DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

[Docket No. EE–RM–96–400]

Energy Efficiency Program for Certain Commercial and Industrial Equipment: Final Determination Concerning the CSA International Petition for Recognition as a Nationally Recognized Certification Program for Electric Motor Efficiency

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

ACTION: Final determination.

SUMMARY: Today's notice announces the Department of Energy's final determination classifying the CSA International Motor Efficiency Verification Service Program as a nationally recognized certification program in the United States for the purposes of section 345(c) of the Energy Policy and Conservation Act.

DATES: This final determination is effective December 27, 2002.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

I. Introduction

On July 5, 2002, the Department of Energy (DOE or Department) published in the **Federal Register** an interim determination to classify CSA International's Motor Efficiency Verification Service Program (MEVS Program or Program) as a nationally recognized certification program for electric motor efficiency and solicited comments, data and information with respect to that interim determination. 67 FR 45018. The Department did not receive any comments concerning its interim determination.

A. Authority

Part C of Title III of the Energy Policy and Conservation Act (EPCA) contains energy conservation requirements for electric motors, including requirements for test procedures, energy efficiency standards, and compliance certification (42 U.S.C. 6311–6316). Section 345(c) of EPCA directs the Secretary of Energy to require motor manufacturers ''to certify, through an independent testing or certification program nationally recognized in the United States, that [each electric motor subject to EPCA efficiency standards] meets the applicable standard.'' 42 U.S.C. 6316(c). Regulations to implement this EPCA directive, with respect to certification programs, are codified in 10 CFR Part 431 at sections 431.123, *Compliance Certification,* 431.27, *Department of Energy recognition of nationally recognized certification programs,* and 431.28, *Procedures for recognition and withdrawal of recognition of accreditation bodies and certification programs.*

For a certification program to be classified by the Department as being nationally recognized, the program must: (1) Have satisfactory standards and procedures for conducting and administering a certification system, and for granting a certificate of conformity; (2) be independent; (3) be qualified to operate in a highly competent manner; (4) be expert in the test procedure and methodology in Institute of Electrical and Electronics Engineers (IEEE) Standard 112–1996 Test Method B and CSA Standard C390–93 Test Method (1), or similar procedures and methodologies for determining the energy efficiency of electric motors; and (5) have satisfactory criteria and procedures for selecting and sampling electric motors for energy efficiency testing. 10 CFR 431.27(b).

B. Background

Pursuant to 10 CFR 431.27, CSA International submitted a ''Petition for Recognition of CSA International as a Nationally Recognized Certification Program for Motor Efficiency'' (CSA International Petition or the Petition) which was published in the **Federal Register** on April 26, 2000. 65 FR 24429. The Petition consisted of a letter from CSA International to the Department, narrative statements on five subject areas, and supporting documentation. At the same time, the DOE solicited comments, data and information as to whether CSA International's Petition should be granted. The Department also conducted an independent investigation concerning the CSA International Petition pursuant to 10 CFR 431.28(f).

The supporting documents that accompanied the Petition, as well as the material CSA International subsequently submitted to the Department in support of the Petition, continue to be available in the Freedom of Information Reading Room, U.S. Department of Energy, Forrestal Building, Room 1E–190, 1000 Independence Avenue, SW., Washington, DC 20585–0101, telephone (202) 586–3142, between the hours of 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Additional information about CSA International's MEVS Program and its Petition to be a nationally recognized certification program for electric motor efficiency can be obtained on the World Wide Web at *http://www.csa-international.org/welcome.html,* or from Mr. Otto Krepps, Manager, Accreditations, CSA International, 178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3; Telephone: (416) 747–2798; Telefax: (416) 747–4173; or Electronic Mail at *otto.krepps@csa-international.org.*

The Department initially received comments on the CSA International Petition from the following four manufacturers and one trade association with respect to the CSA International Petition: Sterling Electric, Inc. (Sterling), Baldor Electric Company (Baldor), Siemens Energy & Automation, Inc. (Siemens), GE Industrial Systems (GE), and the National Electrical Manufacturers Association (NEMA), dated May 16, May 22, May 23, May 24, and May 26, 2000, respectively. In general, Sterling, Baldor, and Siemens believed CSA International to be qualified to test and certify electric motors for energy efficiency, and favored national recognition in the United States of the CSA International

Program. GE and NEMA did not appear to state a position on national recognition, but instead commented on the appropriateness of CSA International's sampling plan. GE recommended CSA International use a process equivalent to the National Institute of Standards and Technology/ National Voluntary Laboratory Accreditation Program for determining the competency of a testing facility. NEMA asserted that the CSA International process of selecting motors for energy efficiency testing appeared to be burdensome to manufacturers.

After reviewing CSA's Petition as well as other applicable documents, including the public comments and facts found through its investigation, the Department issued its interim determination, which was published in the **Federal Register** on July 5, 2002, and notified CSA International in writing of that interim determination pursuant to 10 CFR 431.28(d). See 67 FR 45018. After review of any comments and information submitted in response to the interim determination, the Department is required to publish in the **Federal Register** an announcement of its final determination on the Petition. See 10 CFR 431.28(e). This notice sets forth DOE's final determination.

II. Discussion

A. General

For the Department to classify a certification program as ''nationally recognized,'' the program must meet the following criteria:

Sections 431.27(b)(1) and (c)(1) of 10 CFR Part 431 set forth criteria and guidelines for the standards and procedures for conducting and administering a certification system and for granting a certificate of conformity. As such, a certification program must have satisfactory standards and procedures for conducting and administering a certification system, including periodic follow-up activities to assure that basic models of electric motors continue to conform to the efficiency levels for which they were certified and for granting a certificate of conformity. International Standards Organization/International Electrotechnical Commission (ISO/IEC) Guide 65 (discussed in 10 CFR 431.27(c)(3) and also below) sets forth the general requirements intended to ensure a certification program is operated in a consistent and reliable manner. These requirements address: (1) Impartiality; (2) sufficient personnel having the necessary education, training, technical knowledge and experience; (3) relevant procedures for sampling, testing and inspecting the product, and the means necessary to evaluate conformance by a manufacturer with those standards; (4) surveillance and periodic audits to ensure continued conformance with the applicable standards; (5) subcontracting work, such as testing, with proper arrangements to ensure competence, impartiality, and compliance with the applicable standards; (6) procedures to control records, documents and data, including review and approval by appropriately authorized personnel; and (7) control over use and display of certificates and marks of conformity.

Sections 431.27(b)(2) and (c)(2) of 10 CFR Part 431 set forth criteria and guidelines for independence. A certification program must be independent of electric motor manufacturers, importers, distributors, private labelers or vendors. It cannot be affiliated with, have financial ties with, be controlled by, or be under common control with any such entity. Further, it should disclose any relationship it believes might appear to create a conflict of interest. ISO/IEC Guide 65 sets forth requirements for a certification program to be impartial, and requires that a program have a documented structure that safeguards impartiality. For example, each decision on certification is made by a person(s) different from those who carried out an evaluation or actual testing of the motor. A certification program's policies and procedures must distinguish between product certification and other activities; its certification process must be free from any commercial, financial and other pressures that might influence decisions; and it must have a committee structure where members are chosen to provide a balance of affected interests.

Sections 431.27(b)(3) and (c)(3) of 10 CFR Part 431 set forth criteria and guidelines requiring that a certification organization must be qualified to operate a certification system in a highly competent manner. Of particular relevance is documentary evidence that establishes experience in the application of guidelines contained in ISO/IEC Guide 65: 1996, *General requirements for bodies operating product certification systems*, ISO/IEC Guide 27: 1983, *Guidelines for corrective action to be taken by a certification body in the event of either misapplication of its mark of conformity to a product, or products which bear the mark of the certification body being found to subject persons or property to risk*, ISO/IEC Guide 28: 1982, *General rules for a model third-party certification system for products*, as well as experience in overseeing compliance with the guidelines contained in the ISO/IEC Guide 25: 1990, *General requirements for the competence of calibration and testing laboratories.*

Sections 431.27(b)(4) and (c)(4) of 10 CFR Part 431 set forth criteria and guidelines requiring that a certification program must be expert in the content and application of the test procedures and methodologies in IEEE Standard 112–1996 Test Method B and CSA Standard C390–93 Test Method (1). Of particular relevance would be documentary evidence that establishes experience in the application of guidelines contained in the ISO/IEC Guide 25.

ISO/IEC Guide 25 addresses general requirements for establishing quality systems in laboratories and for recognizing their competence to carry out specified tests. In part, these requirements address standards and procedures for ensuring that: (1) Organization and management that are free from commercial, financial, and other pressures which might adversely affect quality of work; (2) there is independence of judgment and integrity; (3) supervision is provided by persons familiar with the applicable test procedures; (4) a quality system, and a manual which contains procedures for control and maintenance of documents, and procedures for periodic audit and review are all in place; (5) there are sufficient personnel having the necessary education, training, technical knowledge and experience for their assigned functions, and training of its personnel is kept up-to-date; (6) all items of equipment and reference materials for the correct performance of tests are available and used, and equipment is properly maintained and calibrated; (7) test equipment is calibrated and verified prior to operation, and there is traceability to national standards of measurement; (8) documented instructions for the use and operation of equipment, manuals, and applicable test procedures are in place; (9) testing records with sufficient information to permit repetition of a test are retained; and (10) where a laboratory is sub-contracted to conduct testing, that laboratory complies with the requirements contained in ISO/IEC Guide 25 and is competent to perform the applicable testing activities. An example of a ''sub-contracted'' laboratory would be a manufacturer's laboratory that tests motors for energy efficiency under the CSA International MEVS Program.

Also, where 10 CFR 431.27(b)(4) requires a certification program to have satisfactory criteria and procedures for the sampling and selection of electric

motors, likewise, ISO/IEC Guide 25 requires the use of documented sampling procedures and appropriate techniques to select samples.

B. Application of Evaluation Criteria

1. Standards and Procedures for Conducting and Administering a Certification System

Sections 431.27(b)(1) and (c)(1) of 10 CFR Part 431, and ISO/IEC Guide 65, set forth criteria and guidelines for the standards and procedures to be used in administering a certification system and granting a certificate of conformity.

The CSA International Petition asserted, in general, that its certification quality assurance program system is based on national and international accreditation requirements and specific customer requirements in order to ensure technical excellence, consistency of interpretation, application of standards, programs and procedures, integrity of its ''Energy Efficiency Marking,'' and continuous improvement. CSA International asserted that it has implemented the requirements specified in the ISO/IEC Guide 65. Further, CSA International asserted that it has implemented the requirements specified in SCC/CAN P–3 and SCC/CAN P–4, which the Department understands are the Standards Council of Canada equivalents of ISO/IEC Guides 65 and 25, respectively. In order to substantiate these assertions, CSA International provided to the Department certain Divisional Quality Documents (DQDs) which contain the operating procedures and guidelines used by CSA International's staff in support of its MEVS Program.

In view of the above, the Department understands that the CSA International Program carries out the ISO/IEC Guides 65 and 25 requirements through its Quality Assurance System and DQD No. 050, ''Certification Division Quality Assurance Manual,'' DQD No. 200, ''Certification Program,'' DQD No. 306, ''Guidelines for Handling Complaints and Disputes,'' DQD No. 306.1, ''Customer Complaints,'' DQD No. 318, Guidelines for Handling Product Incidents Investigations,'' DQD No. 320, ''Factory Inspections,'' DQD No. 326, ''Handling of Non-conformances,'' and DQD No. 327, ''Corrective & Preventive Action,'' which provide necessary operating procedures and guidelines.

The Department's investigation found that the CSA International procedures for operating a certification system were very general in nature and could be satisfactorily applied to any certification program conducted by CSA International. This raised the issue as to whether the specific standards and procedures by which the CSA International Program operates in order to certify the energy efficiency of electric motors were adequate, properly documented, well established and maintained, understood, and in fact carried out by staff.

For example, according to section 4.8.2 of ISO/IEC Guide 65, the certification body shall establish procedures to control all documents and data that relate to its certification functions, and these documents shall be reviewed and approved by authorized personnel prior to being issued following initial development or subsequent amendment. The Department found that procedural documents used in the electric motor efficiency evaluation process, including witness testing by CSA International staff at non-CSA International facilities, and the sampling procedure to be used, were not marked with identification numbers and information such as date of issue, sources or authorities by which the documents were issued and approved, revision numbers, or a particular page from a set of pages. Consequently, the Department requested that CSA International submit documents relevant to the motor efficiency evaluation procedure that had been processed and approved by the CSA International Engineering Quality Assurance group. CSA International complied and submitted, under a letter dated June 14, 2001, the following DQDs:

Certification Division Quality/ Management System Manual, DQD No. 050, dated October 4, 2000.

Guidelines for the Selection of Test and Measurement Equipment and Validation of Borderline Test Measurements, DQD No. 308, dated March 12, 2001.

Selection of Test and Measurement Equipment/Significant Parameters—CSA Energy Efficiency Verification Program for Three-Phase Induction Motors, DQD No. 308.01, dated March 12, 2001.

Witness Testing, DQD No. 316, dated January 22, 2001.

Electric Motor Efficiency Evaluation, DQD No. 384, dated January 23, 2001.

Application Process—CSA Energy Efficiency Verification Program for Three Phase Induction Motors, DQD No. 385, dated January 24, 2001.

Review of Work and Designation of Signatories, DQD No. 431, dated October 17, 2000.

The Department has examined the above documents and concluded that they provide evidence that the standards and procedures CSA International uses to conduct a motor efficiency verification program satisfy the requirements set forth in 10 CFR 431.27(b)(1). Nevertheless, the Department's December 20, 2001, electronic message to CSA International requested that CSA International clarify or make corrections to certain procedures and documents used in its MEVS Program. In sum, the Department requested that CSA International confirm or correct the following: (1) Confirm that DQD No. 308.01 refers to IEEE Standard 112–1996 Test Method B with the modifications described under appendix A to subpart B of 10 CFR Part 431, paragraph 2 subparagraph (2); and (2) correct DQD No. 385 to refer to C390–93 Test Method (1). Also, the Department requested that CSA International submit the following documents for examination: DQD No. 305—*Quality/Management System Audit Program*; DQD No. 313—*Guidelines on Retesting*; DQD No. 332—*Document Control Procedure*; DQD No. 424—*Technical Training*; DQD No. 425—*Periodic Technical and Process Review*; and DQD No. 513—*Factory Audit Report.*

CSA International's letter, dated March 1, 2002, addressed the above matters and submitted a revised copy of DQD No. 308.01, dated February 15, 2002, to confirm the reference to IEEE Standard 112–1996 Test Method (1) as set forth under appendix A to subpart B of 10 CFR Part 431, and a revised copy of DQD 385 that refers to C390–93 Test Method (1). CSA International's March 1 letter asserted that its MEVS Program operates pursuant to DQD No. 385, wherein fully qualified staff would visit each testing facility to witness the tests being performed, write a detailed report, and have the manufacturer sign an agreement to manufacture the product [motor] in accordance with the description in the report. Also, CSA International confirmed that there will be a minimum of one audit visit per year by certification staff.

CSA International also submitted, with its March 1, 2002, letter, DQD Nos. 305, 313, 320, 385, 424, 425 and 513. Furthermore, CSA International stated that DQD No. 332, *Document Control Procedure*, had been withdrawn from its Quality System and the Department should refer to DQD 050 section 1.5, ''Documentation System,'' section 6.0, ''Document Control,'' and section 12.0, ''Maintenance of Records.'' In view of the criteria and guidelines set forth in 10 CFR 431.27(b)(1) and (c)(1), and ISO/IEC Guide 65, the Department examined the above-referenced DQDs. In sum,

DQD No. 305 sets forth procedures and guidelines for staffing, organizing, and conducting audits of the CSA International quality system, including technical audits of testing facilities in accordance with ISO/IEC Guide 25. DQD No. 313 sets forth procedures and guidelines for witness retesting to ensure continued compliance with, for example, motor efficiency standards. DQD No. 320, *Factory Inspections*, sets forth guidelines for scheduling and conducting factory audits. DQD No. 385, *Electric Motor Efficiency Evaluation*, sets forth the process for evaluating the energy efficiency of three-phase induction motors and applies both to the regulations in Canada and the United States, including the scope, sampling methods, test procedures, alternative efficiency determination methods, and efficiency levels in 10 CFR Part 431. DQD No. 424, *Technical Training*, sets forth the policy and guidelines for the training of technical staff, which is an ongoing activity that is monitored, evaluated and documented in the individual's training record. DQD No. 425, *Periodic Technical and Process Review*, sets forth guidelines to ensure that technical, administrative and quality records are maintained and periodically reviewed by management. DQD No. 513 is a facility audit report form with provisions for sampling and compliance with standards. In addition, CSA International submitted DQD No. 510.02, *List of Fully Qualified Project Holders for the Motor Energy Verification Program*, dated February 28, 2002, and DQD No. 050, revised November 30, 2001, *CSA International Quality Management System Manual*, that supersedes DQD No. 332. CSA International's March 1, 2002, letter confirms that all compliance and follow up testing is witnessed by technically qualified staff.

The Department has examined the Petition and all other documents described above, and affirms its conclusion that the standards and procedures CSA International uses to conduct its MEVS Program satisfy the requirements set forth 10 CFR 431(b)(1) and (c)(1), and the guidelines contained in ISO/IEC Guide 65.

2. Independence

Sections 431.27(b)(2) and (c)(2) of 10 CFR Part 431, and ISO/IEC Guide 65, set forth criteria and guidelines for impartiality.

Under Section 2 of its Petition, entitled ''CSA International,'' CSA International provided an overview of its history and a copy of its incorporation document, by-laws, annual report and an organization chart. CSA International asserted that it is an independent organization, has no affiliation with manufacturers or suppliers of products submitted for certification, and provides a copy of its ''Statement of Independence'' to substantiate these claims. However, the Department understands that the CSA International Standards Division administers the development of voluntary consensus standards for safety matters that involve participation from electric motor manufacturers, while the Certification Division and Quality Management Institute provide conformity assessment programs that carry out laboratory testing certification and inspection of electric motors.

The Department's May 14, 2001, letter requested that CSA International submit to the Department any documents that set forth the policies and procedures that provide assurance of CSA International's independence from any relationship with a manufacturer, importer, or supplier which might create a conflict of interest with its MEVS Program. Also, the Department requested that CSA International provide an explanation as to why a direct or indirect relationship with a motor manufacturer, importer, or private labeler through (a) the combined energy efficiency and product safety certification processes, (b) status as a ''Certification Member,'' (c) membership on a CSA International technical or standards development committee, or (d) shared certification whereby a manufacturer could perform unwitnessed motor testing and submit a certification report to CSA International, would not compromise CSA International's independence or bias information presented to CSA International for the purposes of compliance with 10 CFR 431.27(b)(2).

CSA International submitted, under a letter dated June 14, 2001, the following documents of policy and procedures as further evidence of its independence from manufacturers, importers, distributors, private labelers or vendors:

Corporate Policy Manual, dated December 1, 1996.

Certification Division Policies and Practices Manual, dated February 1999.

Standards of Business Conduct, dated May 1993.

Annual Report 2000.

Statement of Independence, signed by the Vice President, Corporate Secretary of CSA International and a Commissioner of Oaths and Notary Public, Province of Ontario, Canada, dated June 4, 1998.

The Department has examined the above documents and affirms its conclusion that they provide sufficient evidence that the CSA International MEVS Program meets the requirements for independence which are set forth in 10 CFR 431.27(b)(2), and (c)(2). Its MEVS Program meets the guidelines for the objectivity and impartiality of technical persons and committees which are set forth in ISO/IEC Guide 65, including freedom from commercial pressures that might influence the results of the certification process, an organizational structure that provides a balance of affected interests, and procedures that assure each decision on certification is made by a person(s) different from those who carried out an efficiency evaluation or actual testing of a motor. Furthermore, CSA International's MEVS Program meets the ISO/IEC Guide 25 requirements for organization and management to ensure confidence that its independence of judgment and integrity are maintained at all times.

3. Operation of a Certification System in a Highly Competent Manner

Sections 431.27(b)(3) and (c)(3) of 10 CFR Part 431 require that the petitioner demonstrate that its certification program operates in a highly competent manner by establishing its experience in the application of certain ISO/IEC Guides, including ISO/IEC Guides 65, 27 and 28, as well as experience in overseeing compliance with the guidelines in ISO/IEC Guide 25.

Section 3 of the CSA International Petition, ''Certification Division Quality Assurance Manual,'' stated that ''CSA International has implemented the requirements specified in ISO/IEC Guide 65, General requirements for bodies operating product certification systems.'' Furthermore, CSA International asserted that its Quality Assurance system is based, in part, on ISO/IEC Guide 25. Also, CSA International asserted that it has both implemented the requirements specified in SCC/CAN P–3 and SCC/CAN P–4, which the Department understands are the Standards Council of Canada equivalents of ISO/IEC Guides 65 and 25 respectively.

a. General Operating Requirements (ISO/IEC Guide 65)

The Department's letter to CSA International, dated May 14, 2001, requested evidence that, at a minimum, the initial determination as to whether an electric motor is in compliance with 10 CFR 431.42(a) is in fact witnessed by CSA International staff and procedures are in place for regular quality audits of all inspections and testing.

CSA International submitted, by letter dated June 14, 2001, the following documents of policy and procedures as further evidence of its competency and expertise in operating a certification system: *Certification Division Policies and Practices Manual,* dated February 1999; *Certification and Testing Services Brochure;* DQD No. 050—*Certification Division Divisional Quality/ Management System Manual,* October 4, 2000; *Application for CSA Certification Services Agreement* Form; and DQD No. 301—*Guidelines for Certification Division Representation on Standards Committees,* dated March 31, 2001.

Also, CSA International submitted a copy of DQD No. 385, *Application Process—CSA Energy Efficiency Verification Program for Three Phase Induction Motors,* Attachment 1, paragraph 6, ''Qualification of a Manufacturers Testing Facilities,'' and paragraph 12, ''Follow-up Visits,'' which set forth guidelines for initial and subsequent evaluation of a manufacturer's testing facility. The Department understands that CSA International uses these guidelines in conjunction with DQD No. 316, *Witness Testing,* whereby qualified CSA International technical staff evaluate a manufacturer's motor testing laboratory and witness the testing of a motor for energy efficiency.

Also, the Certification Division of CSA International, in its June 14 letter, asserted that procedures are in place for regular quality inspections. Further, CSA International submitted DQD 385, Attachment No. 1, ''Guide to the CSA Energy Efficiency Verification Service,'' that states in paragraph 12.1 ''a minimum of one visit to each manufacturing plant will be carried out each year.''

The Department believes that the above documents provide evidence that procedures are in place for initial compliance testing that is witnessed by CSA International staff, and procedures are in place for regular quality inspections of manufacturers' facilities. Nevertheless, the Department's electronic message to CSA International, dated December 20, 2001, requested that CSA International confirm that all compliance and follow-up testing of motors for energy efficiency is witnessed by a technically qualified CSA International representative.

CSA International's letter, dated March 1, 2002, confirmed that ''all compliance and follow-up testing is witnessed by technically qualified staff.'' Further, CSA International submitted as evidence revised DQD No. 385, *Electric Motor Efficiency Evaluation,* dated February 28, 2002, and DQD No. 510.02, *List of Fully Qualified Project Holders for the Motor Energy Efficiency Verification Program,* dated February 28, 2002, to substantiate its assertion of witness testing. The Department has examined the above documents and affirms its conclusion that the standards and procedures CSA International uses to conduct its MEVS Program satisfy the requirements for training, expertise, and experience in operating a certification system which are set forth in 10 CFR 431.27(b)(3) and (c)(3), and ISO/IEC Guide 65.

b. Guidelines for Corrective Action in the Event of Misapplication of a Mark of Conformity (ISO/IEC Guide 27)

ISO/IEC Guide 27 identifies procedures which a certification program should consider in response to a reported misuse of its registered mark of conformity. According to paragraph 1.1(a) of ISO/IEC Guide 27, ''misuse'' may take a variety of forms, such as a mark of conformity appearing on a non-certified product. The Department construes this to mean the unauthorized use by a manufacturer or private labeler of the CSA International Motor Efficiency Verification Marking (Marking) on the nameplate of an electric motor or in advertising and promotional materials, including the display of a registered CSA Certification Mark on a counterfeit motor. Under ISO/IEC Guide 27, the certification program would then be required to have strong corrective procedures in place. Such corrective measures would depend upon the nature of the misuse and the desire by the certification program to protect the integrity of its mark.

The Department has examined the CSA International *Certification Division Policies and Practices Manual* and finds that it contains rules for authorized use of the CSA International Marking, and procedures that address unauthorized representation of certification of a product or process, and the measures that CSA International would take to protect the integrity of its marking. Also, the Department has examined sections 15.0, ''Control on Non-conformances,'' and 16.0, ''Corrective and Preventive Action,'' contained in the CSA International *Quality Management System Manual,* DQD 050, revised November 30, 2001. These sections establish policies and procedures to control CSA International services, within the CSA International ''Quality Management System,'' which do not conform to the specified requirements, prevent their unintended use, establish a system for taking appropriate actions to resolve actual or potential non-conformances, and apply suitable corrective and preventive actions. The Department affirms its conclusion that the CSA International Program satisfactorily follows the guidelines for corrective action to be taken by a certification organization in the event of misapplication of a mark of conformity to an electric motor, set forth in 10 CFR 431.27(c)(3) and ISO/IEC Guide 27.

c. General Rules for a Model Third-Party Certification System for Products (ISO/IEC Guide 28)

ISO/IEC Guide 28 addresses minimum guidelines for a third party certification system in determining conformity with product standards through sample selection, initial testing and assessment of a factory quality management system, follow-up surveillance, subsequent testing of samples from the factory, and the use of a mark of conformity. Furthermore, ISO/IEC Guide 28 requires a certification program operating at a national level, such as under section 345(c) of EPCA which requires manufacturers to certify compliance through a ''nationally recognized'' certification program, to have a suitable organizational structure and utilize personnel, equipment, and operating procedures that comply with the criteria for a testing laboratory in ISO/IEC Guide 25.

Consistent with the above ISO/IEC Guide 28 guidelines, Section 4 to the CSA International Petition, ''CSA International's Motor Efficiency Verification Program,'' described the CSA International MEVS as depending upon: (1) Satisfactory evaluation, sampling and testing to determine that the requirements of the applicable standard, for example CSA Standard C390–93, are met on a continuing basis; (2) identification of the critical features that affect motor efficiency; (3) initial motor qualification testing and follow-up re-testing to ensure continued compliance; (4) continued access to a manufacturer's facilities and records, product retesting and challenge testing; (5) annual follow-up inspections; (6) proper authorization to apply the CSA International Motor Efficiency Verification Service Marking; and (7) corrective action when a motor fails to comply.

In view of the above ISO/IEC 28 criteria, the Department examined the CSA International *Certification Division Policies and Practices Manual,* dated February 1999, *Quality Management System Manual,* DQD No. 050, dated November 30, 2001, *Management System Audit Program,* DQD No. 305, dated October 31, 2001, *Guidelines on Retesting,* DQD No. 313, dated November 19, 1999, *Selection of Test and Measurement Equipment/ Significant Parameters—CSA Energy*

Efficiency Verification Program for Three-Phase Induction Motors, DQD No. 308.1, dated February 15, 2002, *Factory Inspections,* DQD No. 320, dated January 27, 1999, *Electric Motor Efficiency Evaluation,* DQD No. 385, dated February 28, 2002, *Periodic Technical and Process Review,* DQD No. 425, dated October 3, 2000, and *Facility Audit Report,* DQD No. 513, Revision A. The Department finds that, in general, both ISO/IEC Guide 28, and the above-referenced CSA International documents address: (1) The basic conditions and rules for a manufacturer to obtain and retain a certificate of conformity or mark of conformity; (2) initial inspection of a motor factory and a manufacturer's quality management system; (3) sample selection; (4) initial testing; (5) product evaluation; (6) surveillance; (7) identification of conformity in the form of a certificate of conformity or mark of conformity; (8) withdrawal of a certificate or mark of conformity by the certification program; and (9) guidelines on corrective action for misuse of a certificate or mark of conformity. The Department affirms its conclusion that the CSA International Program satisfies the general guidelines for a model third-party certification system in 10 CFR 431.27(c)(3), and the guidelines set forth in ISO/IEC Guide 28.

The above-referenced DQD No. 050, *Quality Management System Manual,* DQD No. 385, *Electric Motor Efficiency Evaluation,* and DQD No. 308.01, *Selection of Test and Measurement Equipment/Significant Parameters—CSA Energy Efficiency Verification Program for Three-Phase Induction Motors,* provide general policies, practices and procedures that govern the conformity assessment services, and, in particular, those that relate to the electric motor efficiency certification program. The CSA International *Quality Management System Manual* addresses, for example, ''Quality System,'' ''Standards of Conduct,'' ''Organization,'' ''Periodic Technical and Process Review,'' ''Audit Program,'' ''Staff Training,'' ''Inspection, Measuring and Test Equipment,'' ''Maintenance of Records,'' and ''Certification and Testing Programs and Services.'' The *Electric Motor Efficiency Evaluation* addresses, for example, ''Operational Rules/Procedure,'' ''Evaluation,'' ''Qualification of Manufacturers Test Facilities, Test Audit,'' ''Marking Authorization,'' ''Follow-up Visits,'' ''Product Retesting,'' ''Electric Motor Efficiency Evaluation Procedure,'' ''MEEV—Sampling Procedure for U.S.,'' and ''Plan and Procedure Relative to Alternative Efficiency Determination Methods (AEDMs).'' *Selection of Test and Measurement Equipment/ Significant Parameters—CSA Energy Efficiency Verification Program for Three-Phase Induction Motors* addresses, for example, the requirements of IEEE Standard 112–1996, Test Method B, with the modifications described under appendix A to subpart B of 10 CFR Part 431, the National Institute of Standards and Technology (NIST) Handbook 150–10 entitled, *Efficiency of Electric Motors,* and CSA C390–93 when selecting test and measurement equipment.

The Department has examined the contents of these manuals and affirms its conclusion that they satisfy the guidelines for conducting a model third-party certification program at the national level as applicable under 10 CFR 431.27(c)(3) and ISO/IEC Guide 28.

d. General Requirements for the Competence of Testing Laboratories (ISO/IEC Guide 25)

(1) Operating Procedures

Third party certification programs must have experience overseeing compliance with the guidelines contained in ISO/IEC Guide 25. ISO/IEC Guide 25 sets out the general requirements by which a laboratory must operate if it is to be recognized as competent to carry out specific tests.

According to Section 3 of the CSA International Petition, ''Certification Division Quality Assurance Manual,'' CSA International's ''Quality Assurance'' system is based on national and international accreditation requirements, one of which is ISO/IEC Guide 25. In view of ISO/IEC Guide 25, the Department examined the procedures and guidelines contained in CSA International's *Quality Management System Manual,* DQD No. 050, and the above DQD Nos. 385, 308.01 and 316 as they apply to the evaluation of an electric motor testing facility.

The Department finds that DQD No. 050 establishes the general policies, standards of conduct, procedures, guidelines and organization requirements for CSA International's quality program. These are based on national and international accreditation requirements such as ANSI Z34.1, *American National Standard for Certification—Third Party Certification Program,* EN 45004, *General Criteria for the Operation of Various Types of Bodies Performing Inspection,* ISO/IEC 17025, *General Requirements for the Competence of Testing and Calibration Laboratories,* ISO/IEC Guide 65, *General Requirements for Bodies Operating Product Certification Systems,* and NIST Handbook 150, *National Voluntary Laboratory Accreditation Program (NVLAP)—Procedures and General Requirements.* Furthermore, the Department finds that the Standards Council of Canada [1] lists CSA International as an accredited certification body in the area of its Energy Efficiency Verification Service and specifically identifies CSA C390, ''Energy Efficiency Test Methods for Three-Phase Induction Motors,'' which adds credence to the evidence that CSA International operates its certification program in a highly competent manner, including overseeing compliance with the guidelines contained in ISO/IEC Guide 25 to test electric motors for energy efficiency.

The Department finds that DQD No. 385 establishes the guidelines for CSA International's operation of its motor energy efficiency evaluation process in the United States pursuant to 10 CFR Part 431, including the test procedures, alternative efficiency determination methods, and sampling procedures in 10 CFR 431.23 and 431.24. Under DQD No. 385, a manufacturer's motor testing facility is required to have adequate controls in place to ensure manufacturing consistency and consistent product performance with respect to energy usage. Also, the testing facility is examined for the type and accuracy of test equipment, calibration, test procedures and measurement techniques, a system for documenting test results, and staff training. The Department finds that under DQD No. 385, the CSA International sampling procedure adheres to the sampling procedure in 10 CFR 431.24(b). Also, DQD No. 385 requires periodic audit of the test facility and calibration system. A minimum of one visit per year to a manufacturing plant is carried out by CSA International staff to monitor product control measures and testing facilities, and to conduct retesting. Furthermore, DQD No. 385 sets forth procedures that address Alternative Efficiency Determination Methods (AEDMs) in order to reduce testing burden and accommodate the large number of motors a manufacturer would produce. The CSA International procedures essentially follow the procedures for the substantiation of an AEDM as provided in 10 CFR 431.24(a)(3). The Department understands that CSA International uses these guidelines in conjunction with

[1] The Standards Council is a federal Crown corporation which has the mandate to coordinate and oversee the efforts of the National Standards System in Canada.

DQD No. 316, whereby qualified CSA International technical staff evaluate a manufacturer's motor testing laboratory and witness the testing of an electric motor for energy efficiency.

The Department finds that DQD No. 308.01 establishes guidelines that follow the requirements of IEEE Standard 112–1996 Test Method B, CSA Standard C390–93, and NIST Handbook 150–10, *Efficiency of Electric Motors,* when selecting test and measurement equipment that would be utilized for testing electric motors under the CSA Motor Efficiency Verification Service Program. These are the same procedures identified in 10 CFR 431.23.

The Department finds that DQD No. 316, *Witness Testing,* provides guidelines for evaluating and monitoring the capability of a testing facility, such as a manufacturer's motor efficiency testing facility for performing tests that are witnessed by CSA International technical staff. Under DQD No. 316, a motor manufacturer's testing facility is evaluated according to (1) the scope of the standard and test method that it utilizes, for example CSA Standard C390, (2) the technical capability of testing facility staff, ongoing training of that staff and maintenance of personnel records, (3) suitability of the testing environment, (4) suitability and accuracy of the test equipment that is to be used, (5) the system for calibrations and control of test methods, and (6) traceability of calibration to national standards. Also, DQD No. 316 requires examination of the manufacturer's quality system, proper supervision and control of testing, documentation control, and retention of records.

In addition to examining the underlying documentation that establishes the policies and procedures of the CSA International quality system and operating procedures for evaluating electric motors, the Department directly compared the requirements in ISO/IEC Guide 25 with CSA International's MEVS Program as it would apply to a manufacturer's motor testing laboratory under a certification program and found them to be consistent with each other. The Department found, for example:

- ISO/IEC Guide 25 sets forth requirements for organization and management of a testing laboratory to ensure proper supervision and integrity of data. Similarly, the CSA International Program requires examination of the manufacturer's quality system, proper supervision and control of testing, documentation control, and retention of records.
- ISO/IEC Guide 25 requires a manufacturer's testing laboratory to have a quality system with documented policies and procedures, such as for the organization and operation of a testing laboratory, traceability of measurements, calibration of equipment, test procedures used, procedures for corrective actions and audits. Similarly, the CSA International Program requires use of the test procedures and calibration of equipment set forth in 10 CFR 431.23 and the requirements of IEEE Standard 112–1996, Test Method B, with the modifications described in appendix A to subpart B of 10 CFR part 431, and CSA Standard C390–93. In addition, the CSA International Program requires use of the quality system set forth in NIST Handbook 150–10 when selecting test and measurement equipment, meeting significant calibration parameters for electric motor efficiency evaluation, and having traceability of calibrated equipment to national standards. Also, the CSA International Program requires periodic audits of the test facility and calibration system, whereby a minimum of one visit per year to a manufacturing plant is carried out by CSA International staff to monitor product control measures and testing facilities, to conduct retesting, and to take any corrective actions.
- ISO/IEC Guide 25 requires a manufacturer's testing laboratory to have sufficient personnel having the necessary education, training, technical knowledge and experience. Similarly, the CSA International Program evaluates the technical capability of the testing facility staff, staff training, and maintenance of personnel records.
- ISO/IEC Guide 25 requires the proper environment and equipment for performance of testing, and that such equipment is properly maintained and calibrated. Similarly, the CSA International Program requires the proper environment for testing, control of test methods, and suitable equipment that is accurate and properly calibrated and traceable to nationally recognized standards of measurement.
- ISO/IEC Guide 25 requires the testing laboratory to maintain a record system of original observations, calculations, reference to sampling procedures, and derived data sufficient to permit repetition of a test. Similarly, the CSA International Program requires that the test procedures be under documentation control, and that test records be current and properly maintained. Also, the CSA International sampling procedure is consistent with the sampling procedure set forth in 10 CFR 431.24(b).
- Both ISO/IEC Guide 25 and the CSA International Program require test reports that contain similar information.

In view of these comparisons, the Department affirms its belief, set forth in the interim determination, that CSA International's MEVS Program satisfies the requirement of 10 CFR 431.27(c)(3) for documentary evidence that establishes experience in operating a certification system and overseeing compliance with the guidelines for competence contained in ISO/IEC Guide 25 to test electric motors for energy efficiency.

(2) Testing Laboratory

Under Section 1, ''Designated Testing Facility,'' of the CSA International Petition, it is stated that ''as part of CSA International's Motor Energy Efficiency Verification Program we are using our Toronto test facility,'' and that ''the facilities of Toronto are used for testing the full range of motors up to 50 horsepower.'' Also, under Section 3, ''Certification Division Quality Assurance Manual,'' of the CSA International Petition, CSA International asserted that its Quality Assurance system is based, in part, on ISO/IEC Guide 25 and SCC/CAN P–4 that is the Standards Council of Canada equivalent of ISO/IEC Guide 25.

GE Industrial Systems' comments, dated May 24, 2000, recommended that a test facility, such as the ones used by CSA International which test motors for energy efficiency, should be established and maintained by a process equivalent to the National Institute of Standards and Technology/National Voluntary Laboratory Accreditation Program (NIST/NVLAP) as set forth in the NIST Handbook 150–10, ''Efficiency of Electric Motors.'' Also, GE Industrial Systems recommended that any organization that certifies the energy efficiency of electric motors participate in the NIST/NVLAP proficiency testing program in order to understand, document, and make known any variations among participating testing facilities.

The Department's investigation found that the CSA International testing facility in Toronto was not fully operational at the time of the CSA International Petition, and that the CSA International Program relies heavily on the manufacturer to provide most of the test data, including data for initial qualification based on sampling and testing motors for energy efficiency, that are not witnessed by CSA International staff. Nor was there clear evidence of what quality control exists for monitoring the validity of motor efficiency testing by a manufacturer.

Also, it appeared that the CSA International Program lacked sufficient staff to perform all the annual follow-up inspections, bi-annual retesting, cross-testing every three years, unannounced retesting, and challenge testing which it claimed would occur. The Department's May 14, 2001, letter requested that CSA International submit information concerning its Toronto motor testing facility, its oversight of testing performed at a motor manufacturer's facility, and procedures for regular quality audits of all inspections and testing for motor efficiency.

The Certification Division of CSA International, in its June 14, 2001 letter, asserted that the Toronto test facility is fully operational, initial compliance testing is witnessed by CSA International staff, and that procedures are in place for regular quality inspections of a manufacturer's motor testing laboratory. In view of the June 14 letter, the Department understands that CSA International uses the Laboratoire des technologies electrochimiques et des electrotechnologies d'Hydro-Quebec (LTEE) for testing motors over 50 horsepower, and acknowledges that the CSA International test laboratory in Toronto is capable of testing motors up to 50 horsepower. Also, the Department understands that LTEE, although not officially listed in the NIST/NVLAP *2001 Directory,* participates in the NIST/NVLAP Proficiency Testing Program.

Section 431.27 of 10 CFR Part 431 does not require a certification program to actually operate its own motor testing laboratory, nor is a laboratory operated or observed by a certification program required to be accredited. Nevertheless, the Department believes that a testing facility operated or observed by a certification program should follow the guidelines in ISO/IEC Guide 25 and in principle be reasonably close to conforming to the technical requirements of an accredited laboratory. The Department understands that, in general, the evaluation of a motor testing laboratory under an accreditation program includes an on-site assessment, proficiency testing, audit of a laboratory's policies and operational procedures, review of staff qualifications, checks of proper maintenance and calibration of test equipment, and records review. Likewise, the evaluation under the CSA International Program includes evaluation of the manufacturer's testing facility, control and maintenance and calibration of test equipment, factory audits for continued compliance, document control, periodic audits of the operational and technical consistency of the program, control of non-conformances, staff training, and witness testing. The Department believes that the goal of a third party certification program is to provide assurance that test results are accurate, valid, and capable of being replicated. Tests must be performed with a degree of oversight so that the results are not influenced by marketing and production concerns. The Department affirms its belief that the CSA International Program, while not identical to a laboratory accreditation program, nevertheless satisfactorily follows the ISO/IEC 25 Guidelines.

4. Expertise in IEEE Standard 112–1996 Test Method B and CSA Standard C390–93 Test Method (1)

Sections 431.27(b)(4) and (c)(4) of 10 CFR Part 431 set forth evaluation criteria and guidelines whereby personnel conducting a certification program should be expert and experienced in the content and application of IEEE Standard 112–1996 Test Method B and CSA Standard C390–93 Test Method (1), or similar procedures and methodologies for determining the energy efficiency of electric motors. The program must have satisfactory criteria and procedures for the selection and sampling of electric motors tested for energy efficiency, and provide documents that establish experience in applying the guidelines for confidence in testing laboratories contained in ISO/IEC Guide 25. Such guidelines address quality audits and reviews, personnel, equipment, test methods, sampling, and records.

Section 3, ''Certification Division Quality Assurance Manual,'' of the CSA International Petition, stated that its Quality Assurance system is based on national and international requirements that include ISO/IEC Guide 25. The Department understands that section 6, ''Personnel,'' of ISO/IEC Guide 25 sets forth general requirements for the training, technical knowledge, and experience of testing laboratory personnel. In sum, it states that the testing laboratory shall have sufficient personnel, having the necessary education, training, technical knowledge and experience for their assigned functions; training of personnel is kept up-to-date; and records on relevant qualifications, training, skills, and experience of the technical personnel shall be maintained.

The Department's investigation found that the technical qualifications of the CSA International staff involved in the MEVS Program were very limited with regard to electric motor construction, performance, and efficiency testing. Also, it appeared to the Department that CSA International has only one person that actually participates in the qualification of a motor manufacturer's test facility, witnesses testing, and both directs and evaluates compliance testing, cross testing, and retesting. Consequently, the Department requested that CSA International address its intention to assign additional expert staff to its MEVS Program, and submit evidence as to the nature and extent of training the current staff receives in order to maintain proficiency in the evaluation of motor design and construction, and the practice of efficiency testing.

CSA International, in its June 14, 2001 letter, asserted that it had identified additional staff for participation in the operation of its MEVS Program, additional training would be provided, and that it would ensure its staff resources are appropriate to the amount of work required by its Motor Efficiency Verification Program. On August 20, 2001, the Department received an electronic message from CSA International which identified additional staff, their credentials, and the associated training each would receive as part of its MEVS Program in order to fulfill the requirements set forth in 10 CFR 431.27(b)(4) and 431.27(c)(4). In sum, the Department understands that this training addresses electric motor construction, performance, and efficiency testing, and will become part of a regular training program. Also, the Department understands that certain technical staff will work under the direction of a CSA International senior engineer or qualified project leader.

In the Department's view, any technically qualified person could satisfy the criteria for expertise in the content, application and methodologies of the test procedures pursuant to 10 CFR 431.27 (b)(4) if that person: (1) Is proficient in the test methodology of IEEE Standard 112 Test Method B and CSA C390–93 Test Method (1); (2) is familiar with the electrical, mechanical and environmental capabilities of a testing laboratory system; (3) understands how to prepare and mount a motor for testing, which includes the connection and operation of the test equipment; (4) is competent in calibrating test equipment; and (5) is competent with data collection and analysis. CSA International's experience in standards development, testing and evaluation of motors to both U.S. and International safety and similar energy efficiency procedures and methodologies provide sufficient evidence of CSA International staff having the necessary proficiency and expertise to conduct energy efficiency

evaluations under ISO/IEC Guide 25. Thus, the Department affirms its belief that the credentials of the CSA International staff, regular additional training, and monitoring by CSA International management, satisfy the general requirements for the training, technical knowledge, and experience of testing laboratory personnel under 10 CFR 431.27(b)(4) and (c)(4).

5. Sampling Criteria and Procedures for Selecting an Electric Motor for Energy Efficiency Testing

Section 431.27(b)(4) of 10 CFR part 431 requires a certification organization to have satisfactory criteria and procedures for the selection and sampling of electric motors tested for energy efficiency. Based on the National Institute of Standards and Technology report, NISTIR 6092, ''Analysis of Proposals for Compliance and Enforcement Testing Under the New part 431: Title 10, Code of Federal Regulations,'' January 1998, which analyzed various criteria and sampling plans proposed for establishing compliance with the nominal full-load efficiency levels prescribed by EPCA, 42 U.S.C. 6313(b)(1), the Department determined that ''the NEMA proposal for compliance testing provides statistically meaningful sampling procedures.'' Moreover, the NIST analysis was extensive in order to determine whether a particular sampling plan would be valid for the purpose of establishing compliance with EPCA motor efficiency levels. Also, section 10.5 of ISO/IEC Guide 25 requires the use of documented procedures and appropriate statistical techniques to select samples.

Under section 4 of the Petition, entitled ''CSA International's Motor Efficiency Verification Program,'' CSA International described its process for the selection and sampling of electric motors to be tested for energy efficiency. CSA International asserted that the objective of its sampling process is to minimize manufacturers' tests, costs and time to market, while providing sufficient confidence that the series of motors verified meet the applicable energy efficiency standard. Further, CSA International conducts unannounced follow-up inspections, random motor retesting, and challenge testing to ascertain continued compliance with energy efficiency standards by a manufacturer. The Department understands that under the CSA International sampling program, a minimum of 5 basic models are required to be tested to verify the energy efficiency ratings of a series of motors. The basic models are selected so as to represent the complete range of motors within the series, which could require more than 5 basic models. Thereafter, 1 to 5 units of each basic model are tested. The average efficiency of the sample lot must equal or exceed the required nominal full load efficiency. Furthermore, CSA International's goal for verifying continued compliance is to retest high volume motors at least once every 2 years. Other motors of different frame series are retested as needed to ensure continued compliance. Also, the Department understands that under the CSA International retesting program, the initial sample lot is one motor, and if after retesting the result equals or exceeds the minimum result from the qualification tests, then no further samples would be required. If the result is less than the minimum result from the qualifying tests, then motor samples would be selected pursuant to the qualifying test procedure.

GE Industrial Systems' comments, dated May 24, 2000, asserted that there should be some understanding of the level of confidence CSA International believes appropriate for the efficiency data that is determined from testing, and the basis for that confidence level. GE Industrial Systems described the CSA International statistical approach to sampling of motors for testing as the selection and testing of 5 basic models with a sample size of 1 to 5. GE Industrial Systems asserted that a minimum sample selection to substantiate an Alternative Efficiency Determination Method [2] should be 5 randomly selected units of 5 basic models, in order to provide a look at the population and statistical variation in the basic model. Further, GE Industrial Systems asserted that frequent sampling over time is more appropriate to an assessment of design and manufacturing variables, and therefore an ongoing sampling program would be appropriate.

NEMA's comment, dated May 26, 2000, asserted that CSA International's sampling process appears to be more burdensome than required by the Department of Energy. NEMA did not elaborate on its comment.

In view of GE Industrial Systems' and NEMA's comments, the Department's investigation found confusing statements from CSA International concerning its intentions to substantiate a manufacturer's AEDMs, either (1) by analyzing and comparing a manufacturer's energy efficiency modeling methods to actual test measurements, or (2) through comparisons between a motor manufacturer's energy efficiency calculations on a software program and a CSA International software program. It was not clear to the Department that the CSA International Program would substantiate an AEDM in a manner that is consistent with 10 CFR 431.24(a)(3) and (4), whereby a manufacturer could test 5 units each of 5 basic models and use the test results to substantiate an AEDM. Furthermore, it was not clear that the CSA International sampling plan would be valid if the initial sample lot is one motor, nor was it clear that testing all the basic models that a manufacturer produces would not be unduly burdensome. The Department's May 14, 2001, letter requested that CSA International submit documents and other materials to substantiate that its motor sampling procedures are statistically valid, not unduly burdensome, and would provide sufficient confidence that the true mean energy efficiency of a particular basic model meets or exceeds the energy efficiency level that is displayed on the nameplate of a single unit. Further, the Department's letter requested that CSA International submit its plan and procedures to evaluate a manufacturer's AEDMs.

CSA International, in its June 14, 2001 letter, described its plan and procedures to evaluate a manufacturer's AEDMs, whereby CSA International would verify that the manufacturer's software energy efficiency calculations are in agreement with its independent calculated values using the methods described in CSA Standard C390. The Department understands that CSA International would use the test data measurements, and then (a) perform its own calculations to determine the efficiency of the tested motor and (b) match it with the manufacturer's calculated efficiency. If the two values are in agreement for all the motors tested, then CSA International would accept the manufacturer's efficiency calculation procedure as intended by 10 CFR 431.24(b)(3). In its June 14 letter, CSA International asserted that its sampling procedures for electric motor efficiency evaluations are statistically valid, use random selection, and result in

[2] Alternative Efficiency Determination Method (AEDM) means a method of calculating the total power loss and average is full load efficiency of an electric motor. See 10 CFR 43.1.2. Section 431.24(a)(1) of 10 CFR part 431 provides that the energy efficiency of a motor must be determined either by testing in accordance with the Department of Energy test procedure or application of an AEDM. Section 431.24(a)(3) of 10 CFR part 431 requires that, in sum, the accuracy and reliability of an AEDM must be substantiated through testing at least 5 basic models; and that the calculated total power loss for each basic model must be within plus or minus 10 percent of the mean total power loss determined from testing.

confidence levels such that the true mean energy efficiency of a basic model meets or exceeds the motor's represented energy efficiency level.

Furthermore, CSA International's DQD 384, *Electric Motor Efficiency Evaluation*, paragraph 6.2 and Attachment No. 2, *MEEV—Sampling Procedure*, dated January 23, 2001, set forth the CSA International sampling procedure whereby, in sum, CSA International staff selects a minimum of 5 basic models that represent a complete range of motors, and tests 1 to 5 units of those basic models to determine whether the average efficiency of the sample lot equals or exceeds the required efficiency rating. Also, the Department understood that CSA International was establishing a database to substantiate that the sampling plan is valid, uses random selection, and provides the required confidence limits. In view of the above-referenced sampling plan, the Department calculated that a manufacturer could be required to test only 5 motors (5 basic models multiplied by 1 unit equal 5 motors) to substantiate compliance for up to 113 basic models. The Department believed this approach was not statistically valid for the purposes of 10 CFR 431.24 and 431.27(b)(4).

On August 28, 2001, the Department received an electronic message from CSA International which set forth its ''Plan and Procedure Relative to Alternative Efficiency Determination Methods (AEDMs)'' (Plan and Procedure). In sum, CSA International asserted that it will require a motor manufacturer to submit predicted energy efficiency values that represent a group of motors. CSA International would then select a minimum of 5 basic models from that group, and 5 samples of each basic model, for testing to determine the correlation between the predicted efficiency and the tested efficiency. CSA International asserted that the individual and average efficiency of the motors tested shall be in accordance with 10 CFR 431.24(b)(2)(i) and (ii). Also, CSA International asserted that it will conduct periodic follow-up audits and testing witnessed by CSA International staff.

The Department finds that the above Plan and Procedure is consistent with 10 CFR 431.24(a)(1)–(4)(i). However, in item 3 of the Plan and Procedure, CSA International stated that ''tests may be performed at the manufacturer's previously evaluated testing facility with some testing witnessed by [CSA International] CSAI staff.'' This appeared to contradict the aforementioned CSA International policies and procedures in DQDs 385 and 316, and assertions by CSA International in its *Certification and Testing Services* booklet, that both initial compliance and periodic follow-up tests would be witnessed by qualified CSA International technical staff. The Department requested that CSA International confirm that the ''witness testing'' policies and procedures apply to initial and subsequent verification of a manufacturer's AEDMs.

On August 30, 2001, the Department received an electronic message from CSA International containing a revised sampling plan and procedure DQD 384, ''Attachment 2, MEEV—Sampling Procedure for U.S., Part 431—DOE Energy Efficiency Program for Motors,'' dated August 29, 2001, for motor compliance testing, substantiation of an AEDM, and retesting. The Department examined the above DQD 384 Attachment 2 and, in general, found it to be consistent with 10 CFR 431.24(a)(1)–(4)(i) and 431.24(b)(1). However, where the CSA International sampling procedures follow 10 CFR 431.24, the Department recommended that DQD 384 Attachment 2 clearly state that (1) the average full load efficiency of each basic model of electric motor must be determined either by testing or by the application of an Alternative Efficiency Determination Method, (2) the section entitled ''Samples Required for Motor Model Qualification Testing'' should be modified to read ''Samples of Units Required for Motor Model Qualification Testing,'' (3) the section entitled ''Selection of Basic Model Types to Represent a Group of Motors'' should be modified to read ''Selection of Basic Models for Testing,'' and (4) the specific example provided under ''Example Scope of Certification'' should be corrected to accurately depict the sampling guidelines that precede it in DQD 384 Attachment 2.

Also, DQD 384 Attachment 2, entitled ''Samples Required for Scheduled Motor Retesting,'' states: ''The initial retest sample lot shall consist of one motor. If the measured full load efficiency from retest meets or exceeds the lowest full load efficiency determined from the qualification testing, then no further samples are required for testing.'' It was not clear to the Department whether the ''lowest full load efficiency determined from the qualification testing'' referred to the results of actual tests or some other criterion. Consequently, the Department requested that the procedures to be used during retesting be clarified.

Moreover, the Department believes that the sampling procedures set forth in 10 CFR 431.24(b)(2)(i) and (ii) provide reasonable assurance that the average full load efficiency of the basic model being retested meets or exceeds the mandated efficiency level and, accordingly, may be applied during re-testings. The Department recommended that CSA International adopt these sampling procedures for retesting. Thus, when testing a sample size of one motor during retesting, the efficiency of that unit must not be less than the full load efficiency described in section 431.24(b)(2)(ii); and, when samples of two or more motors are tested during retesting, the average efficiency of the lot must not be less than the full load efficiency described in section 431.24(b)(2)(i) and, the lowest efficiency of any unit in the lot must not be less than the full load efficiency described in section 431.24(b)(2)(ii).

CSA International's letter, dated March 1, 2002, addressed the above recommendations. As such, the Department understands that DQD No. 384 and DQD No. 385 have been combined into one document, and have been revised to clarify the sampling and compliance requirements. Also, CSA International revised the above DQD No. 384, Attachment 2, *MEEV—Sampling Procedure* which is now DQD No. 385, Attachment 2, in order to incorporate the Department's above recommendations both for initial qualification testing and retesting. The Department has examined the above documents and affirms its conclusion that the standards and procedures CSA International uses to conduct sampling under its MEVS Program are consistent with 10 CFR 431.24 and 431.42, and satisfy the criteria for the selection and sampling of electric motors to be tested for energy efficiency under 10 CFR 431.27(b)(4).

III. Final Determination

On July 5, 2002, DOE published in the **Federal Register** an interim determination to classify CSA International's MEVS Program as a nationally recognized certification program for electric motor efficiency. At that time, the Department solicited comments, data and information with respect to that interim determination. 67 FR 45018. The Department did not receive any comments concerning its interim determination.

In view of CSA International's Petition and supporting documents, the public comments received concerning the Petition, the Department's independent investigation, CSA International's actions to correct the

defects the Department addressed as described above, and the fact no comments were submitted concerning the Department's interim determination, the Department concludes that the CSA International Motor Efficiency Verification Service Program satisfactorily meets the criteria in 10 CFR 431.27.

Therefore, the Department's final determination is to classify the CSA International Motor Efficiency Verification Service Program as nationally recognized in the United States for the purposes of section 345(c) of EPCA. This final determination is effective upon the publication of this notice in the **Federal Register**, notwithstanding the Department's final determination, in the event that the CSA International Motor Efficiency Verification Service Program fails to continue to meet the criteria in 10 CFR 431.27 for a nationally recognized certification program, the Department can withdraw recognition after following the procedural requirements in 10 CFR 431.28(g).

Issued in Washington, DC, on December 19, 2002.

David K. Garman,

Assistant Secretary, Energy Efficiency and Renewable Energy.

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DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

[Docket No. EE–RM–96–400]

Energy Efficiency Program for Certain Commercial and Industrial Equipment: Final Determination Concerning the Petition for Recognition of Underwriters Laboratories Inc. as a Nationally Recognized Certification Program for Electric Motor Efficiency

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

ACTION: Final determination.

SUMMARY: Today's notice announces the Department of Energy's final determination classifying the Underwriters Laboratories Inc. Energy Verification Service Program for Electric Motors as a nationally recognized certification program in the United States for the purposes of section 345(c) of the Energy Policy and Conservation Act.

DATES: This final determination is effective December 27, 2002.

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SUPPLEMENTARY INFORMATION:

I. Introduction

On July 5, 2002, the Department of Energy (DOE or Department) published in the **Federal Register** an interim determination to classify Underwriters Laboratories Inc.'s Energy Verification Service Program for Electric Motors (UL EVS Program or Program) as a nationally recognized certification program for electric motor efficiency and solicited comments, data and information with respect to that interim determination. 67 FR 45028. The Department did not receive any comments concerning its interim determination.

A. Authority

Part C of Title III of the Energy Policy and Conservation Act (EPCA) contains energy conservation requirements for electric motors, including requirements for test procedures, energy efficiency standards, and compliance certification (42 U.S.C. 6311–6316). Section 345(c) of EPCA directs the Secretary of Energy to require motor manufacturers ''to certify, through an independent testing or certification program nationally recognized in the United States, that [each electric motor subject to EPCA efficiency standards] meets the applicable standard.'' 42 U.S.C. 6316(c). Regulations to implement this EPCA directive, with respect to certification programs, are codified in 10 CFR Part 431 at sections 431.123, *Compliance Certification,* 431.27, *Department of Energy recognition of nationally recognized certification programs,* and 431.28, *Procedures for recognition and withdrawal of recognition of accreditation bodies and certification programs.*

For a certification program to be classified by the Department as being nationally recognized, the program must: (1) Have satisfactory standards and procedures for conducting and administering a certification system, and for granting a certificate of conformity; (2) be independent; (3) be qualified to operate in a highly competent manner; and (4) be expert in the test procedures and methodologies in Institute of Electrical and Electronics Engineers (IEEE) Standard 112–1996 Test Method B and CSA Standard C390–93 Test Method (1), or similar procedures and methodologies for determining the energy efficiency of electric motors; and (5) have satisfactory criteria and procedures for selecting and sampling electric motors for energy efficiency testing. 10 CFR 431.27(b).

B. Background

Pursuant to 10 CFR 431.27, UL submitted a petition, ''Classification in Accordance with 10 CFR 431.27,'' (UL Petition or the Petition), which was published in the **Federal Register** on October 3, 2001. 66 FR 50355. The Petition consisted of a letter from UL to the Department, narrative statements on five subject areas, and supporting documentation. At the same time, DOE solicited comments, data, and information as to whether UL's Petition should be granted. The Department received two comments. The Department also conducted an independent investigation concerning the UL Petition pursuant to 10 CFR 431.28(f).

The supporting documents that accompanied the Petition, as well as the material UL subsequently submitted to the Department in support of UL's Petition, continue to be available in the Freedom of Information Reading Room, U.S. Department of Energy, Forrestal Building, Room 1E–190, 1000