an appropriate period for providing comments, given the limited scope of issues addressed in the proposal. 89 FR 87803, 87806.

II. Synopsis of the Final Rule

In this final rule, DOE amends its test cloth specifications as follows:

(1) Specify that fabric weight and thread count must be measured on finished goods prior to pre-conditioning,

(2) Clarify that the test cloth be made with a ''granite,'' ''momie,'' or ''crepe'' weave,

(3) Allow the use of an alternate test cloth,

(4) Amend the statistical criteria for a new test cloth lot to be considered acceptable for use,

(5) Restructure and renumber certain sections of appendix J3 for clarity, and

(6) Harmonize the test cloth specifications for clothes washers and clothes dryers.

The adopted amendments are summarized in Table II.1 compared to the test procedure provisions prior to the amendments, as well as the reason for the adopted changes.

TABLE II.1—SUMMARY OF CHANGES IN THE AMENDED TEST PROCEDURE

DOE test procedure prior to amendment	Amended test procedure	Attribution
Does not specify at which stage of the process the fabric weight and thread count of test cloth are applicable.	Specifies that fabric weight and thread count must be measured on finished goods prior to pre-conditioning.	Industry request; improve reproducibility of test results.
Specifies the use of ''granite or momie'' weave.	Specifies the use of ''granite, momie, or crepe'' weave	Industry request; clarification of existing requirement.
Specifies one type of allowable test cloth.	Specifies two types of allowable test cloth	Industry request; reduce test burden while maintaining reproducibility and representativeness.
Specifies that the coefficient of variation across nine RMC values must be less than or equal to 1 percent.	Specifies that the coefficient of variation across nine RMC values must be less than or equal to 1.5 percent.	Reduce test burden while maintaining reproducibility and representativeness.
Specifies that the P-value of the RMC correction curve must be greater than or equal to 0.1.	Specifies that the root-mean-square error of the RMC correction curve must be less than or equal to 0.012.	Reduce test burden while maintaining reproducibility and representativeness.
Appendix J3 test cloth specifications currently apply only to clothes washers.	Harmonizes test cloth requirements across both clothes washers and clothes dryers and extends applicability of appendix J3 test cloth specifications to both clothes washers and clothes dryers.	Industry request; clarify existing requirements consistent with industry practice.

[12] Table I.1 excludes one comment not applicable to this rulemaking.

[13] The parenthetical reference provides a reference for information located in the docket of DOE's rulemaking to develop test procedures for insert product. (Docket No. EERE–2024–BT–TP–0009, which is maintained at: *www.regulations.gov*). The references are arranged as follows: (commenter name, comment docket ID number at page of that document).

DOE has determined that the amendments described in section III and adopted in this document will not alter the measured efficiency of RCWs, CCWs, or consumer clothes dryers, or require retesting or recertification solely as a result of DOE's adoption of the amendments to the test procedures. Additionally, DOE has determined that the amendments will not increase the cost of testing. Discussion of DOE's actions are addressed in detail in section III of this document.

The effective date for the amended test procedures adopted in this final rule is 30 days after publication of this document in the **Federal Register**. Representations of energy use or energy efficiency must be based on testing in accordance with the amended test procedures beginning 180 days after the publication of this final rule.

III. Discussion

In the following sections, DOE discusses certain amendments to its test procedures for RCWs, CCWs, and consumer clothes dryers. For each amendment, DOE provides relevant background information, explains why the amendment merits consideration, discusses relevant public comments, and its final approach.

A. Scope of Applicability

This rulemaking applies to clothes washers (both RCWs and CCWs, which use the same test procedures) [14] and consumer clothes dryers.

DOE has defined a clothes washer as a consumer product designed to clean clothes, utilizing a water solution of soap and/or detergent and mechanical agitation or other movement, that must be one of the following classes: automatic clothes washers,[15] semi-automatic clothes washers,[16] and other clothes washers.[17] 10 CFR 430.2.

DOE regulations also define ''electric clothes dryer'' and ''gas clothes dryer'' similarly as a cabinet-like appliance designed to dry fabrics in a tumble-type drum with forced air circulation, with blower(s) driven by an electric motor(s) and either electricity or gas, respectively, as the heat source. *See,* 10 CFR 430.2. DOE's clothes dryer test procedures are applicable to both electric and gas clothes dryers.

A commercial clothes washer is defined as a soft-mount front-loading or soft-mount top-loading clothes washer that—

(A) Has a clothes container compartment that–

(i) For horizontal-axis clothes washers, is not more than 3.5 cubic feet; and

(ii) For vertical-axis clothes washers, is not more than 4.0 cubic feet; and

(B) Is designed for use in–

(i) Applications in which the occupants of more than one household will be using the clothes washer, such as multi-family housing common areas and coin laundries; or

(ii) Other commercial applications.

(42 U.S.C. 6311(21); 10 CFR 431.452)

DOE is not changing the scope of the RCW, CCW, or consumer clothes dryer test procedures, or the relevant definitions, in this final rule.

B. Relevant Historical Background

This section summarizes the historical background of test cloth specifications in DOE's clothes washer and clothes dryer test procedures that is relevant to topics discussed in this final rule.

DOE first introduced the use of test cloth into the original clothes dryer test procedure established by the final rule published September 14, 1977 (''September 1977 Clothes Dryer Final Rule''). 42 FR 46145. The test cloth specifications were a 50-percent cotton and 50-percent polyester blended material, representative of the range of fabrics comprising consumer wash loads. *Id.* at 42 FR 46146. The September 1977 Clothes Dryer Final Rule also established a maximum use of 25 clothes dryer test cycles for each piece of test cloth to reduce potential variability in the test results that may occur from any change in the composition of the test cloth due to continued drying of the same test cloth. *Id.*

DOE introduced the use of test cloth into the original clothes washer test procedure established by the final rule published September 28, 1977 (''September 1977 Clothes Washer Final Rule''). 42 FR 49802. As discussed in the September 1977 Clothes Washer Final Rule, the size and composition of the test load was chosen to be identical to the test load that had been specified for clothes dryers in the September 1977 Clothes Dryer Final Rule. *Id.* at 49 FR 49805. The number of test runs for each piece of test cloth was limited to no more than 25 clothes washer test cycles. *Id.* at 49 FR 49808.

Since introducing the use of test cloth into the originally established clothes dryer and clothes washer test procedures, DOE has periodically updated the test cloth specifications and requirements. The following paragraphs summarize some of these changes to test cloth specifications and requirements that are relevant to the amendments in this document.

In a final rule published May 19, 1981 (''May 1981 Final Rule''), DOE amended the clothes dryer test procedure to, among other changes, establish test cloth pre-conditioning requirements to improve test repeatability by ensuring that the test cloth not contain any water-soluble sizing or finishing agents that could affect the moisture performance of test cloth. 46 FR 27324. The May 1981 Final Rule also established a weight tolerance on the test cloth. *Id.*

In a final rule published August 27, 1997, DOE amended its test cloth requirements in the clothes washer test procedure by adding a new requirement to prewash (*i.e.,* pre-condition) new test cloth prior to first use for energy consumption testing. 62 FR 45484.

DOE published a final rule on January 12, 2001 (''January 2001 Final Rule'') that, among other changes to the clothes washer test procedure, introduced the modified energy factor descriptor, which incorporated an estimate of clothes drying energy into the clothes washer efficiency descriptor through consideration of the RMC of the clothes leaving the clothes washer. 66 FR 3314. As discussed in the January 2001 Final Rule, it had been discovered that the test cloth to be used for determining the RMC was giving inconsistent results. *Id.* at 66 FR 3317. DOE investigated possible causes for the inconsistent test results and summarized the results in a report published in May 2000 titled *Development of a Standardized Energy Test Cloth for Measuring Remaining Moisture Content in a Residential Clothes Washer* (''May 2000 Test Cloth Report'').[18]

In particular, relevant to topics discussed in this final rule, the May 2000 Test Cloth Report documented the difficulty of relating specifiable test

[14] The test procedures for CCWs must be the same as those established for RCWs. (42 U.S.C. 6314(a)(8)).

[15] An ''automatic clothes washer'' is a class of clothes washer that has a control system that is capable of scheduling a preselected combination of operations, such as regulation of water temperature, regulation of the water fill level, and performance of wash, rinse, drain, and spin functions without the need for user intervention subsequent to the initiation of machine operation. Some models may require user intervention to initiate these different segments of the cycle after the machine has begun operation, but they do not require the user to intervene to regulate the water temperature by adjusting the external water faucet valves. 10 CFR 430.2

[16] A ''semi-automatic clothes washer'' is a class of clothes washer that is the same as an automatic clothes washer except that user intervention is required to regulate the water temperature by adjusting the external water faucet valves. *Id.*

[17] ''Other clothes washer'' means a class of clothes washer that is not an automatic or semi-automatic clothes washer. *Id.*

[18] The May 2000 Test Cloth Report is available at *www.regulations.gov/document/EERE-2006-STD-0064-0277.*

cloth characteristics—fiber content, weight, *etc.*—to RMC measurements. (*See* section 4 of May 2000 Test Cloth Report). On this basis, DOE concluded that tighter test cloth specifications alone would not necessarily lead to comparably consistent RMC measurements. To provide more consistent RMC measurements from lot to lot, the May 2000 Test Cloth Report proposed a new method for developing a ''correction factor'' for each new lot of test cloth. The correction factor would be applied to the RMC measurement to normalize the RMC results to match the RMC performance of a designated ''standard lot.''

The May 2000 Test Cloth Report also concluded that a viable approach to minimize the effects of test cloth variation on RMC would be to consistently specify a single type of fabric that is produced frequently by one mill to a consistent set of specifications. The report recommended the use of a 50-percent cotton/50-percent polyester momie weave fabric from one particular mill as a suitable choice, noting that this cloth (at the time) was produced in high volume, had been produced to a consistent specification for many years, and was likely to continue to be produced on this basis for the foreseeable future. (*See* section 6 of May 2000 Test Cloth Report).

The May 2000 Test Cloth Report recommended a set of test cloth specifications and an RMC correction factor approach that could be adopted into the DOE test procedure. The January 2001 Final Rule incorporated into the clothes washer test procedures many of the recommendations of the May 2000 Test Cloth Report, including the recommended updates to the test cloth specifications and the RMC correction factor procedure. The January 2001 Final Rule also increased the number of allowable test runs for each piece of test cloth to no more than 60 clothes washer test cycles (from 25 previously). 66 FR 3314, 3320.

DOE published a direct final rule on October 31, 2003 (''October 2003 Final Rule'') that, among other changes to the clothes washer test procedure, added as a testing requirement the use of a statistical analysis approach to qualify any interactive effect between different lots of test cloth and spin speeds to further improve consistency of the RMC measurement. 68 FR 62198.

On March 7, 2012, DOE published a final rule (''March 2012 Final Rule'') that, among other changes, updated certain test cloth specifications for clothes washer testing based on recommendations provided by AHAM. 77 FR 13888, 13920–13921. Specifically, the March 2012 Final Rule adopted definitions for cloth ''lot'' and ''roll'' and established test cloth weight tolerances. *Id.* at 77 FR 13921–13922. The March 2012 Final Rule also updated pre-conditioning wash requirements and incorporated American Association of Textile Chemists and Colorists (''AATCC'') test methods for verifying the absence of water-repellent finishes on the test cloth. *Id.* at 77 FR 13922.

In a final rule published on August 5, 2015 (''August 2015 Final Rule''), DOE moved the standard extractor RMC procedure for developing the correction factors for each new test cloth lot from appendix J2 to the newly created appendix J3. 80 FR 46730.

In a final rule published on June 1, 2022 (''June 2022 Final Rule''), among other changes, DOE further consolidated clothes washer test cloth-related provisions into appendix J3 (from appendix J2) to improve the overall logical flow of both test procedures. *Id.* at 87 FR 33367. DOE additionally codified in appendix J3 a test cloth material verification procedure that had historically been used by the AHAM task force when evaluating new lots of test cloth. *Id.* at 87 FR 33368.

C. Test Cloth Specifications and Requirements

In this final rule, DOE is updating its test cloth specifications and requirements to (1) further improve consistency in test results across different lots of test cloth, (2) clarify certain requirements consistent with textile industry nomenclature, (3) allow the use of an alternate type of test cloth that has been shown to exhibit performance consistent with the current test cloth, and (4) re-define appropriate thresholds for certain statistical requirements specified for new lots of test cloth.

Each of the changes are in line with DOE's historical practice of regularly updating its test cloth specifications to improve the consistency of test results and adapt to changes in material specifications and availability of commercially available textiles.

In this section, DOE addresses clothes washer specifications in appendix J3 specifically. As discussed in section III.C.3 of this document, DOE is harmonizing the clothes washer and clothes dryer test cloth specifications such that the edits in this section apply to both product types.

1. Cut Orientation

Section 3.1 of appendix J3 specifies that the test cloth material should come from a roll of material with a width of approximately 63 inches, although other sizes may be used if the test cloth material meets the specifications listed in sections 3.2 through 3.6 of appendix J3. Section 3.7.1 of appendix J3 specifies the dimensions of the individual energy test cloths—nominally 24 inches by 36 inches prior to hemming.[19] Furthermore, section 5 of appendix J3 specifies that the maximum shrinkage requirements for the energy test cloth after pre-conditioning [20] must not be more than 5 percent of the length and width.

Appendix J3 does not specify the orientation of the rectangular dimensions (*i.e.,* lengthwise versus widthwise) for cutting individual energy test cloths from the roll of fabric. As such, the cut orientation of the rectangular energy test cloths can be optimized to minimize wasted fabric (*e.g.,* a lengthwise cut of 36 inches adjacent to a widthwise cut of 24 inches could be patterned on a 63-inch width roll of material with minimal waste).

The May 2024 AHAM Letter recommended that appendix J3 specify that the energy test cloth be cut in a specific orientation relative to the fabric roll. Specifically, the May 2024 AHAM Letter suggested that the 24-inch dimension be cut from the lengthwise (*i.e.,* ''warp'') direction of the roll and the 36-inch dimension be cut from the widthwise (*i.e.,* ''weft'') direction of the roll, as depicted in Figure III.1.

[19] Section 3.7.2 of appendix J3 specifies dimensions of smaller energy ''stuffer'' cloths, which are nominally 12 inches by 12 inches prior to hemming. Since the energy stuffer cloths are square, the consideration of cut orientation in this section of the document pertains only to the rectangular energy test cloths.

[20] The pre-conditioning process is specified in section 5 of appendix J3 and consists of five wash-rinse-spin cycles, with the load bone-dried between each of the five cycles.

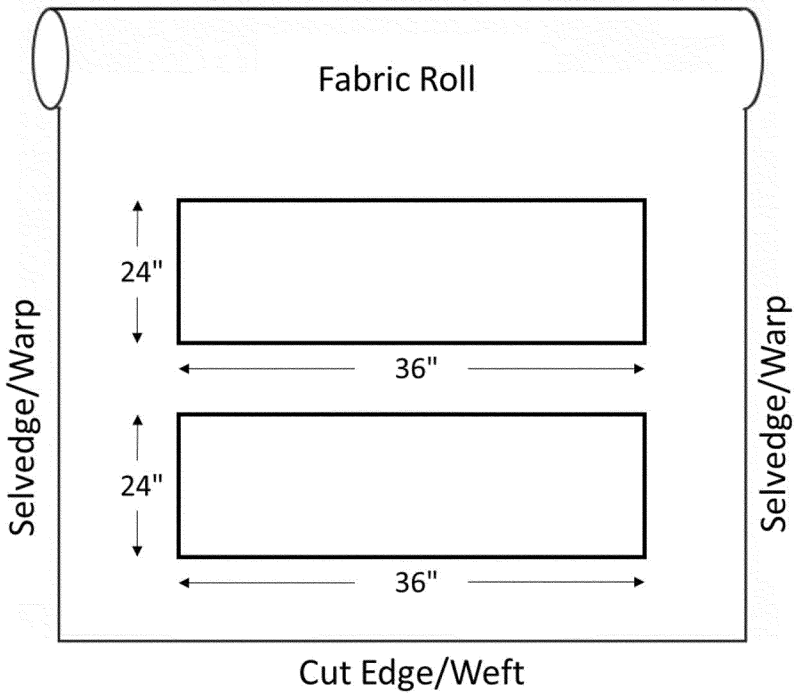

Figure III.1 Energy Test Cloth Cut Orientation Diagram Adapted from the May 2024 AHAM Letter

In the November 2024 NOPR, DOE discussed that differences in cut orientation can impact the relative shrinking of cloth in each direction after repeated wash and dry cycles, which could potentially affect its water absorption and retention properties—characteristics that are particularly relevant to the RMC measurement.[21] 89 FR 87803, 87809. The May 2024 AHAM Letter did not, however, provide any data or quantitative evaluation of whether, or to what extent, the direction of cut orientation could affect the shrinkage of the energy test cloth, or the RMC measurement in the clothes washer test procedure. In the November 2024 NOPR, DOE noted that even if the cut orientation could impact the relative shrinkage of the length and width of the energy test cloth, section 5 of appendix J3 already specifies a maximum allowable shrinkage of 5 percent in each direction. *Id.* DOE added that it had no information to suggest that any variation in shrinkage within this 5 percent tolerance would have a substantive impact on the resulting RMC measurement in the clothes washer test procedure. *Id.*

In the November 2024 NOPR, DOE further raised concerns about potential unintended consequences of requiring a specific cut orientation for each energy test cloth. *Id.* DOE noted that depending on the width of the fabric roll, specifying a cut orientation as suggested in the May 2024 AHAM Letter could prevent the optimization of cut patterns as described previously (*i.e.,* a 36-inch lengthwise cut adjacent to a 24-inch widthwise cut on a 63-inch width roll of material), resulting in increased fabric waste and a corresponding increase in material cost. *Id.* For instance, a 63-inch-wide roll as specified by section 3.1 of appendix J3 would be able to accommodate only a single 36-inch wide cut as suggested by AHAM, resulting in nearly 40 percent of the roll material being wasted. And although section 3.1 of appendix J3 permits the use of other size rolls, DOE noted that textiles are typically woven in standardized widths and expressed concern that fabricating rolls with a custom width for DOE test cloth could increase the material cost. *Id.*

In summary, in the November 2024 NOPR, DOE expressed uncertainty as to whether, or to what extent, the energy test cloth cut orientation could impact the RMC measurement in the clothes washer test procedure, and whether specifying a particular cut orientation could result in fabric waste that would lead to an increase in material cost. *Id.*

Irrespective of its determination regarding the specification of a cut orientation requirement, in the November 2024 NOPR, DOE tentatively determined that section 3.1 of appendix J3 is superfluous,[22] given that the suggested parameters regarding the width and length dimensions of the roll (*i.e.,* a roll width of approximately 63 inches and approximately 500 yards per roll) are rendered moot by the accompanying provision allowing for rolls of other sizes to be used. *Id.* at 89 FR 87810. As such, in the November 2024 NOPR, DOE proposed removing section 3.1 of appendix J3 and renumbering the subsequent sections accordingly. *Id.*

In the November 2024 NOPR, DOE requested comment on the roll dimensions and cut orientations that are currently used to fabricate DOE test cloth. *Id.* DOE also requested comment as to whether, or to what extent, the energy test cloth cut orientation could impact the RMC measurement in the clothes washer test procedure. *Id.*

[21] As discussed, RMC is a measure of the remaining water content of the clothes washer load at the end of the wash cycle and is used to incorporate an estimate of clothes drying energy into the clothes washer efficiency descriptor.

[22] Section 3.1 of appendix J3 specifies that the test cloth material should come from a roll of material with a width of approximately 63 inches and approximately 500 yards per roll. However, other sizes may be used if the test cloth material meets the specifications listed in sections 3.2 through 3.6 of appendix J3.

DOE further requested comment on its concern that establishing a cut orientation requirement could lead to fabric waste, depending on the dimensions of the fabric roll. *Id.* DOE also requested comment on its tentative determination not to specify a cut orientation requirement, and whether it should adopt the cut orientation requirement specified by AHAM or any other cut orientation requirement. *Id.* DOE requested comment on its tentative determination that section 3.1 of appendix J3 is superfluous and its proposal to remove the requirements in section 3.1 of appendix J3. *Id.*

AHAM commented that it specifically supports the roll dimension and cut orientation amendments to appendix J3 proposed in the November 2024 NOPR. (AHAM, No. 10 at p. 1)

Ravnitzky commented that allowing flexibility in test cloth specifications, such as adjustments in cut orientations and fabric dimensions, would help reduce fabric waste and lower material costs without compromising test integrity. Ravnitzky added that this practical approach would benefit both the industry and sustainability efforts. (Ravnitzky, No. 5 at p. 1)

For the reasons discussed in this final rule and in the November 2024 NOPR, DOE is finalizing its proposal, consistent with the November 2024 NOPR, to not specify a cut orientation requirement and to remove the requirements in section 3.1 of appendix J3.

2. Fabric Weight and Thread Count

Section 3.3 of appendix J3 specifies that the fabric weight of the test cloth must be 5.60 ± 0.25 ounces per square yard, but it does not currently specify at what point in the fabrication process this specification applies. Similarly, section 3.4 of appendix J3 specifies that the thread count of the test cloth must be 65 x 57 threads per inch ± 2 percent, but it does not currently specify at what point in the fabrication process this specification applies. The May 2024 AHAM Letter requested that DOE amend these specifications to clarify that fabric weight and thread count specifications apply to ''finished goods'' test cloth prior to pre-conditioning. In the November 2024 NOPR, DOE noted the term ''finished goods'' means after the cloth has been hemmed into energy test cloth and energy stuffer cloths, but prior to any pre-conditioning. 89 FR 87803, 87810.

In the November 2024 NOPR, DOE further noted that specifying that these requirements apply to finished goods (as opposed to prior to the cloth having been processed, de-starched, and hemmed), but prior to any pre-conditioning, is the most appropriate point in the cloth fabrication process because these dimensional properties can change during certain stages of the cloth fabrication process. *Id.* In the November 2024 NOPR, DOE stated that applying these specifications to finished goods therefore ensures the consistency of each test cloth lot at the state in which the test cloth is purchased by a manufacturer or test laboratory. *Id.*

In the November 2024 NOPR, DOE proposed to specify within section 3 of appendix J3 that fabric weight and thread count specifications apply to finished goods prior to pre-conditioning, and requested feedback on this proposal. *Id.*

NEEA commented that it supports specifying a point in the manufacturing and preconditioning process at which the fabric weight and thread count are measured. (NEEA, No. 8 at p. 2)

For the reasons discussed in this final rule and in the November 2024 NOPR, DOE is finalizing its proposal, consistent with the November 2024 NOPR, to specify in section 3 of appendix J3 that fabric weight and thread count specifications apply to finished goods prior to pre-conditioning.

3. Granite Weave

Section 3.2 of appendix J3 currently states that the test cloth used for clothes washer testing must be a pure finished bleached cloth, made with a momie or granite weave. As discussed in the May 2024 AHAM Letter, recent lots 25A and 25B [23] were woven with a different type of granite weave—a ''crepe'' weave—than the ''momie'' type of granite weave that has historically been used for DOE test cloth.

To evaluate whether using a crepe weave would impact test results compared to the historical momie weave, DOE conducted comparative testing of RCWs and consumer clothes dryers using Lot 25A (made with a crepe weave) and previous test cloth Lot 23 (made with a momie weave). 89 FR 87803, 87810. The results of DOE's testing are presented in a Technical Appendix published in the docket for this rulemaking.[24] The testing presented in the November 2024 NOPR showed no substantive variation in RMC, integrated modified energy factor (''IMEF''), or integrated water factor—the reported metrics for RCWs—or in combined energy factor—the reported metric for consumer clothes dryers—between the different granite weave types (*i.e.,* traditional momie versus crepe weave). *Id.* Although DOE's test sample in the November 2024 NOPR did not include any CCWs, DOE noted that it expects that the trends in RMC values, energy use, and water use that it observed in RCWs would apply to CCWs, given that RCWs and CCWs are designed and operate similarly and are tested using the same test procedure. *Id.*

In the November 2024 NOPR, DOE noted that through its participation in discussions with the AHAM task force it understands that very few textile mills maintain the capability to fabricate cloth using the type of momie weave that has traditionally been used to produce DOE test cloth. *Id.* DOE noted that, instead, the type of crepe weave used for Lot 25A is expected to be more readily available going forward. *Id.*

Appendix J3 currently does not define the terms ''momie'' or ''granite'' weave. In the May 2024 AHAM Letter, AHAM suggested that DOE establish definitions for these terms in appendix J3.[25] In the November 2024 NOPR, DOE noted that momie, granite, and crepe weave types are generally understood terms of art within the textile industry, but there is not a definitive source for definitions of these terms. *Id.* In the November 2024 NOPR, DOE expressed concerns that creating its own definitions for these terms could inadvertently conflict with the range of weave styles that are generally understood by the textile industry to be granite weaves. *Id.* Therefore, in the November 2024 NOPR, DOE tentatively determined not to establish a definition for these terms within the appendix J3 test procedure. *Id.*

In the November 2024 NOPR, DOE requested feedback on its proposal to add the term ''crepe'' to the list of allowable weaves in appendix J3. *Id.* DOE further requested feedback on its tentative determination not to establish definitions for ''crepe,'' ''granite,'' or ''momie'' weave in appendix J3. *Id.*

Aside from the generally supportive comments discussed previously, DOE received no comments in response to

[23] The AHAM task force designated the two most recent lots of test cloth ''25A'' and ''25B'' to reflect that these two lots were manufactured at the same time using the same continuous weaving process, although they were finished in separate batch processes.

[24] The Technical Appendix can be found at *https://www.regulations.gov/document/EERE-2024-BT-TP-0009-0003.*

[25] AHAM suggested defining ''granite weave'' as a broad classification of weave producing a small, irregular, pebbled surface similar to crepe fabrics; fabrics made with a granite weave are generally interlaced tightly, and warp and filling yarns appear on the face. AHAM suggested defining ''momie/granite weave fabric'' as test cloth made with granite weave fabric as specified in the suggested definition of granite weave.

the November 2024 NOPR specifically regarding its proposal to add the term ''crepe'' to the list of allowable weaves in appendix J3, or its tentative determination not to establish definitions for ''crepe,'' ''granite,'' or ''momie'' weave in appendix J3.

For the reasons discussed in this final rule and in the November 2024 NOPR, DOE is finalizing its proposal, consistent with the November 2024 NOPR, to add the term ''crepe'' to the list of allowable weaves in appendix J3, and to not establish definitions for ''crepe,'' ''granite,'' or ''momie'' weave in appendix J3.

4. Alternate Test Cloth

DOE is required to ensure that the test procedure is reasonably designed to produce test results that measure energy efficiency, energy use, water use, or estimated annual operating cost of a covered product/equipment during a representative average use cycle or period of use and is not unduly burdensome to conduct. (42 U.S.C. 6293(b)(3); 42 U.S.C. 6314(a)(2)) In establishing the current test cloth specifications, DOE considered the representativeness of the range of fabrics comprising consumer wash loads, the manufacturability of the fabric, the consistency in test cloth production, and the consistency in test results from the fabric. 66 FR 3314, 3318 (Jan. 12, 2001).

As discussed, the current test cloth specifications were recommended by the May 2000 Test Cloth Report, which noted that this cloth (at the time) was produced in high volume, had been produced to a consistent specification for many years, and was likely to continue to be produced on this basis for the foreseeable future. (*See* section 6 of May 2000 Test Cloth Report.) The May 2000 Test Cloth Report also highlighted the benefits of specifying a single type of fabric that is produced frequently by one mill to a consistent set of specifications.

However, while the test cloth specified in appendix J3 continues to be produced by a single supplier, DOE noted in the November 2024 NOPR that it now understands through its participation in the AHAM task force that this cloth is produced exclusively for use in conducting the DOE test procedure (*i.e.,* this specific cloth is not used to any significant extent by any other industry bodies or for any other regulatory or research and development purposes). 89 FR 87803, 87811. As such, it is no longer the case that this cloth is produced in high volume (beyond the volume needed for DOE testing purposes), leading to uncertainty as to whether this cloth is likely to remain readily available on a consistent basis for the foreseeable future. *Id.*

As discussed in the November 2024 NOPR, during the COVID–19 pandemic, the laundry industry experienced shortages in DOE test cloth supply.[26] *Id.* The specialized nature of the DOE test cloth (*i.e.,* the fact the cloth is unique to DOE testing needs and produced in relatively low volumes) inhibited the ability to identify alternate sources of supply for the test cloth. *Id.* To mitigate this shortage, AHAM requested that DOE use its enforcement discretion to allow extended use of test cloth beyond the currently defined cycle limits.[27] On September 28, 2023, DOE issued a statement [28] that it would exercise its enforcement discretion and not impose civil penalties on a clothes washer, commercial clothes washer, or clothes dryer manufacturer for certifying compliance with DOE's energy conservation standards based on testing that exceeds the maximum test cloth run provision set forth in the DOE test procedures. Instead, DOE allowed for usage of test cloth for twice the number of runs allowed in the relevant test procedures.

In an effort to further alleviate any test cloth supply constraints that could limit energy testing activities for clothes washers and clothes dryers, the AHAM task force evaluated the potential merits of specifying an alternate test cloth that could be used for DOE testing, as discussed in the May 2024 AHAM Letter.

In the November 2024 NOPR, DOE noted that the AHAM task force identified a commercially available standardized fabric as a possible alternative to the current test cloth specification. *Id.* This fabric is used as ''ballast'' for testing specific material attributes (such as colorfastness) of textiles and, according to the May 2024 AHAM Letter, has been used by the textile industry for over 80 years. Specifically, the fabric meets the specifications of Laundering Ballast Type 3 cloth specified by industry standard AATCC LP1–2021, *Laboratory Procedure for Home Laundering: Machine Washing.*[29] The specifications for Laundering Ballast Type 3 cloth are provided in Table III.1.

TABLE III.1—SPECIFICATIONS FOR LAUNDERING BALLAST TYPE 3 CLOTH FROM AATCC LP1–2021

Characteristic	Specification
Fiber Content	50% cotton/50% polyester ± 3%.
Greige Fabric Yarns	16/1 or 30/2 ring spun.
Greige Fabric Construction	52 × 48 ± 5 yarns per inch, plain weave.
Finished Fabric Weight	155 ± 10 grams per square meter (4.57 ± 0.29 ounces per square yard).
Edges	All edges hemmed or over-edged.
Finished Piece Size	920 × 920 ± 30 millimeters (36.0 × 36.0 ± 1 inch).
Finished Piece Weight	130 ± 10 grams (4.59 ± 0.35 ounces).

As part of an AHAM task force investigation, DOE and AHAM members conducted comparative testing of Laundering Ballast Type 3 cloth [30] to evaluate whether this cloth could be used to conduct the DOE test procedures and whether doing so would produce test results comparable to the currently specified test cloth. *Id.* The

[26] AHAM informed DOE on March 3, 2022 that there were significant issues with the quality and availability of the required test cloth material for the applicable energy tests for clothes washers and clothes dryers.

[27] On August 7, 2023, AHAM informed DOE that test cloth shortages were persisting and that this supply shortage could also eventually impact DOE's ability to conduct assessment, enforcement, or other testing.

[28] Available at *www.energy.gov/sites/default/files/2023–09/Test%20Cloth%20Policy%20for%20Clothes%20Washers%20and%20Clothes%20Dryers%20Enforcement%20Policy.pdf.*

[29] Table VII of AATCC LP1–2021 provides specifications for various types of cloth, one of which is designated as Laundering Ballast Type 3.

[30] The tested cloth used 16/1 fabric yarns and was sized to match the DOE energy test cloth and energy stuffer cloth dimensions and hemming instructions (as currently specified in section 3.7.1 and 3.7.2 of appendix J3, respectively) instead of the finished piece dimensions specified in Table VII of AATCC LP1–2021.

results of DOE's testing are presented in the Technical Appendix published in the docket for this rulemaking.[31]

Specifically, as discussed in the November 2024 NOPR, DOE tested six RCWs and eight consumer clothes dryers, representing eight manufacturers and all major product classes; AHAM members additionally conducted testing of eight RCWs and six consumer clothes dryers, representing all major product classes. *Id.* These products were tested to their rated appendix (D1, D2, or J2) using both the current DOE test cloth and the Laundering Ballast Type 3 cloth. *Id.*

As discussed in the November 2024 NOPR, DOE's testing demonstrated no substantive difference in measured efficiency compared with historical lots used for RCW and consumer clothes dryer testing. *Id.* In particular for clothes washers, the Laundering Ballast Type 3 produced RMC results comparable to existing DOE test cloth using the currently specified correction factor approach. *Id.* In the November 2024 NOPR, DOE discussed that although its test sample did not include any CCWs, DOE expects that the trends in RMC values, energy use, and water use that it observed in RCWs would apply to CCWs, given that RCWs and CCWs are designed and operate similarly and are tested using the same test procedure. *Id.* at 89 FR 87811–87812.

In addition, AHAM presented the results of its members' testing in appendix A to the May 2024 AHAM Letter. As discussed in the November 2024 NOPR, this testing also demonstrated no substantive difference in measured efficiency compared with historical lots used for RCW and consumer clothes dryer testing. *Id.* at 89 FR 87812.

Based on these data, DOE tentatively determined in the November 2024 NOPR that the AATCC Laundering Ballast Type 3 cloth provides results that are equally as representative as results obtained using the currently specified test cloth. *Id.* On this basis, in the November 2024 NOPR, DOE proposed, consistent with the recommendations from the May 2024 AHAM Letter, to amend appendix J3 to allow for the use of AATCC Laundering Ballast Type 3 cloth, with a specific yarn size, and cut and hemmed to the DOE energy test cloth dimensions. *Id.*

Specifically, DOE proposed in the November 2024 NOPR to incorporate by reference AATCC LP1–2021 into appendix J3 and to allow the use of test cloth meeting the specifications of Laundering Ballast Type 3, as specified in Table VII of AATCC LP1–2021, with the following additional specifications and substitutions:

- Greige Fabric Yarns: Type 16/1 only [32]
- Edges: All edges hemmed only [33]
- Finished Piece Size: Dimensions in accordance with sections 3.7.1 and 3.7.2 of appendix J3 for energy test cloths and energy stuffer cloths, respectively.[34]
- Finished Piece Weight: Disregard.[35]

Id.

Furthermore, and consistent with the discussion in section III.C.3 of this document, DOE considered in the November 2024 NOPR whether to propose a definition for ''plain weave'' as specified in Table VII of AATCC LP1–2021. *Id.* In the November 2024 NOPR, DOE noted the term ''plain weave'' to be a well-understood term of art and therefore tentatively determined that adding a definition of ''plain weave'' to appendix J3 was not warranted. *Id.*

In the November 2024 NOPR, DOE requested comment on its proposal to allow the use of Laundering Ballast Type 3 cloth specified in AATCC LP1–2021 (with certain additional specifications) as an alternate test cloth for conducting clothes washer and clothes dryer testing. *Id.* DOE also requested feedback on its tentative determination not to establish a definition for ''plain weave'' in appendix J3. *Id.*

NEEA commented that it specifically supports allowing the use of the Laundering Ballast Type 3 cloth specified in AATCC LP1–2021 (with certain additional specifications) as an alternate test cloth for conducting clothes washer and clothes dryer testing. (NEEA, No. 8 at p. 2)

Ravnitzky commented in support of the alternate test cloth proposed in the November 2024 NOPR to address potential supply shortages and ensure consistent and reliable results, based on thorough testing. (Ravnitzky, No. 5 at p. 1)

AHAM commented that it supports DOE's proposal in the November 2024 NOPR to not establish a definition for ''plain weave'' in appendix J3. (AHAM, No. 10 at p. 1)

For the reasons discussed in this final rule and in the November 2024 NOPR, DOE is finalizing its proposal, consistent with the November 2024 NOPR, to allow the use of test cloth corresponding to the Laundering Ballast Type 3 cloth specified in AATCC LP1–2021 (with certain additional specifications) as an alternate test cloth for conducting clothes washer and clothes dryer testing, and to not establish a definition for ''plain weave'' in appendix J3. In this final rule, DOE is implementing this in appendix J3 by directly codifying each of the cloth specifications within appendix J3, rather than incorporating by reference Table VII of AATCC LP1–2021 with modifications (as was proposed in the November 2024 NOPR). As discussed in section III.D.3 of this document, as a result of the amendments in this final rule, the specifications in appendix J3 apply to both clothes washers and clothes dryers.

In response to the November 2024 NOPR, AHAM commented that section 3.1.2.3 of appendix J3 as proposed in the November 2024 NOPR [36] should reference section 3.3 instead of section 3.7.1 and 3.7.2. (AHAM, No. 10 at p. 5)

DOE agrees with AHAM's assessment of the incorrect cross-references in the proposed amendments to section 3.1.2.3 of appendix J3. However, these proposed cross-references are rendered moot by the approach taken in this final rule to directly codify each of the test cloth specifications within appendix J3.

5. Uniformity Criteria

In the June 2022 Final Rule, DOE codified a prequalification procedure to be performed on each new lot of test cloth to verify the uniformity of the test cloth throughout the beginning, middle, and end of the lot. 87 FR 33316. As discussed in the June 2022 Final Rule,

[31] The Technical Appendix can be found at *https://www.regulations.gov/document/EERE-2024-BT-TP-0009-0003.*

[32] As discussed previously, comparative testing was conducted only on fabric with 16/1 yarn type, which is a single-string yarn similar in thickness to the 15/1 yarn type currently specified in section 3.5 of appendix J3. No testing was conducted on fabric with 30/2 yarn type—the other fabric yarn option specified in Table VII of AATCC LP1–2021—which is a two-string version of yarn with each string roughly half the diameter of the single-string version.

[33] As discussed previously, comparative testing was conducted only on fabric matching the hemming instructions currently specified in sections 3.7.1 and 3.7.2 of appendix J3. No testing was conducted on over-edged pieces of test cloth (*i.e.,* the other edging option specified in Table VII of AATCC LP1–2021).

[34] As discussed previously, comparative testing was conducted only on fabric matching the dimensions currently specified in sections 3.7.1 and 3.7.2 of appendix J3. No testing was conducted on fabric pieces matching the dimensions as specified in Table VII of AATCC LP1–2021.

[35] The Finished Piece Weight specified in Table VII of AATCC LP1–2021 corresponds to the Finished Piece Size specified in the same table; as such, this specification does not apply to fabric pieces matching the proposed finished piece dimensions.

[36] Section 3.1.2.3 of the proposed regulatory text in the November 2024 NOPR specified the following: *Finished piece size.* Dimensions in accordance with sections 3.7.1 and 3.7.2 of [appendix J3] for energy test cloths and energy stuffer cloths, respectively.

DOE had received a request from members of the AHAM task force to add to appendix J3 additional steps to the qualification procedure that have historically been performed on each new lot of test cloth to ensure uniformity of RMC test results on test cloths from the beginning, middle, and end of each new lot. *Id.* at 87 FR 33368. Industry practice has been to perform this ''uniformity check'' before conducting the procedure to develop the RMC correction factors currently specified in appendix J3. *Id.* Specifically, the uniformity check involves performing an RMC measurement on nine bundles of sample test cloth representing the beginning, middle, and end locations of the first, middle, and last rolls of test cloth in a new lot. *Id.* In the historical procedure provided by the AHAM task force, the coefficient of variation (''CV'') across the nine RMC values must be less than or equal to 1 percent for the test cloth lot to be considered acceptable for use. *Id.* The amendments codified by the June 2022 Final Rule included the suggested requirement for the CV of the ''uniformity check'' procedure to be less than or equal to 1 percent. *Id.* at 87 FR 33369.

Shortly after the publication of the June 2022 Final Rule establishing the requirement for the CV to be less than or equal to 1 percent—but prior to its effective date—Lot 24D was produced by the test cloth supplier and was measured to have a CV of 1.6 percent. As discussed in the November 2024 NOPR, AHAM developed correction factors for this lot of test cloth despite its CV over 1 percent, on the basis that the new CV requirement had not yet become effective, and that the industry was facing a test cloth shortage. 89 FR 87803, 87812.

Since the effective date of the CV requirement, the AHAM task force has developed correction factors for test cloth lots 25A and 25B [37]—both with CV values of 1.1 percent. AHAM stated in letters to DOE that it based its recommendations to proceed with these test cloth lots on the ongoing test cloth shortages, DOE's historical acceptance of lots with CVs exceeding 1 percent, and the extensive testing that DOE performed of Lot 25A, as described in section III.C.3 of this document.

In the November 2024 NOPR, DOE noted that the 1-percent threshold was originally recommended by AHAM during a previous test procedure rulemaking. *Id.* citing 87 FR 33316, 33368 (Jun. 1, 2022). DOE further noted that prior to the codification of the pre-qualification procedure, the AHAM task force used its discretion to evaluate the uniformity of each new test cloth lot. 89 FR 87803, 87812. DOE noted that it understood the repeatable performance of test cloth lots with a CV slightly higher than 1 percent—as shown by the testing of Lot 25A described in section III.C.3 of this document—to be an indication that the 1-percent threshold may be unnecessarily stringent (*i.e.,* too low). *Id.* In the November 2024 NOPR, DOE proposed to amend appendix J3 by increasing the allowable CV threshold to 2 percent. *Id.*

In the November 2024 NOPR, DOE requested feedback on its proposal to amend the CV threshold requirement in appendix J3 from 1 percent to 2 percent. Specifically, DOE requested comment on whether another threshold would be more appropriate. *Id.*

NEEA commented that it supports increasing the CV of the ''uniformity check'' from 1 percent to 2 percent. (NEEA, No. 8 at p. 2) NEEA noted that it has extensive experience testing laundry products with common and emerging technologies using a variety of textiles. (*Id.* at p. 1)

AHAM commented that it agrees with DOE's statement in the November 2024 NOPR that repeatable performance of test cloth lots with a CV slightly higher than 1 percent is an indication that the threshold may be unnecessarily stringent. However, AHAM expressed reluctance with a 2-percent threshold, stating that a CV threshold of 2 percent would result in a within-lot variation of up to 1 RMC percentage point, and instead suggested a CV limit of 1.5 percent. AHAM commented that this threshold would exclude lots 19, 24B, and 24D, which AHAM characterized as highly variable and problematic lots. (AHAM, No. 10 at pp. 3–4)

As discussed, EPCA requires that any test procedures be reasonably designed to produce test results which measure energy efficiency, energy use or estimated annual operating cost of a covered product during a representative average use cycle (as determined by the Secretary) or period of use and shall not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(3); 42 U.S.C. 6314(a)(2)) DOE tentatively determined in the November 2024 NOPR that increasing the allowable CV threshold to 2 percent would reduce test burden while maintaining reproducibility and representativeness [38] of test results. DOE understands that the cost of the test cloth factors in the cost of pre-qualification testing as specified in appendix J3. If the pre-qualification test must be repeated, either on subdivided portions of the test cloth lot or on a different test cloth lot, in order to achieve an allowable CV value, the cost of the qualified test cloth and thus test burden for clothes washer and clothes dryer manufacturers may increase.

Based on the comments received from NEEA and AHAM, both of which have extensive experience testing clothes washers and clothes dryers, DOE understands that there is general support to increase the threshold to 1.5 percent, but only mixed support to increase the threshold to 2 percent. DOE understands AHAM's comment as indicating that, despite historical test cloth lots with CV values greater than 1.5 percent having been qualified for use, manufacturers would currently find an allowable CV threshold of 1.5 percent to reflect the appropriate balance between representativeness and test burden. DOE recognizes that manufacturers (as represented by AHAM) have extensive experience in dealing with differences between test cloth lots, and likewise recognizes manufacturers' interest in ensuring repeatable and reproducible test results—as the basis for producing *representative* test results—for the purposes of certifying compliance with the applicable standards. In consideration of the above, in this final rule, DOE is amending the CV threshold requirement in section 7.2.5 of appendix J3 from 1 percent to 1.5 percent. DOE further specifies that this requirement applies to test cloth lots qualified after February 18, 2025.

6. Variance P-Value Threshold and Root-Mean-Square Error

In the October 2003 Final Rule, DOE adopted a statistical procedure, called ''analysis of variance'' (or ''ANOVA''), as the lot-to-lot interactive-effect statistical test for screening out lots of test cloth whose RMC behavior is inconsistent with the baseline lot. 68 FR 62198, 62201. The ANOVA statistical test measures the extent of the deviation of the shape of the RMC compared to the g-curve for a given lot of the test cloth from the shape of the RMC compared to the g-curve for the baseline lot. *Id.* In the October 2003 Final Rule, DOE explained that it believed that the test would catch any unanticipated deviation in RMC in future lots. *Id.*

Section 8.8 of appendix J3 specifies performing the analysis of variance with replication test using two factors, spin speed and lot, to determine whether the interaction of speed and lot is

[37] *See* letters received by DOE on December 13, 2023 and May 24, 2024.

[38] *See* Table II.1—Summary of Changes in Proposed Test Procedures Relative to Current Test Procedures in the November 2024 NOPR.

significant. If the interaction is not significant (as calculated by the ''P-value'' of the F-statistic being greater than 0.1), then the lot is considered acceptable. If the P-value is less than 0.1, the test cloth is deemed unacceptable. The P-value provides an indication of any interactive effect between lots and spin speeds. The lower the P-value, the stronger the evidence of such an interaction.

On March 29, 2010, AHAM sent DOE a letter (''March 2010 AHAM Letter'') noting that Lot 17 was measured to have a P-value that was less than 0.1.[39] AHAM requested that DOE approve Lot 17 for use on the basis that the root-mean-square error (''RMSE'') was less than 2 percent, the P-value of the test cloth excluding the 100g test condition was greater than 0.1, and test cloth supply shortage issues.

The more recent lot of AATCC test cloth evaluated by DOE and AHAM, as described in section III.C.4 of this document, had a P-value of 0.072, which would not meet the requirements of section 8.8 of appendix J3. However, the testing conducted by DOE and AHAM[40] suggests that, despite the low P-value, the application of the test cloth correction factors produces corrected RMC values that are comparable (*i.e.,* less than 1 RMC percentage point difference on average) to the standard RMC values for each tested extractor condition. For this reason, in the November 2024 NOPR, DOE tentatively determined that a low P-value is not necessarily indicative of a test cloth lot not being acceptable for use in the clothes washer test procedures. 89 FR 87803, 87813. DOE further tentatively determined that a different statistical measure can provide a better measure of the acceptability of a new test cloth lot. *Id.*

Specifically, in the November 2024 NOPR, DOE evaluated the usefulness of the RMSE between the corrected RMC values and the standard RMC values for the same test conditions as a potentially more relevant statistical measure to evaluate a new test cloth lot. *Id.* Conceptually, this RMSE value represents the closeness of fit of the corrected RMC values to the standard RMC values. A smaller RMSE value indicates a better closeness of fit. Recognizing that the *corrected* RMC value is used to calculate IMEF, DOE tentatively determined in the November 2024 NOPR that RMSE—which evaluates corrected RMC values—would provide a better measure of acceptability than P-value, which evaluates uncorrected RMC values. *Id.*

In the November 2024 NOPR DOE presented RMSE values of the historical test cloth lots posted to DOE's website[41] that fell within a range of 0.004 to 0.014. *Id.* Additionally, DOE stated that the AATCC lot of test cloth evaluated by DOE and AHAM, as described in section III.C.4 of this document, has an RMSE of 0.009. *Id.*

Based on the historical record and its testing, DOE tentatively determined in the November 2024 NOPR that an RMSE-based threshold for new test cloth lots would provide a better measure of the acceptability of a new test cloth lot, and therefore proposed to replace the P-value evaluation in section 8.8 of appendix J3 with a calculation of RMSE and a requirement that the RMSE be below 0.015, which represents a threshold slightly higher than the maximum RMSE value of 0.014 observed among historical test cloth lots. *Id.*

In the November 2024 NOPR, DOE requested comment on its proposal to replace the P-value test in appendix J3 with a root-mean-square error test, and on its proposal to specify 0.015 as an acceptability threshold for the RMSE value. *Id.*

Ravnitzky commented in support of the proposed shift from the P-value test to the RMSE threshold, stating that the proposed RMSE threshold of 0.015, based on historical data, provides a more accurate measure of test cloth performance and ensures that new test cloth lots produce consistent RMC measurements, improving the robustness of the testing protocol. (Ravnitzky, No. 5 at p. 1)

AHAM commented that it does not necessarily oppose DOE's tentative determination that an RMSE-based threshold for new test cloth lots would provide a better measure of acceptability than the P-value evaluation, but suggested certain improvements to the approach. (AHAM, No. 10 at p. 4)

Specifically, AHAM recommended that the RMSE calculation reflect the ''N–2'' approach[42] that has historically been used in the test cloth evaluations and is used in the appendix J3 test report template today.[43] AHAM commented that this would change the denominator in equation proposed in section 8.9 of draft appendix J3 from 20 to 18. (*Id.* at p. 5)

DOE notes that in addition to being used in the appendix J3 test report (as described by AHAM), the ''N–2'' approach was also used in the RMSE calculation previously specified in appendices J1 and J2 as codified by the January 2001 Final Rule. *See* 66 FR 3314, 3332. DOE did not intend to change its approach to calculating RMSE compared to the approach used in the appendix J3 test report and previously specified in appendices J1 and J2.[44] For this final rule, DOE re-calculated the historical test cloth lot RMSE values that were presented in the November 2024 NOPR using the ''N–2'' approach.[45]

AHAM further noted that as presented in the November 2024 NOPR, the highest RMSE value of 0.014 is for Lot 6, which included testing at the 50g force instead of the 100g force testing that has been required since the introduction of Lot 7.[46] AHAM suggested that Lot 6 be excluded from the evaluation. (AHAM, No. 10 at p. 4)

DOE notes that Lot 5 was also tested using the 50g test point instead of the 100g test point. Due to the lack of repeatability and consistency of the previous 50g data point, DOE agrees with AHAM's suggestion to exclude Lot 6—as well as Lot 5—from consideration in determining an appropriate RMSE threshold.

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[39] The March 2010 AHAM Letter is available at *www.regulations.gov/document/EERE–2024–BT–TP–0009–0002*.

[40] *See* the Technical Appendix available at *www.regulations.gov/document/EERE–2024–BT–TP–0009–0003*.

[41] DOE maintains a historical record of the standard extractor test data and final correction curve coefficients for each approved lot of energy test cloth at *www.energy.gov/eere/buildings/articles/clothes-washer-test-cloth-correction-factor-information*.

[42] The RMSE, as proposed in the November 2024 NOPR, is equal to the square root of the ratio of the sum of the squared errors across the test sample divided by the number of values in the test sample (N). The ''N–2'' approach refers to a different formula for RMSE wherein the denominator of the equation is N–2 instead of N, as proposed in the November 2024 NOPR.

[43] The appendix J3 test report referenced by AHAM is available at *www.energy.gov/eere/buildings/standardized-templates-reporting-test-results*. DOE develops standardized data templates for reporting the results of tests conducted in accordance with current DOE test procedures. Templates may be used by third-party laboratories under contract with DOE that conduct testing in support of ENERGY STAR verification, DOE rulemakings, and enforcement of the federal energy conservation standards.

[44] The appendix J3 test report uses the STEYX() function in Microsoft Excel to calculate RMSE. This function uses N–2 as the denominator. In its analysis conducted for the November 2024 NOPR, DOE inadvertently used a different formula for calculating RMSE that uses N as the denominator.

[45] The RMSE values presented in this final rule were calculated using the N–2 approach consistent with the formula in section 8.9 of appendix J3, as amended in this final rule, using all available tested runs. For lots of test cloth prior to Lot 16, where the 500g and 650g tests were not performed, the N–2=18 value in the denominator of the RMSE formula was updated to N–2=10 to correspond to the number of tested runs for these lots of test cloth.

[46] In the October 2003 Final Rule, the 50g test point resulted in inconsistent corrected RMC results. DOE acknowledged a basic lack of repeatability of the 50g spin tests and replaced these test points with 100g test points. 68 FR 62198, 62200–62201.

The updated RMSE values used for this final rule analysis are presented in Table III.2 of this document. These values reflect use of the ''N–2'' approach and exclude Lot 5 and Lot 6.

TABLE III.2—HISTORICAL TEST CLOTH LOT RMSE VALUES FOR LOT 7 THROUGH LOT 25B

[Calculated using ''N–2'' approach]

Lot	RMSE
7	0.007
8	0.006
9	0.006
10	0.008
11	0.009
12	0.010
13	0.010
14	0.008
15	0.005
16	0.010
17	0.011
18	0.010
19	0.010
20	0.009
21	0.010
22	0.010
23	0.010
24A	0.010
24B	0.008
24D	0.011
25A	0.008
25B	0.010

The updated RMSE values fall within a range of 0.004 to 0.011, compared to a range of 0.004 to 0.014 as presented in the November 2024 NOPR. Additionally, the AATCC lot of test cloth evaluated by DOE and AHAM, as described in section III.C.4 of this document, has an updated RMSE value of 0.010, compared to a value of 0.009 as presented in the November 2024 NOPR. Accordingly, DOE determines that a threshold RMSE value of 0.012, as suggested by AHAM, is appropriate.

Lastly, AHAM requested that the P-value calculation remain in the test cloth test report (without an acceptability threshold) so that the metric can be monitored and ensure that the change does not have unintended consequences. (AHAM, No. 10 at p. 4)

DOE recognizes the benefits to maintaining the P-value calculation in the appendix J3 test report, even if no longer used as acceptability criteria, and will consider AHAM's suggestion at such time DOE updates its appendix J3 test report.

In summary, in this final rule, DOE is finalizing its proposal to replace the P-value test in appendix J3 with an RMSE test. DOE is establishing the RMSE threshold requirement in section 8.9 of appendix J3 at 0.012, as calculated using the ''N–2'' approach. DOE further specifies that this requirement applies to test cloth lots qualified after February 18, 2025.

D. Other Clarifying and Restructuring Edits

1. Introductory Paragraph

Appendix J3 includes test cloth specifications, procedures for pre-conditioning test cloth, procedures for verifying that new lots of test cloth meet the defined material specifications, and procedures for developing RMC correction factors. Appendix J3 contains an introductory section titled ''Objective'' that summarizes the key objectives of the procedure. This paragraph currently does not reference the pre-conditioning of test cloth as one of the key objectives.

In the November 2024 NOPR, DOE proposed to update the heading to appendix J3 and its objective paragraph to explicitly include pre-conditioning of test cloth as one of the key objectives. 89 FR 87803, 87813.In the November 2024 NOPR, DOE requested feedback on its proposal to update appendix J3 to explicitly mention pre-conditioning of test cloth. *Id.*

DOE did not receive any specific comments on this topic and is finalizing its proposal, consistent with the November 2024 NOPR, to update appendix J3 to explicitly include pre-conditioning of test cloth as one of the key objectives.

2. Pre-Conditioning Instructions

Section 5 of appendix J3 provides the test cloth pre-conditioning instructions. Currently, this section is organized as a single paragraph detailing the entire procedure, whereas other sections of appendix J3 are organized with subsections that provide a clearer step-by-step sequence of instructions.

In the November 2024 NOPR, DOE proposed to restructure section 5 of appendix J3 to read as a sequence of instructions rather than a single paragraph, for greater clarity and ease of use. 89 FR 87803, 87813.

DOE did not receive any specific comments on this topic and is finalizing its proposal, consistent with the November 2024 NOPR, to restructure section 5 of appendix J3 to read as a sequence of instructions rather than a single paragraph, for greater clarity and ease of use.

3. Harmonizing Clothes Washer and Clothes Dryer Test Procedures

As previously discussed, in the August 2015 Final Rule, DOE moved the test cloth qualification procedures from appendix J2 to a newly created appendix J3. Appendix J3 is currently referenced by only the clothes washer test procedure. Section 2.7 of appendices J and J2 reference appendix J3 generally for test cloth specifications and section 5 of appendix J3 for test cloth pre-conditioning instructions. Whereas, for clothes dryers, section 2.6 of appendices D1 and D2 list each of the test cloth specifications and detail the test cloth pre-conditioning requirements.

As discussed in the November 2024 NOPR, historically, manufacturers and test laboratories have used the same test cloth for both clothes washers and clothes dryers. 89 FR 87803, 87813. The May 2024 AHAM Letter requested that DOE harmonize specifically the pre-conditioning procedure for clothes washers and clothes dryers. *Id.* In line with this recommendation, in the November 2024 NOPR, DOE tentatively determined that all aspects of the test cloth specifications can be harmonized between clothes washers and clothes dryers (*i.e.,* not just the pre-conditioning requirements). *Id.* at 89 FR 87814.

In the November 2024 NOPR, DOE proposed to harmonize test cloth specifications between appendices J, J2, D1, and D2 by replacing existing test cloth specifications in appendices D1 and D2 with references to the analogous specifications in appendix J3. *Id.*

Specifically, DOE proposed to replace the entirety of section 2.6 in both appendices D1 and D2 with a paragraph specifically referencing sections 3 (Test Cloth Specifications) and 7 (Test Cloth Material Verification Procedure) of appendix J3. DOE also proposed to update section 2.7 of appendices J and J2 to specifically reference sections 3 (Test Cloth Specifications), 7 (Test Cloth Material Verification Procedure), and 8 (RMC Correction Curve Procedure) of appendix J3. *Id.*

DOE further proposed to remove section 3.8 of appendix J3, which currently specifies that the test cloth must be clean, may not be used for more than 60 clothes washer runs, must be permanently marked, and may not be used in mixed lots. *Id.* DOE proposed that these specifications—which are specific to clothes washers and do not apply to clothes dryers—be included in section 2.7 of appendices J and J2. *Id.* DOE also proposed that appendices D1 and D2 retain the existing requirement that for clothes dryers the test cloth must not be used for more than 25 runs, although this requirement will be relocated to section 2.6 (from 2.6.1(c) currently). *Id.*

Finally, DOE proposed to update the objective statement and section 5 of appendix J3 to explicitly reference

clothes dryers alongside clothes washers. *Id.*

In the November 2024 NOPR, DOE requested comment on its proposal to harmonize test cloth specifications for clothes washers and clothes dryers. *Id.*

AHAM commented that it supports DOE's proposal in the November 2024 NOPR to harmonize test cloth specifications for clothes washers and clothes dryers. (AHAM, No. 10 at p. 1)

Ravnitzky commented in support of harmonizing the test cloth specifications between clothes washers and clothes dryers to simplify compliance, enhance the consistency of test results, reduce complexity for manufacturers, and support standardized testing practices. (Ravnitzky, No. 5 at p. 1)

For the reasons discussed in this final rule and in the November 2024 NOPR, DOE is finalizing its proposal, consistent with the November 2024 NOPR, to harmonize test cloth specifications for clothes washers and clothes dryers.

4. Restructuring Appendix J3

Section 3.2 of appendix J3 specifies the ''nominal fabric type'' for the test cloth as pure finished bleached cloth made with a momie or granite weave, which is nominally 50 percent cotton and 50 percent polyester. Section 3.5 of appendix J3 contains a duplicative (although more specific) requirement specifying a fiber content of 50 percent ± 4 percent cotton, with the balance being polyester. In the November 2024 NOPR, DOE proposed to remove the less-specific nominal fiber content specification from section 3.2 of appendix J3. 89 FR 87803, 87814. Accordingly, DOE further proposed to update the name of section 3.2 of appendix J3 from ''nominal fabric type'' to ''fabric type.'' *Id.*

Within section 3 of appendix J3, which lists the specifications for the test cloth, subsections 3.2 through 3.5 are currently organized as follows: section 3.2 specifies the nominal fabric type, section 3.3 specifies the fabric weight, section 3.4 specifies the thread count, and section 3.5 specifies the fiber content of the yarn. This order does not match the order in which these material properties are considered throughout the test cloth fabrication process. Specifically, the weaving process starts with spinning yarn of a specific fiber content, then a specific number of yarn strands (corresponding to thread count) are woven into a roll of fabric, resulting in a specific material density (*i.e.,* fabric weight). To better match the order in which these material properties are considered throughout the test cloth fabrication process, DOE proposed in the November 2024 NOPR to reorder these subsections to provide the fiber content specification first, followed by thread count specification, followed by the fabric weight specification. *Id.*

Section 3.7 of appendix J3 currently includes dimensions for the energy test cloth and energy stuffer cloth [47] and specifies that the dimensions apply ''before washing.'' DOE is aware that this terminology may lead to confusion, as it is inconsistent with other parts of the test procedure that use the term ''pre-conditioning'' rather than ''washing'' to refer to the process by which test cloth is washed before its first use. In the November 2024 NOPR, DOE proposed, consistent with the recommendations in the May 2023 AHAM Letter, to clarify this wording and to specify that the dimensions listed in section 3.7 apply before pre-conditioning of the test cloth. *Id.*

Appendices D1, D2, J, J2, and J3 currently use inconsistent hyphenation of the word pre-conditioning, using ''pre-conditioning'' in some cases and ''preconditioning'' in others. The May 2024 AHAM Letter requested that DOE standardize the hyphenation of ''pre-conditioning'' throughout the appendix. *Id.* In the November 2024 NOPR, DOE proposed to standardize the hyphenation of ''pre-conditioning'' across all five appendices. *Id.*

The June 2022 Final Rule re-numbered certain sections of appendix J3 and implemented in section 8.5 of appendix J3 references to ''sections 8.3.3 and 8.3.4 of this appendix.'' 87 FR 33316, 33405. These cross-references should instead reference sections 8.3 and 8.4 of appendix J3. In the November 2024 NOPR, DOE proposed to correct this typographical error by updating section 8.5 of appendix J3 to correctly reference sections 8.3 and 8.4, in place of sections 8.3.3 and 8.3.4. 89 FR 87803, 87814.

In the November 2024 NOPR, DOE requested feedback on its proposal to clarify and restructure appendix J3. *Id.*

Ravnitzky commented that the proposed reorganization of the test procedures for improved readability and simplicity is a significant improvement, stating that clearer procedural instructions make it easier for manufacturers and testing laboratories to accurately follow the guidelines, enhancing overall compliance, and that simplifying the test procedures helps manufacturers to meet important energy efficiency requirements for major appliances such as clothes washers and clothes dryers, supporting broader energy conservation goals. (Ravnitzky, No. 5 at p. 1)

For the reasons discussed in this final rule and in the November 2024 NOPR, DOE is finalizing its proposal, consistent with the November 2024 NOPR, to clarify and restructure appendix J3.

E. Test Procedure Costs

EPCA requires that test procedures amended by DOE not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(3); 6314(a)(2)) DOE does not anticipate that the amendments in this final rule will impact testing costs or the burden of conducting the test procedure.

In the November 2024 NOPR, DOE presented market research indicating that the alternate test cloth proposed for use has approximately the same cost per pound as the current test cloth—approximately $40–50 per pound of unconditioned test cloth.[48] 89 FR 87803, 87814. Therefore, DOE tentatively determined that using the alternate test cloth would not impact clothes washer or clothes dryer testing costs. *Id.*

Based on an analysis of the test results presented in the Technical Appendix, in the November 2024 NOPR, DOE tentatively determined that manufacturers would be able to rely on data generated under the current test procedures for the newly finalized amendments. *Id.*

In the November 2024 NOPR, DOE requested comment on its tentative determination that that the amendments proposed in this NOPR would not impact testing costs or the burden of conducting the test procedure. *Id.*

DOE received no comments in response to the November 2024 NOPR regarding the impact of testing costs or the burden of conducting the test procedure.

For the reasons discussed in this final rule and in the November 2024 NOPR, DOE has determined that the amendments adopted in this final rule will not impact testing costs or the burden of conducting the test procedure.

F. Effective and Compliance Dates

The effective date for the adopted test procedure amendment will be 30 days after publication of this final rule in the **Federal Register**. EPCA prescribes that all representations of energy efficiency

[47] An energy stuffer cloth is made from the same material as an energy test cloth but is cut to a smaller size. Test loads must consist of energy test cloths and no more than five energy stuffer cloths per load to achieve the specified weight.

[48] These cost estimates are based on DOE's most recent purchases of test cloth in relatively small quantities.

and energy use, including those made on marketing materials and product labels, must be made in accordance with an amended test procedure, beginning 180 days after publication of the final rule in the **Federal Register**. (42 U.S.C. 6293(c)(2); 42 U.S.C. 6314(d)(1)) EPCA provides an allowance for individual manufacturers to petition DOE for an extension of the 180-day period if the manufacturer may experience undue hardship in meeting the deadline. (42 U.S.C. 6293(c)(3); 42 U.S.C. 6314(d)(2)) To receive such an extension, petitions must be filed with DOE no later than 60 days before the end of the 180-day period and must detail how the manufacturer will experience undue hardship. (*Id.*)

As discussed, on September 28, 2023, DOE issued a statement stating that DOE would exercise its enforcement discretion and not impose civil penalties on a clothes washer, commercial clothes washer, or clothes dryer manufacturer for certifying compliance with DOE's energy conservation standards based on testing that exceeds the maximum test cloth run provision set forth in the DOE test procedures. Instead, DOE allowed for usage of test cloth for twice the number of runs allowed in the relevant test procedures.

In the May 2024 AHAM Letter, AHAM requested that DOE maintain its enforcement discretion policy to allow twice the number of test runs than is currently specified for test cloth meeting the current specifications, but not for any of the alternate test cloth, noting that it did not have any test data to support an extended number of cycles on the new test cloth at the time. 89 FR 87803, 87815.

In the November 2024 NOPR, DOE tentatively determined that the updated test cloth provisions would alleviate any test cloth shortages that were the impetus for the enforcement discretion policy, and that at the time of compliance of the amended test procedure, no need for such a policy would remain. *Id.* Therefore, in the November 2024 NOPR, DOE tentatively determined that upon the compliance date of test procedure provisions of an amended test procedure (*i.e.,* 180 days after publication of a test procedure final rule), the enforcement discretion policy would be withdrawn. *Id.*

In the May 2024 AHAM Letter, AHAM further requested that DOE consider allowing immediate use of the alternate test cloth as a relief to manufacturers facing test cloth shortages, rather than waiting for the completion of the rulemaking. *Id.*

In the November 2024 NOPR, DOE recognized the concern of test cloth availability. *Id.* As noted, DOE tentatively determined that it would maintain the current enforcement policy allowing for the extended lifetime of the current test cloth until 180 days after publication of a test procedure final rule and noted that the amendments could be used as early as their effective date (*i.e.,* 30 days after publication of the final rule DOE published regarding these amendments). *Id.*

In the November 2024 NOPR, DOE requested comments on its tentative determination that the enforcement discretion policy allowing twice the number of test cloth runs would be withdrawn 180 days after publication of a test procedure final rule. *Id.*

DOE did not receive any specific comments on this topic and is finalizing its proposal, consistent with the November 2024 NOPR, that the enforcement discretion policy allowing twice the number of test cloth runs will be withdrawn 180 days after publication of this final rule.

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Orders 12866, 13563, and 14094

Executive Order (''E.O.'') 12866, ''Regulatory Planning and Review,'' as supplemented and reaffirmed by E.O. 13563, ''Improving Regulation and Regulatory Review,'' 76 FR 3821 (Jan. 21, 2011) and E.O. 14094, ''Modernizing Regulatory Review,'' 88 FR 21879 (April 11, 2023), requires agencies, to the extent permitted by law, to: (1) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public. DOE emphasizes as well that E.O. 13563 requires agencies to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible. In its guidance, the Office of Information and Regulatory Affairs (''OIRA'') in the Office of Management and Budget (''OMB'') has emphasized that such techniques may include identifying changing future compliance costs that might result from technological innovation or anticipated behavioral changes. For the reasons stated in the preamble, this final regulatory action is consistent with these principles.

Section 6(a) of E.O. 12866 also requires agencies to submit ''significant regulatory actions'' to OIRA for review. OIRA has determined that this final regulatory action does not constitute a ''significant regulatory action'' under section 3(f) of E.O. 12866. Accordingly, this action was not submitted to OIRA for review under E.O. 12866.

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires preparation of a final regulatory flexibility analysis (''FRFA'') for any final rule where the agency was first required by law to publish a proposed rule for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, ''Proper Consideration of Small Entities in Agency Rulemaking,'' 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the DOE rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's website: *www.energy.gov/gc/office-general-counsel.* DOE reviewed this final rule under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003.

DOE has recently conducted a focused inquiry into small business manufacturers of the RCWs, CCWs, and consumer clothes dryers covered by this rulemaking. DOE used available public information to identify potential small manufacturers. DOE accessed the

Compliance Certification Database [49] to create a list of companies that import or otherwise manufacture the RCWs, CCWs, and consumer clothes dryers covered by this final rule. Of the domestic original equipment manufacturers (''OEM'') that manufacture the RCWs, CCWs, and consumer clothes dryers covered by this final rule, DOE has identified one domestic RCW OEM that qualifies as a small business.

As detailed in section III.C.4 of this document, DOE is establishing an additional type of test cloth be permitted for testing. This alternate test cloth (and updated test cloth provisions) will alleviate any test cloth shortages currently experienced by manufacturers. This alternate test cloth is approximately the same cost as the existing test cloth and has not demonstrated any substantive differences in measured efficiency compared with historical lots used to RCW and consumer clothes dryer testing. As a result, DOE does not expect any increased cost or burdens to manufacturers from this final rule.

Therefore, DOE concludes that the final rule would not have a ''significant economic impact on a substantial number of small entities,'' and that the preparation of a FRFA is not warranted. DOE has submitted a certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review under 5 U.S.C. 605(b).

C. Review Under the Paperwork Reduction Act of 1995

Manufacturers of RCWs, CCWs, and consumer clothes dryers must certify to DOE that their products comply with any applicable energy conservation standards. To certify compliance, manufacturers must first obtain test data for their products according to the DOE test procedures, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including RCWs, CCWs, and consumer clothes dryers. (*See generally* 10 CFR part 429.) The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (''PRA''). This requirement has been approved by OMB under OMB control number 1910–1400. Public reporting burden for the certification is estimated to average 35 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

DOE is not amending the certification or reporting requirements for RCWs, CCWs, and consumer clothes dryers in this final rule.

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

D. Review Under the National Environmental Policy Act of 1969

In this final rule, DOE establishes test procedure amendments for measuring the energy efficiency of RCWs, CCWs, and consumer clothes dryers. DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and DOE's implementing regulations at 10 CFR part 1021. Specifically, DOE has determined that adopting test procedures for measuring energy efficiency of consumer products and industrial equipment is consistent with activities identified in 10 CFR part 1021, appendix A to subpart D, A5 and A6. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

E. Review Under Executive Order 13132

Executive Order 13132, ''Federalism,'' 64 FR 43255 (August 4, 1999), imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. The Executive order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE examined this final rule and determined that it will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of this final rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) No further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

Regarding the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, ''Civil Justice Reform,'' 61 FR 4729 (February 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity, (2) write regulations to minimize litigation, (3) provide a clear legal standard for affected conduct rather than a general standard, and (4) promote simplification and burden reduction. Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this final rule meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (''UMRA'') requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. Public Law 104–4, sec. 201 (codified at 2 U.S.C. 1531). For a regulatory action resulting in a rule that

[49] U.S. Department of Energy Compliance Certification Database, available at: *www.regulations.doe.gov/certification-data/products.html.*

may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a)–(b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed ''significant intergovernmental mandate,'' and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820; also available at *www.energy.gov/gc/office-general-counsel.* DOE examined this final rule according to UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure of $100 million or more in any year, so these requirements do not apply.

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

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105–277) requires Federal agencies to issue a Family Policymaking Assessment for any proposed rule or policy that may affect family well-being. When developing a Family Policymaking Assessment, agencies must assess whether: (1) the action strengthens or erodes the stability or safety of the family and, particularly, the marital commitment; (2) the action strengthens or erodes the authority and rights of parents in the education, nurture, and supervision of their children; (3) the action helps the family perform its functions, or substitutes governmental activity for the function; (4) the action increases or decreases disposable income or poverty of families and children; (5) the benefits of the action justify the financial impact on the family; (6) the action may be carried out by State or local government or by the family; and whether (7) the action establishes an implicit or explicit policy concerning the relationship between the behavior and personal responsibility of youth, and the norms of society. In evaluating the above factors, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment as none of the above factors are implicated. Further, this determination would not have any financial impact on families nor any impact on the autonomy or integrity of the family as an institution.

I. Review Under Executive Order 12630

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

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

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE's guidelines were published at 67 FR 62446 (Oct. 7, 2002). Pursuant to OMB Memorandum M–19–15, Improving Implementation of the Information Quality Act (April 24, 2019), DOE published updated guidelines which are available at *www.energy.gov/sites/prod/files/2019/12/f70/DOE%20Final%20Updated%20IQA%20Guidelines%20Dec%202019.pdf.* DOE has reviewed this final rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review Under Executive Order 13211

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

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

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

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

The modifications to the test procedures for RCWs, CCWs, and consumer clothes dryers adopted in this final rule do not incorporate any new commercial standards or test procedures that are not already incorporated by reference at 10 CFR 430.3 and therefore DOE has not re-assessed such standards as part of this final rule.

M. Description of Materials Incorporated by Reference

AATCC Test Method 135–2010 is referenced in the amendatory text of this document but has already been approved for the sections where it appears. No changes are being made to the IBR material.

N. Congressional Notification

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

V. Approval of the Office of the Secretary

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

List of Subjects in 10 CFR Part 430

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

Signing Authority

This document of the Department of Energy was signed on January 10, 2025, by Jeffrey Marootian, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE **Federal Register** Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on January 13, 2025.

Treena V. Garrett,

Federal Register Liaison Officer, U.S. Department of Energy.

For the reasons stated in the preamble, DOE amends part 430 of Chapter II of Title 10, Code of Federal Regulations as set forth below:

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; 28 U.S.C. 2461 note.

■ 2. Amend appendix D1 to subpart B of part 430 by:

■ a. Revising sections 2.6, 2.6.1, 2.6.2, and 2.6.3;

■ b. Adding sections 2.6.4 and 2.6.5; and

■ c. Revising the heading for section 2.8.

The revisions and additions read as follows:

Appendix D1 to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Clothes Dryers

* * * * *

2. Testing Conditions

* * * * *

2.6 *Test cloths.*

2.6.1 *Material Specifications.* The energy test cloth and energy stuffer cloth material and dimensions must conform to the specifications in section 3 of appendix J3 to this subpart.

2.6.2 *Material Verification.* The test cloth lot used to fabricate each piece of test cloth must conform with the material verification procedures specified in section 7 of appendix J3 to this subpart.

2.6.3 *Lot Identification.* Each piece of test cloth must be clean and permanently marked identifying the lot number of the material. Mixed lots of material must not be used for testing a clothes dryer.

2.6.4 *Pre-Conditioning.* The test cloth must be pre-conditioned prior to first use as specified in section 5 of appendix J3 to this subpart.

2.6.5 *Lifetime.* Each piece of test cloth must not be used for more than 25 test runs (after pre-conditioning).

* * * * *

2.8 *Clothes dryer pre-conditioning.*

* * * * *

■ 3. Amend appendix D2 to subpart B of part 430 by:

■ a. Revising sections 2.6, 2.6.1, 2.6.2, and 2.6.3;

■ b. Adding sections 2.6.4 and 2.6.5; and

■ c. Revising the heading for section 2.8.

The revisions and additions read as follows:

Appendix D2 to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Clothes Dryers

* * * * *

2. Testing Conditions

* * * * *

2.6 *Test cloths.*

2.6.1 *Material Specifications.* The energy test cloth and energy stuffer cloth material and dimensions must conform to the specifications in section 3 of appendix J3 to this subpart.

2.6.2 *Material Verification.* The test cloth lot used to fabricate each piece of test cloth must conform with the material verification procedures specified in section 7 of appendix J3 to this subpart.

2.6.3 *Lot Identification.* Each piece of test cloth must be clean and permanently marked identifying the lot number of the material. Mixed lots of material must not be used for testing a clothes dryer.

2.6.4 *Pre-Conditioning.* The test cloth must be pre-conditioned prior to first use as specified in section 5 of appendix J3 to this subpart.

2.6.5 *Lifetime.* Each piece of test cloth must not be used for more than 25 test runs (after pre-conditioning).

* * * * *

2.8 *Clothes dryer pre-conditioning.*

* * * * *

■ 4. Amend appendix J to subpart B of part 430 by revising section 2.7 to read as follows:

Appendix J to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Automatic and Semi-Automatic Clothes Washers

* * * * *

2. Testing Conditions and Instrumentation

* * * * *

2.7 *Test cloths.*

2.7.1 *Material Specifications.* The energy test cloth and energy stuffer cloth material and dimensions must conform to the specifications in section 3 of appendix J3 to this subpart.

2.7.2 *Material Verification.* The test cloth lot used to fabricate each piece of test cloth must conform with the material verification procedures specified in section 7 of appendix J3 to this subpart.

2.7.3 *RMC Correction Curve.* The test cloth lot used for testing must have a remaining moisture content (RMC) correction curve determined, according to section 8 of appendix J3 to this subpart.

2.7.4 *Lot Identification.* Each piece of test cloth must be clean and permanently marked identifying the lot number of the material. Mixed lots of material must not be used for testing a clothes washer.

2.7.5 *Pre-Conditioning.* The test cloth must be pre-conditioned prior to first use as specified in section 5 of appendix J3 to this subpart.

2.7.6 *Lifetime.* Each piece of test cloth must not be used for more than 60 test runs (after pre-conditioning).

* * * * *

■ 5. Amend appendix J2 to subpart B of part 430 by revising section 2.7 to read as follows:

Appendix J2 to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Automatic and Semi-Automatic Clothes Washers

* * * * *

2. Testing Conditions and Instrumentation

* * * * *

2.7 *Test cloths.*

2.7.1 *Material Specifications.* The energy test cloth and energy stuffer cloth material and dimensions must conform to the specifications in section 3 of appendix J3 to this subpart.

2.7.2 *Material Verification.* The test cloth lot used to fabricate each piece of test cloth must conform with the material verification procedures specified in section 7 of appendix J3 to this subpart.

2.7.3 *RMC Correction Curve.* The test cloth lot used for testing must have a remaining moisture content (RMC) correction curve determined, according to section 8 of appendix J3 to this subpart.

2.7.4 *Lot Identification.* Each piece of test cloth must be clean and permanently marked identifying the lot number of the material. Mixed lots of material must not be used for testing a clothes washer.

2.7.5 *Pre-Conditioning.* The test cloth must be pre-conditioned prior to first use as specified in section 5 of appendix J3 to this subpart.

2.7.6 *Lifetime.* Each piece of test cloth must not be used for more than 60 test runs (after pre-conditioning).

■ 6. Amend appendix J3 to subpart B of part 430 by:
■ a. Revising the heading for appendix J3;
■ b. Revising section 1;
■ c. Revising section 3;
■ d. Revising section 5;
■ e. Revising sections 7.1.1 and 7.2.5;
■ f. Revising sections 8.5 through 8.8; and
■ g. Adding section 8.9.

The revisions and additions read as follows:

Appendix J3 to Subpart B of Part 430—Test Cloth Specifications and Procedures for Pre-Conditioning and Determining Correction Coefficients of New Test Cloth Lots

* * * * *

1. Objective

This appendix includes the following: (1) Specifications for the test cloth to be used for testing clothes washers and clothes dryers; (2) procedures for pre-conditioning the test cloth for use in testing clothes washers and clothes dryers; (3) procedures for verifying that new lots of test cloth meet the defined material specifications; and (4) procedures for developing a set of correction coefficients that correlate the measured remaining moisture content (RMC) values of each new test cloth lot with a set of standard RMC values established as an historical reference point. These correction coefficients are applied to the RMC measurements performed during testing according to appendix J or appendix J2 to this subpart, ensuring that the final corrected RMC measurement for a clothes washer remains independent of the test cloth lot used for testing.

* * * * *

3. Test Cloth Specifications

The energy test cloths and energy stuffer cloths must meet the following specifications:

3.1 The test cloth material must be one of the following two types:

3.1.1 *Legacy Momie Cloth.* Test cloth meeting all of the specifications in sections 3.1.1.1 through 3.1.1.4 of this appendix.

3.1.1.1 *Fabric type.* Pure finished bleached cloth made with a momie, granite, or crepe weave.

3.1.1.2 *Fiber content of warp and filling yarn.* 50% ± 4% cotton, with the balance being polyester, open end spun, 15/1 ± 5% cotton count blended yarn.

3.1.1.3 *Thread count.* 65 x 57 per inch (warp × fill), ± 2%. Thread count is measured on the finished good, prior to pre-conditioning.

3.1.1.4 *Fabric weight.* 5.60 ± 0.25 ounces per square yard (190.0 ± 8.4 g/m^2). Fabric weight is measured on the finished good, prior to pre-conditioning.

3.1.2 *Modified AATCC Laundering Ballast Type 3.* Test cloth meeting the specifications in sections 3.1.2.1 through 3.1.2.4 of this appendix.

3.1.2.1 *Fabric Type.* Plain weave.

3.1.2.2 *Fiber content of warp and filling yarn.* 50% cotton/50% polyester ± 3%, 16/1 ring spun.

3.1.2.3 *Thread count.* 52 x 48 ± 5 yarns per inch. Thread count is measured on the finished good, prior to pre-conditioning.

3.1.2.4 *Fabric weight.* 4.57 ± 0.29 ounces per square yard (155 ± 10 g/m^2). Fabric weight is measured on the finished good, prior to pre-conditioning.

3.2 Water repellent finishes, such as fluoropolymer stain resistant finishes, must not be applied to the test cloth.

3.3. *Test cloth dimensions.*

3.3.1 *Energy test cloth.* The energy test cloth must be made from test cloth material that is cut to 24 ± ½ inches by 36 ± ½ inches (61.0 ± 1.3 cm by 91.4 ± 1.3 cm), and hemmed to 22 ± ½ inches by 34 ± ½ inches (55.9 ± 1.3 cm by 86.4 ± 1.3 cm) before pre-conditioning.

3.3.2 *Energy stuffer cloth.* The energy stuffer cloth must be made from the same test cloth material as the energy test cloth, cut to 12 ± ¼ inches by 12 ± ¼ inches (30.5 ± 0.6 cm by 30.5 ± 0.6 cm), and hemmed to 10 ± ¼ inches by 10 ± ¼ inches (25.4 ± 0.6 cm by 25.4 ± 0.6 cm) before pre-conditioning.

* * * * *

5. Test Cloth Pre-Conditioning Instructions

Use the following instructions for performing pre-conditioning of new energy test cloths and energy stuffer cloths as specified throughout section 7 and section 8 of this appendix, before any clothes washer testing using appendix J or appendix J2 to this subpart, and before any clothes dryer testing using appendix D1 or appendix D2 to this subpart.

5.1 Perform five complete wash-rinse-spin cycles, the first two with current AHAM Standard detergent Formula 3 and the last three without detergent. Place the test cloth in a clothes washer set at the maximum water level. Wash the load for ten minutes in soft water (17 ppm hardness or less) using 27.0 grams + 4.0 grams per pound of cloth load of AHAM Standard detergent Formula 3. The wash temperature is to be controlled to 135 °F ± 5 °F (57.2 °C ± 2.8 °C) and the rinse temperature is to be controlled to 60 °F ± 5 °F (15.6 °C ± 2.8 °C).

5.2 Dry the load to bone-dry between each of the five wash-rinse-spin cycles.

5.3 The maximum shrinkage after pre-conditioning must not be more than 5 percent of the length and width. Measure per AATCC Test Method 135–2010 (incorporated by reference; see § 430.3).

* * * * *

7. Test Cloth Material Verification Procedure

* * * * *

7.1.1 *Dimensions.* Each hemmed energy test cloth must meet the size specifications in section 3.3.1 of this appendix. Each hemmed energy stuffer cloth must meet the size specifications in section 3.3.2 of this appendix.

* * * * *

7.2 *Uniformity Verification.*

* * * * *

7.2.5 Calculate the coefficient of variation (CV) of the nine average RMC values from each sample load. For test cloth lots qualified after February 18, 2025, the CV must be less than or equal to 1.5% for the test cloth lot to be considered acceptable and to perform the standard extractor RMC testing.

8. RMC Correction Curve Procedure

* * * * *

8.5 Repeat sections 8.3 and 8.4 of this appendix an additional two times, so that three replications at each extractor condition are performed. When this procedure is performed in its entirety, a total of 60 extractor RMC test runs are required.

8.6 Calculate $RMC_{cloth\text{-}avg}$ for each extractor test condition by averaging the values of the 3 replications performed specified in sections 8.3 and 8.4 of this appendix.

8.7 Perform a linear least-squares fit to determine coefficients A and B such that the standard RMC values shown in Table 8.7 of this appendix ($RMC_{standard}$) are linearly related to the $RMC_{cloth\text{-}avg}$ values calculated in section 8.6 of this appendix:

$$RMC_{standard} \sim A \times RMC_{cloth\text{-}avg} + B$$

where A and B are coefficients of the linear least-squares fit.

TABLE 8.7—STANDARD RMC VALUES

"g Force"	RMC percentage			
	Warm soak		Cold soak	
	15 min. spin (percent)	4 min. spin (percent)	15 min. spin (percent)	4 min. spin (percent)
100	45.9	49.9	49.7	52.8
200	35.7	40.4	37.9	43.1
350	29.6	33.1	30.7	35.8
500	24.2	28.7	25.5	30.0

TABLE 8.7—STANDARD RMC VALUES—Continued

"g Force"	RMC percentage			
	Warm soak		Cold soak	
	15 min. spin (percent)	4 min. spin (percent)	15 min. spin (percent)	4 min. spin (percent)
650	23.0	26.4	24.1	28.0

8.8 Calculate the corrected RMC value for each extractor test condition, $RMC_{cloth\text{-}corr}$ as follows:

$RMC_{cloth\text{-}corr} = A \times RMC_{cloth\text{-}avg} + B$

Where:

$RMC_{cloth\text{-}avg}$ = the average RMC value, as calculated in section 8.6 of this appendix for each extractor test condition, expressed as a decimal, and

A and B are the coefficients of the linear least squares fit as determined in section 8.7 of this appendix.

8.9 Calculate the root mean square error of the linear fit, RMSE. For test cloth lots qualified after February 18, 2025, the RMSE must be less than or equal to 0.012 for the test cloth lot to be considered acceptable. The RMSE is calculated as follows:

$$RMSE = \sqrt{\sum_{i=1}^{N} \frac{\left(RMC_{standard\_i} - RMC_{cloth-corr\_i}\right)^2}{N-2}}$$

Where:

$RMC_{standard\_i}$ = the $RMC_{standard}$ value in Table 8.7 of this appendix for the ith extractor test condition, expressed as a decimal,

$RMC_{cloth\text{-}corr\_i}$ = the corrected RMC value, as calculated in section 8.8 of this appendix for the ith extractor test condition, expressed as a decimal, and

N = the number of extractor test conditions listed in Table 8.7 of this appendix = 20.

* * * * *

[FR Doc. 2025–00986 Filed 1–16–25; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

10 CFR Part 431

[EERE–2022–BT–TP–0019]

RIN 1904–AF08

Energy Conservation Program: Test Procedure for Compressors

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

ACTION: Final rule.

SUMMARY: The U.S. Department of Energy ("DOE") is amending the test procedure for compressors to correct an error and to ensure that pressure ratio is expressed in terms of absolute pressure. DOE is also correcting the formula for isentropic efficiency and specific energy consumption of the packaged compressor by incorporating a K_6 correction factor to correct for differences in pressure ratio when testing at differing elevations. Finally, DOE is amending the definition of "air compressor" to include a minor clarification and revise a typographical error.

DATES: The effective date of this rule is April 2, 2025. The amendments will be mandatory for product testing starting July 16, 2025.

The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register on April 2, 2025.

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

A link to the docket web page can be found at *www.regulations.gov/docket/EERE-2022-BT-TP-0019.* The docket web page contains instructions on how to access all documents, including public comments, in the docket.

For further information on how to review the docket contact the Appliance and Equipment Standards Program staff at (202) 287–1445 or by email: *ApplianceStandardsQuestions@ee.doe.gov.*

FOR FURTHER INFORMATION CONTACT:

Mr. Jeremy Dommu, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE–2J, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 586–9870. Email: *ApplianceStandardsQuestions@ee.doe.gov.*

Mr. Pete Cochran, U.S. Department of Energy, Office of the General Counsel, GC–33, 1000 Independence Avenue SW, Washington, DC 20585–0121. Telephone: (202) 586–9496. Email: *Peter.Cochran@hq.doe.gov.*

SUPPLEMENTARY INFORMATION:

DOE incorporates by reference the following industry standards into title 10 of the Code of Federal Regulation ("CFR") part 431:

IEC 60584–1:2013, *Thermocouples—Part 1: EMF specifications and tolerances,* edition 3.0, August 2013 ("IEC 60584–1:2013").

IEC 60584–3:2021, Thermocouples—*Part 3: Extension and compensating cables—Tolerances and identification system,* edition 3.0, February 2021 ("IEC 60584–3:2021").

Copies of IEC 60584–1:2013 and IEC 60584–3:2021 may be purchased from International Electrotechnical Commission ("IEC") Central Office, 3, rue de Varembé, Case Postale 131, CH–1211, Geneva, Switzerland +41 22 919 02 11, or by going to *webstore.iec.ch.*

ISO 1217:2009(E), *Displacement compressors—Acceptance tests,* fourth edition, July 1, 2009 ("ISO 1217:2009(E)").

ISO 1217:2009/Amd.1:2016(E), *Displacement compressors—Acceptance tests* (fourth edition, July 1, 2009), AMENDMENT 1: Calculation of isentropic efficiency and relationship with specific energy, April 15, 2016 ("ISO 1217:2009/Amd.1:2016(E)").

ISO 5167–1:2022(E), *Measurement of fluid flow by means of pressure*