

HB

406

STATE OF ALASKA

DEPARTMENT OF LAW

OFFICE OF THE ATTORNEY GENERAL

STEVE COWPER, GOVERNOR

P.O. BOX K—STATE CAPITOL
JUNEAU, ALASKA 99811-0300
PHONE: (907) 465-3600

January 29, 1990

The Honorable Sam Cotten
Speaker of the House
Alaska State Legislature
P.O. Box V
Juneau, Alaska 99811

Re: HB 406

Dear Representative Cotten:

Recent meetings with the Department of Labor inspection staff and telephone discussions with Underwriters Laboratory staff lead me to suggest some minor revisions to HB 406.

We agree with the Department of Labor that "offer to sell" should be added to Sec. 45.45.910(a). This change would greatly simplify the enforcement of this statute. This same section should be revised by changing "approved testing laboratory" to "approved third-party product certifier." This change is close to the change suggested by "UL" but uses language consistent with that used by "The American National Standards Institute."

We suggest that AS 45.45.910 be changed from "maintain a list of approved testing laboratories" to "review and approve third party certification programs that substantially comply with AS 45.45.910(d)." This change allows for more consistent language and clarifies responsibility of the Department of Law.

We agree with Underwriters Laboratories that the reference to ASTM E994 be deleted and in its place "ANSI Z34-1987, American National Standard for Certification - Third-Party Certification Program," published by the American National Standard Institute. The reference to ASTM was inappropriate, The ANSI standard is the appropriate recognized national standard. We also substantially agree with Underwriters Laboratories that AS 45.45.910(d)(2)(B) be changed from "for which an approved testing laboratory exists" to "for which listing or labeling by an approved third-party product certifier is available." This change allows for language consistent with ANSI guidelines.

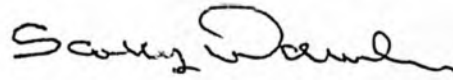
Representative Sam Cotten
Alaska State Legislature
HB 406

January 29, 1990
Page 2

These changes clean up and clarify the bill but do not substantially change the bill. Hopefully, few other changes will be necessary.

Sincerely,

DOUGLAS B. BAILY
ATTORNEY GENERAL



By:

Scotty Dawkins
Investigator
Consumer Protection

SD:nb

ALASKA STATE LEGISLATURE

P. O. Box 770296
Eagle River, Alaska 99577
(907) 694-6683



P. O. Box V
Juneau, Alaska 99811
(907) 465-3720

SAM COTTEN
SPEAKER OF THE HOUSE

Memorandum

TO: Representative Dave Donley
Chairman, House Labor & Commerce Committee

FROM: Representative Sam Cotten *SC*
Speaker of the House

DATE: January 26, 1990

RE: Hearing on House Bill 406

=====

For your planning purposes, the following individuals will be in town next Tuesday to testify regarding House Bill 406:

1. Mr. Robert Pollock
Senior Staff Engineer
Underwriters Laboratories, Inc.
Santa Clara, California
2. Mr. Wes Christiansen
Service Consultant
Underwriters Laboratories, Inc.
Edmonds, Washington
3. Mr. Ronald M. "Scotty" Dawkins
Investigator
Consumer Protection Section
Alaska Department of Law
Anchorage, Alaska

I would appreciate it if you could accommodate these witnesses at this hearing as they will be traveling to Juneau specifically for this hearing. If you have any questions, please do not hesitate to contact me. Your cooperation is appreciated.



International Association of Electrical Inspectors



The Alaskan Chapter of the International Association of Electrical Inspectors supports House Bill No. 406. This bill follows our associations major objectives in formulating standards for safe installation and use of electrical materials, devices and appliances. Product manufacturers have the responsibility to supply products that are safe and suitable for the purpose. Listing and labeling of an electrical product assures the consumer that the product manufacturer has met basic fire and life safety tests conducted by an unbiased approved testing laboratory.

Gil Chambers
Sec/Tres AK Chapter IAEI
13811 Savage Drive, Box 110
Eagle River, Alaska 99577

International Brotherhood of Electrical Workers

Local 1547

2702 DENALI STREET
ANCHORAGE, ALASKA 99503-2779

TELEPHONE
(907) 272-6571

DISPATCH
(907) 276-1547

GARY BROOKS
BUSINESS MANAGER • FINANCIAL SECRETARY

JOSEPH HODGE
PRESIDENT

January 25, 1990



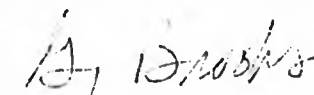
Rep. Dave Donley, Chairman
Labor and Commerce Committee
Alaska State House of Representatives
Pouch V
Juneau, Alaska 99811

Re: House Bill 406

Dear Representative Donley:

In light of the tragic incident that inspired this legislation, the International Brotherhood of Electrical Workers Local Union 1547 would like to go on record as supporting this legislation. We have a longstanding tradition of supporting consumer as well as workplace safety, and legislation such as this will go far in ensuring a higher degree of safety in both areas.

Very Truly Yours,
IBEW LOCAL UNION 1547



Gary Brooks
Business Manager

GB:sb

Faxed P. gm
1/26/89
3:51 PM
Pages

IN THE HOUSE

HOUSE BILL NO. 406
IN THE LEGISLATURE OF THE STATE OF ALASKA
SIXTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act relating to the sale, gift, or transfer for value of electrical products."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 45.45 is amended by adding a new section to read:

Sec. 45.45.910. SALE OR OTHER DISPOSAL OF ELECTRICAL PRODUCTS.

(a) A person may not, in the course of the person's business OFFER TO SELL, sell, give away, or exchange for value an electrical product unless the electrical product is labeled or listed by an approved THIRD PARTY CERTIFICATION PROGRAM [testing laboratory] in accordance with the minimum electrical standards established by AS 18.60.580.

(b) The consumer protection section of the Department of Law shall [maintain a list of approved testing laboratories] REVIEW AND APPROVE THIRD PARTY CERTIFICATION PROGRAMS THAT SUBSTANTIALLY COMPLY WITH 45.45.910(d).

(c) A person who violates (a) of this section is guilty of a violation.

(d) In this section,

DRAFT

DR



*Department of Transportation
and Public Facilities*

POSITION PAPER

BILL NO: HB 406

APPROVED:

A handwritten signature in black ink, appearing to be "M. L. S. H. G.", written over a horizontal line.

TITLE: An Act relating to sale of electrical products.

DATE: January 30, 1990

The department supports the intent of this bill -- the elimination of dangerous consumer electrical products. However we are concerned that this bill could significantly raise costs on certain types of construction which involve electrical products not intended for the consumer market and which are not routinely tested by an approved laboratory. For example airport navigation lights and some traffic signal products are not tested by an approved testing laboratory.

While these and similar non-consumer electrical products do not meet the testing criteria established in this bill, they are normally required to meet standards established by funding agencies (Federal Aviation Administration and Federal Highway Administration) and the registered engineers who design and observe the construction.

The requirement for the testing of non-consumer electrical products with a limited market could result in the full cost of a test being borne by the purchaser. Just recently, a sheet metal enclosure on a highway traffic signal power center was mandated to have an approved label by a local inspector. At an expense of \$15,000 a UL inspector visited the site and reported that the enclosure was "galvanized sheet metal and water tight".

We recommend that provisions be made in Sec. 45.45.910 (a) to accept products specified by a person who is a registered electrical engineer, licensed to practice in the State of Alaska.

**International Brotherhood of Electrical Workers
Local 1547**

2702 DENALI STREET
ANCHORAGE, ALASKA 99503-2779

TELEPHONE
(907) 272-8571

DISPATCH
(907) 276-1547

GARY BROOKS
BUSINESS MANAGER • FINANCIAL SECRETARY

JOSEPH HODGE
PRESIDENT



January 29, 1990

The International Brotherhood of Electrical Workers, Local 1547 ("IBEW") supports House Bill No. 406. This bill follows our Local's major objective in formulating standards for safe installation and use of electrical materials, devices and appliances. Product manufacturers have the responsibility to supply products that are safe and suitable for the purpose. Listing and labeling of an electrical product assures the consumer that the product manufacturer has met basic fire and life safety tests conducted by an unbiased approved testing laboratory.

IBEW LOCAL UNION 1547

Gary Brooks
Business Manager

GB/cfd

Post-It™ brand fax transmittal memo 7671		# of pages >	1
To	Janet		
From	Gary Brooks		
Co.	Sanku Cotton's Office		
Co.	IBEW Local 1547		
Dept.	N		
Phone #	272-6571		
Fax #	465-9565		
Fax #	276-1963		

HOUSE COMMITTEE REPORT

(7)

Date Referred: January 8, 1990

FURTHER REFERRALS: FINANCE

Date of Committee Action: 2/15/90

The LABOR & COMMERCE Committee considered:

HB 406

HOUSE BILL NO. 406

SALE OF ELECTRICAL PRODUCTS

"An Act relating to the sale, gift, or transfer for value of electrical products."

RECOMMENDATIONS:

- be replaced with CS HB406 (LHC) the same title
- a new title
- have attached amendment(s)
- do pass
- do not pass
- no recommendation
- individual recommendations
- additional referral to the _____ Committee

ADOPTS: _____ letter of intent

ATTACHES NEW FISCAL NOTE(s):
(Dept)

APPROVES PREVIOUS:

(Date/Dept)

- fiscal impact _____
- zero fiscal note _____
- zero with analysis _____

- fiscal note(s) _____
- zero fiscal note(s) _____
- zero fn/analysis _____

SIGNING DO PASS:

David Donley
Mark Boyer
[Signature]
Mr. [Signature]
[Signature]

SIGNING:
(Check appropr. column)

	Do Not Pass	No Rec	Amend
<u>[Signature]</u>		X	

David Donley
Chairman's Signature

FISCAL NOTE

REQUEST:

Revision Date: _____
 Title: "An Act relating to the sale, gift, or transfer for value of electrical products."
 Sponsor: Repr. Cotten
 Requestor: Repr. Cotten

Agency Affected: Department of Law
 BRU: Consumer Protection
 Components: Consumer Protection

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	-0-	-0-	-0-	-0-	-0-
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME	-0-	-0-	-0-	-0-	-0-	-0-
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

Please see the attached analysis.

Prepared by: Richard I. Pegues Director Phone: 465-3672
 Division: Administrative Services Date: January 30, 1990
 Approved by Commissioner: Douglas B. Bailly Attorney General Date: January 30, 1990
 Agency: Department of Law

Distribution (by preparer):
 Legislative Finance
 Legislative Sponsor
 Requestor
 Office of Management and Budget
 Impacted Agency(ies)

This bill amends AS 45.45 by adding a new section (AS 45.45.910) that provides that a person may not, in the course of the person's business, sell, give away, or exchange for value an electrical product unless the electrical product is labeled or listed by an approved testing laboratory, in accordance with the minimum electrical standards established by AS 18.60.550.

The bill also provides that the consumer protection section of the Department of Law shall maintain a list of approved testing laboratories. Approved testing laboratory is defined as a laboratory that meets the requirements of the 1984 Standard Guide for Laboratory Accreditation Systems, ASTM E-944, published by the American Society for Testing and Materials.

A previous attempt by the U.S. Department of Labor, to adopt the ASTM E-944 standards, resulted in a lawsuit requiring the Department of Labor to certify 900+ testing laboratories, including many offshore testing firms. Because of the number of potential testing firms that could be certified under ASTM E-944 is so great, it would be nearly impossible for the consumer protection section to maintain a list of approved testing laboratories. The department believes that substitution of ANSI Z-34.1-1987, the American National Standard for Certification - Third Party Certification Program, published by the American National Standards Institute, in place of the ASTM E-944 standards, may eliminate most of this problem. Otherwise, it appears that simply keeping-up with the paperwork for the large number of potential approved testing laboratories could be extremely time consuming and expensive, without any real assurance that a product has been properly tested.

Lastly, the bill amends AS 45.50.471 by providing that violation of proposed AS 45.45.910 is an unlawful act under the state's Unfair Trade Practices and Consumer Protection Act. Approval of this provision will increase the number of unlawful acts specified under AS 45.50.471 from 28 to 29. The consumer protection section currently consists of one attorney, two paraprofessionals, and one and one-half secretaries, in sharp contrast to the three attorneys, seven paraprofessionals, and five secretaries who staffed the section prior to the FY87 budget crisis. Consequently, the section can only handle the most serious violations. The department therefore recommends adoption of the ANSI Z-34.1-1987 certification standards, in order to provide for a workable method of records-keeping and in order to avoid unnecessary cost.

STATE OF ALASKA
1990 LEGISLATIVE SESSION

BILL VERSION: HB 406
PUBLISH DATE: _____

FISCAL NOTE

REQUEST:

Revision Date: _____ Agency Affected: Labor
Title: "An Act relating to the sale, gift,
or transfer for value of electrical products." BRU: Labor Standards & Safety
Sponsor: Cotten Components: Mechanical Inspection
Requestor: House Labor & Commerce

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND&STRUCTURES						
GRANTS,CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

Note: there is no fiscal impact in FY 90

Prepared by: Tom Stuart, Director Phone: 465-2712
Division: Labor Standards & Safety Date: 1/25/90
Approved by Commissioner: Jim Sampson Date: 1/25/90
Agency: Department of Labor

Distribution (by preparer) :

Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

BY REP. COTTEN

1 IN THE HOUSE

2

HOUSE BILL NO. 406

3

IN THE LEGISLATURE OF THE STATE OF ALASKA

4

SIXTEENTH LEGISLATURE - SECOND SESSION

5

A BILL

6 For an Act entitled: "An Act relating to the sale, gift, or transfer for
7 value of electrical products."

8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 45.45 is amended by adding a new section to read:

Sec. 45.45.910. SALE OR OTHER DISPOSAL OF ELECTRICAL PRODUCTS.

9
10
11

(a) A person may not, in the course of the person's business, sell,
12 give away, or exchange for value an electrical product unless the
13 electrical product is labeled or listed by an approved testing labora-
14 tory in accordance with the minimum electrical standards established
15 by AS 18.60.580.

16

(b) The consumer protection section of the Department of Law
17 shall maintain a list of approved testing laboratories.

18

(c) A person who violates (a) of this section is guilty of a
19 violation.

20

(d) In this section,

21

(1) "approved testing laboratory" means a laboratory that
22 meets the requirements of the 1984 Standard Guide for Laboratory
23 Accreditation Systems, ASTM E-994, published by the American Society
24 for Testing and Materials;

25

(2) "electrical product" means material, a device, or
26 another item

27

(A) that can be operated by electrical current or that
28 is used to convey electrical current; and

29

(B) for which an approved testing laboratory exists.

*new featured
after act*

1 * Sec. 2. AS 45.50.471(b) is amended by adding a new paragraph to read:
2 (29) violating AS 45.45.910(a).

Researchers identify flaw in lamp that caused electrocution

By JOSEPH DITS
Times Writer

Investigators have discovered the flaw that caused a brass lamp to fatally electrocute an 11-month-old girl in Eagle River last week.

Screws holding the lamp's three legs to the base slowly dug their way through an electrical cord and exposed the bare wire, according to Scotty Dawkins, investigator with the state attorney general's office.

The lamp electrocuted Crystal Thaysse on Dec. 3, after she grasped the lamp's base and a hot-water baseboard heater simultaneously in her parents' living room.

Two sets of screws keep the electrical cord sandwiched in the middle of the hollow brass column, Dawkins said. The screws are long enough that they actually squeezed the cord, he said.

Over the course of the two years the Thaysse

family owned the lamp, the plastic coating around the cord's wire gave way to the screws, Dawkins said.

The lamp was turned off when it sent 110 volts through the Crystal Thaysse's body, he said. When she touched the heater, she allowed the electrical current to complete a circuit from the exposed wire and through the metal base.

Dawkins said he and two other researchers sawed open the lamp on Monday. Inside, they found the screws' indentations in the cord.

Dawkins later checked a similar lamp turned in from an Anchorage home. He found the same design, but no exposed wires.

His investigation has found the electrical system at the Thaysse home to be safe. He also ruled out an earlier theory that the polarity of the lamp's plug might be involved.

The Consumer Protection Section, in which

Dawkins works, issued another warning Wednesday on the lamp and the 11 others reportedly sold by Liquidation Sales, an Anchorage discount store.

Owners had turned in two similar lamps after an initial alert, one in Anchorage and one in Fairbanks. Dawkins urged the owners of the other nine lamps to call his office, 276-3550.

None of the lamps were certified by Underwriters Laboratories, an industry-supported testing lab, although the socket bore the U.L. label, Dawkins said.

Some states have laws that prohibit sales of electrical appliances without by U.L. or an equivalent lab's certification, Dawkins said.

Alaska is one state without such a law, but Rep. Sam Cotten, D-Eagle River, said he plans to change that.

Although it's not written, Cotten said his proposal would require that stores in Alaska only sell

appliances with the U.L. or equivalent label.

"It appears legislation is necessary, and I'd be happy to introduce it," he said. "It's hard to believe we have products that are killing people."

Cotten said he is researching laws of other states and intends to introduce his bill early when the state legislature begins its session in January.

A spokeswoman for U.L. said such legislation is unfortunately necessary to protect the public.

"When you have an (electrocution) death, especially a small child, it wakes everyone up and puts the wheels in motion," said Sharon Dalton, media relations supervisor at the firm's headquarters near Chicago.

Markings on some parts of the lamps indicate it was manufactured in Taiwan, Dawkins said.

Dalton said place of origin should not lessen a product's chance for safety.

Dec 14, 1989 Times

Underwriters Laboratories Inc.

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MCI Mail No. 259-3283
Cable ULINC SANTA CLARA CA
Telex No. (TRT) 184-219

January 24, 1990

Representative Sam Cotten
Speaker of the House
Alaska State Legislature
P. O. Box V
Juneau, Alaska 99811

Dear Mr. Cotten:

Your letter of January 10 to our Mr. Wes Christensen, together with the copy of House Bill 406, has been referred to me for review.

We note that Section 45.45.910(d)(1) states that an approved testing laboratory means a laboratory that meets the requirements of ASTM E994-84, Standard Guide for Laboratory Accreditation Systems. We believe it inappropriate to reference ASTM E994 in this context since it does not include criteria that a laboratory must meet in order to be accredited.

ASTM E994 identifies the important features that operators of laboratory accreditation systems should adhere to in their accreditation procedures and practices. It provides guidelines for the qualifications and selection of assessors, the conduct of on-site assessments, the implementation of proficiency testing and the evaluation of laboratories leading to accreditation. In other words, ASTM E994 applies to the accreditor of a laboratory, and not the laboratory.

The title of E994 is "Standard Guide for Laboratory Accreditation Systems." Further, the introduction concludes with the sentence "Laboratory accreditation systems should not be confused with product certification systems." We are enclosing a copy of ASTM E994 for your reference.

If the bill remains essentially in its present form, then we recommend the following changes:

Sec. 45.45.910(a) - Change "...labeled or listed by an approved testing laboratory..." to "... listed or labeled by an approved third-party product safety certifier..."

An independent,
not-for-profit organization
testing for public safety

January 24, 1990
Page 2

Sec. 45.45.910(d)(1) - Delete the reference to ASTM E994 and include in its place "ANSI Z34.1-1987, American National Standard for Certification - Third-Party Certification Program, published by the American National Standards Institute." ANSI Z34.1 is a reasonably complete standard for third-party product safety certifiers and includes most, by not all, of the criteria UL recommends for valid third-party product safety certification programs.

Sec. 45.45.910(d)(2)(B) - Change "for which an approved testing laboratory exists" to "for which listing or labeling by an approved third-party product safety certifier is available."

It is important to recognize the significant difference between "laboratory accreditation" and "product certification."

"Laboratory accreditation" is a formal recognition that a testing laboratory is competent to carry out specific tests or types of tests. Laboratory accreditation is directed toward and limited to assessing testing competence. The adequacy of personnel, laboratory facilities and equipment are determined. At best, testing competence should be considered as only one of several elements of a product safety certification system.

"Product certification" includes testing, but, in addition, involves a number of other elements. An over-simplified visual comparison of the two systems might look as follows:

MAIN ELEMENTS OF SYSTEMS	
<u>PRODUCT CERTIFICATION</u>	<u>LABORATORY ACCREDITATION</u>
Product standard	
Product testing	Product testing
Product assurance (Follow-up production inspection)	
Certification Mark	

Laboratory accreditation does not include supervision of the use of a certification mark by which the government authorities and the public can identify products produced in accordance with a certification program.

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Laboratory accreditation does not include a product follow-up program to assure that factory production continues to comply with minimum safety requirements.

It does not have provision for recall and removal of certification marks from noncomplying products, response to field problems and a host of other elements essential to a product certification system.

The only element of a product certification system that is addressed by laboratory accreditation is testing competence. Without the other elements of a product certification system, accreditation of testing competence is meaningless to the role of protecting the public from unsafe electrical products and installations.

The term "Testing laboratory accreditation" or the equivalent is commonly used in laws and regulations, probably because the organizations involved often have the word "laboratory" in their names and testing is one element of the process. In reality, "product safety certification system" is the subject.

The prevailing view of product safety certification is that it is an activity involving laboratory testing to determine compliance with a standard. Testing is only one of many essential elements in a product safety certification system, however.

"Product certification" is the action of certifying, generally by a registered mark, that a product is in conformity with specific standards, in this case American National Standards for safety, or equivalent. Since product certification is directed to product conformance vis-a-vis testing competence, it is also concerned with conflict of interests, independence, use of United States codes and standards, a production inspection program, contractual provisions for testing and follow-up, and provisions for removal of the certifier's mark from noncomplying products.

There are relatively few organizations (laboratories) operating product safety certification systems. On the other hand, there are thousands of testing laboratories doing commercial testing.

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Commercial testing laboratories perform a variety of tests in fields such as metallurgical, chemical and physical analysis, radiological analysis, air and water quality, concrete, soil and weld analysis, and on and on. The list is almost endless. Often, a laboratory is organized to do only one type of analytical testing, such as concrete.

The testing performed by commercial testing laboratories is usually on a lot-by-lot, project-by-project, one-of-a-kind, or similar basis. That is one time testing, as opposed to continuous product testing of mass produced products upon which the public depends for product safety. Potential customers may be interested in knowing that a laboratory has been judged by an independent organization to be capable of performing specific analytical tests. This would motivate a laboratory to seek accreditation of some form.

Accreditation would involve an evaluation of laboratory personnel, test equipment and facilities with respect to performance of specific tests or groups of tests not necessarily to a specific standard nor to all the requirements of the standard.

Product testing is one of many elements of a product certification program. The operator of a certification program, such as UL, conceivably could contract to have testing performed by an outside laboratory. Laboratory accreditation could provide a useful mechanism in assessing the technical competence of a testing laboratory. This is another illustration of how a testing laboratory and laboratory accreditation might serve a useful purpose as one element in a certification system. Laboratory accreditation could never be a substitute for product certification, however.

Historically, the regulatory authority exercising legal jurisdiction over electrical installations has been charged with the responsibility to assure that the health, safety, and property of the people of a state, county or city are reasonably protected.

Requirements for the safe installation of electrical products have been available in the National Electrical Code since 1897, but this Code does not cover the safety of the

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products themselves. Most regulatory authorities have not had a staff with technical expertise to devote to the evaluation of product safety, the laboratory facilities in which to conduct such evaluations, the funds to do so, the ability to conduct factory production inspections nor the other necessities to conduct an adequate product certification system.

As a result, those responsible have looked for assistance to organizations specifically established to conduct product safety certification systems. The National Electrical Code makes such a recommendation in the first paragraph of Section 90-6. Up until recently, a statement appeared in a state regulation to the effect that "electrical equipment shall be listed by Underwriters Laboratories." With the advent of competitive certification programs in recent years, reference to "electrical equipment listed by Underwriters Laboratories or by a testing agency approved by the department" has been substituted.

As concern for public safety has increased, so has the number of laboratories claiming to conduct product safety certification programs. Regulatory authorities in general were ill equipped to evaluate the qualifications of laboratories. There were no guidelines, insufficient funds, no spare time and little expertise. Unfortunately, many regulatory authorities were placed in a position of having to recognize laboratories without adequate evaluation.

The result was that products began to appear which some electrical authorities believed did not comply with minimum safety requirements. Accidents and fires were reported, allegedly involving electrical equipment certified by a laboratory whose product certification system was recognized. Concerned authorities decided that it was time that stringent guidelines be established with which to evaluate product safety certification systems.

The states of Texas, North Carolina, Oregon and Washington adopted completely new regulations. Other jurisdictions upgraded their existing requirements. Today, as a result, product safety certification systems and the laboratories operating them are receiving more scrutiny than ever before.

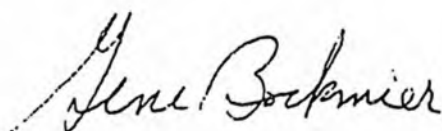
Underwriters Laboratories supports independent third-party product safety certification systems and we support efforts to

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Page 6

develop more stringent criteria for the evaluation of such certification systems. We believe the certifying organizations seeking recognition should be willing to reimburse the state for the cost involved, so that the program will be essentially self-supporting.

We are enclosing a copy of the ANSI Z34.1-1987 document we referenced in our suggested changes. Also, enclosed is a copy of the Washington State product certification rule that may be of interest to you. It is more complete than ANSI Z34.1-1987.

I understand that our Messrs. Bob Pollock and Wes Christensen expect to meet with you February 2. They will be prepared to discuss this matter. In the meantime, if we can be of help, please let us know.



GENE BOCKMIER
Vice President

c: Bob Pollock)
Wes Christensen) with enclosures

R. W. Miller - letter only

American National Standard

for certification –
third-party certification program

ANSI Z39.1-1967



american national standards institute inc.
1430 broadway, new york, new york 10018

(NBK TRC COPY)

ANSI®
Z34.1-1987
Revision of
ANSI Z34.1-1982

**American National Standard
for Certification –
Third-Party Certification Program**

Secretariat

American Council of Independent Laboratories

Approved June 4, 1987

American National Standards Institute, Inc

American National Standard

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.

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Foreword (This Foreword is not part of American National Standard Z34.1-1987.)

The proximate reason for developing and issuing this revised American National Standard for Certification – Third-Party Certification Program, ANSI Z34.1-1987, was the publication in 1984 of Guidelines for Federal Agency Use of Private Sector Third-Party Certification Programs by the Office of Product Standards Policy, National Bureau of Standards of the United States Department of Commerce. Although that publication drew heavily on the content and philosophical underpinnings of American National Standard for Certification – Third-Party Certification Program, ANSI Z34.1-1982, the Guidelines differed substantially from the standard in their textual organization and in choice of language. Moreover, the development and publication of the Guidelines represented a response by the United States Government to certain obligations it undertook in adhering to the Agreement on Technical Barriers to Trade administered under the Secretariat of the General Agreement on Tariffs and Trade (GATT), popularly known as the "GATT Standards Code." Accordingly, various paragraphs of the Guidelines contain nonspecific references to guides published by nontreaty international standards organizations, which guides, in turn, reference without specificity still other documents of those organizations.

In its deliberations on this revised standard, the Task Group of Accredited Standards Committee on Principles Underlying Valid Certification and Labeling of Products and Services, Z34, chose to harmonize, wherever practicable, the standard's textual organization and language with that of the Guidelines. The premise for that decision has been the belief that users of this standard, whether in government or the private sector, are better served when potential conflict and confusion between two documents directed to the same or similar purposes are minimized. The Task Group determined, however, that incorporation by nonspecific reference of provisions in international documents would be inappropriate to an American standard. The Task Group did consult and take account of the relevant ISO and IEC Guides on questions of substance. Thus, although this and previous revisions of this standard do in fact contain numerous similar and identical provisions in common with those to be found in international guides, those provisions here are set forth explicitly and never by reference.

Suggestions for improvement of this standard will be welcome. They should be sent to the American Council of Independent Laboratories, Inc, 1725 K Street, NW, Washington, DC 20006.

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee on Principles Underlying Valid Certification and Labeling of Products and Services, Z34. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the Z34 Committee had the following members:

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American National Standard for Certification -

Third-Party Certification Program

1. Scope and Purpose

1.1 This American National Standard sets forth generic criteria for third-party certification programs under which a producer is authorized by a third party to use the program's mark (certification mark) or a certificate of conformity to indicate that a product or service is in compliance with applicable standards or specifications.

1.2 The application and utilization of this standard shall not contravene any federal, state, or local statutory requirements.

1.3 This American National Standard shall be open to voluntary adoption and compliance by a certification body under whose authority a certification program is developed and financed, and under whose name the program is identified. When conformance to this standard is claimed, it shall pertain to the provisions of all criteria set forth in this standard.

2. Standards

2.1 A certification program shall be based upon and shall utilize all applicable portions and contents of the standards or specifications, or both, to which conformity is certified. In instances in which deviations from or exclusions of certain portions of a standard are permissible, the certification program shall require that full disclosure of such deviation or exclusion shall be made on the mark, label, or certificate of conformity. Where such a means of disclosure is not practicable, the program's operating procedures shall provide a precise method whereby users shall be advised that the standard has not been utilized in its entirety.

2.2 This document is applicable to certification programs concerned with conformity to available standards and specifications with a broad level of recognized acceptance, selected from any of, or any combination of, the following:

- (1) An American National Standard
- (2) A standard or specification published by a qualified technical society, trade association, agency, society, or other organization of national or international scope or recognition
- (3) A standard or specification published by the federal, state, or local government

3. Definitions

3.1 **Certification.** The procedure by which written assurance is given that a product or service conforms to a standard or specification.

3.2 **Third-Party Certification.** A form of certification in which the producer's claim of conformity is validated, as part of a third-party certification program, by a technically and otherwise competent body other than one controlled by the producer or the buyer.

3.3 **Producer.** The manufacturer, distributor, supplier, or other party providing the product or service who is responsible for assuring conformity with all requirements of the referenced standards or specifications.

3.4 **Third-Party Certification Program.** An organized system (1) under which similar products or services of any number of producers may be certified as conforming to the referenced standards or specifications on a uniform and equitable basis, (2) which uses or is operated by a third-party inspection/testing body, and (3) which authorizes the use of controlled certification marks or certificates of conformity as evidence of conformity.

3.5 **Mark of Conformity (Certification Mark).** The sign or symbol owned or controlled by the certification body that is used exclusively by the third-party certification program to identify products or services as being certified and is registered as a certification mark with the U.S. Patent Office under the Trade Mark Act of 1946.

3.6 Certificate of Conformity. A tag, label, nameplate, or document of specified form and content, affixed or otherwise directly associated with a product or service on delivery to the buyer, attesting that the product or service is in conformity with the referenced standards or specifications.

3.7 Certification Body. An impartial body possessing the necessary competence and other qualifications to sponsor and operate a certification program. A certification body is that organization under whose authority a certification program is developed, promulgated, operated, and financed, and with whose name the certification program is identified.

3.8 Third-Party Testing/Inspection Body. An organization that possesses the necessary technical competence and that is other than one operated or controlled by a manufacturer, supplier, or buyer of a certified product or service in that it has no organizational, financial, or commercial involvements with the producer or buyer that might pose a potential conflict of interest.

3.9 Standard. A prescribed set of conditions and requirements, established by authority or agreement, for continuous application. A standard takes the form of a document containing a set of conditions to be fulfilled, or an object of comparison. For the purposes of this document, the provisions of a standard as defined and utilized in this standard shall be such as to be suitable to and capable of certification.

3.10 Specification. A concise statement of requirements to be satisfied by a product, material, service, or process indicating, whenever appropriate, the procedure by which it may be determined whether the requirements given are satisfied. Insofar as is practicable, the requirements of a specification are to be expressed in exact numerical terms describing applicable limits.

4. Certification Body

4.1 The certification body whose name is identified with the program shall be one of the following:

- (1) A trade association
- (2) A professional or technical society
- (3) An organization of producers or service-rendering entities
- (4) An organization oriented to consumers or users of the product or service
- (5) A third-party testing/inspection organization

4.2 The certification body shall be responsible for and qualified to sponsor and operate a program to ensure uniform compliance with the provisions contained in this standard for use of a mark or certificate of conformity. A certification body may delegate certain elements but not the entire operation and administration of a certification program to another party, providing that such a designated party satisfies the requirements for competence and other qualifications within the area of delegation, as set forth in this standard.

4.3 The procedures under which the body operates shall be administered in a nondiscriminatory manner. The body shall make participation in the certification program available to any applicant and shall not require membership as a condition of participation.

4.4 It shall be the responsibility of the certification body to:

(1) Adopt, keep current, and make available on request a systematic set of general and specific rules governing the organizational and administrative structures, operational policies and practices, extents and limitations of authority, appeals and dispute settlement mechanisms, and amendment of the rules for the certification program.

(2) Organize and make available full operating procedures. An application procedure shall be included, with provisions for identifying the applicable standards or specifications, products or services covered, and their places of origin. Procedures shall also be specified for determination of conformity and issuance of authorization to use the mark or certificate of conformity; conditions shall be identified for the appropriateness of a subsequent extension of such authorities; and terms shall be detailed for suspension and subsequent restoration or termination of authorization.

(3) Designate the standards and specifications that shall serve as the basis of the certification program and notify participants of the effective dates of modifications of each.

(4) Provide a system of validation (see Section 7) to determine that products or services bearing the mark or certificate of conformity comply with the applicable standard and other requirements of the program. The certification body may conduct its own validation activities or exercise oversight of these activities carried out on its behalf by other organizations.

(5) Effect the provisions of due process, providing an appeals mechanism for resolving disputes that arise under the program.

(6) Maintain adequate communication with all participating parties in order to assure relevancy, acceptability, and continuity of the program.

(7) Make available and maintain in writing the following:

(a) General information covering the procedures and operations of the program, a description of the mark of conformity, the referenced standards or specifications, and identification of the certification body and other parties to the program in a form that discloses their relationship to participating producers.

(b) A program directory that includes a list of participants and their products or services, or both, authorized to bear the mark or certificate of conformity, identification of the specific referenced standards or specifications; a description of the mark of conformity; and identification of the certification body and other parties to the program in a form that discloses their relationships to the participating producers.

(8) Maintain the confidentiality of proprietary information, access to which results from contacts with participants in the program.

(9) Provide for the operation of the program on a continuing basis. The certification body may itself administer the program's activities or shall oversee the administration carried out on its behalf by another organization meeting the requirements applicable to the functions performed.

(10) Safeguard the use of the mark or certificate of conformity. Procedures shall be established and used to detect incorrect citations of authorization or misleading use of the mark or certificate of conformity. When warranted, corrective action shall be taken. The basis for suspension or cancellation of authorization and procedures for its withdrawal shall be established with respect to participating producers, together with conditions for reinstating authorization. There shall be conditions for advising the user community of withdrawals of authorization, as well as reinstatement of authorization, and of unauthorized use of the mark or certificate of conformity under circumstances in which public notice is issued.

(11) Implement a uniform, legally binding agreement (contract) between the certification body and the program participants to provide for proper use and control of the mark or certificate of conformity and other key operational elements of the certification program.

NOTE: In circumstances when an organization other than the certification body carries out actual functions respecting participants in the certification program, the certification body shall have given its prior approval to the form and general content of agreements entered into on its behalf by such organization.

5. Quality Assurance

5.1 The producer shall establish, maintain, and use a system that will assure compliance with the requirements of the referenced standards or specifications. The system shall include the methods, procedures, controls, records, and maintenance of the system to provide continuing assurance of compliance with the referenced standards or specifications. The extent of this system will be dependent on the characteristics of the products or services and the requirements of the standards or specifications.

5.2 The producer shall conduct or contract for all necessary inspection and testing. Where appropriate, sampling and the frequency of sampling should be conducted in accordance with accepted quality-control practice. Testing shall be performed by a competent laboratory, properly equipped and with trained personnel.

5.3 The producer shall inform the certification body of any intended modifications in the product, manufacturing process, or quality-assurance system that may affect conformance to standards or specifications covered by the applicable authorization. In such cases, the producer shall not be allowed to release certified products from such modification until the certification body has notified the producer accordingly.

5.4 When the assurance of conformity is provided by a supplier who is not the basic producer, the supplier shall account for these actions of the producer.

5.5 The system shall be documented by the producer to permit review and evaluation by the certification body. The documentation shall include a record of all complaints received relative to conformity, as well as their resolution.

6. Methods of Indicating Conformity

6.1 The program mark of conformity (certification mark) or, when permitted, a certificate of conformity issued under the authority of the certification body shall be used to indicate that the product or service has been found to conform to all requirements for third-party certification.

6.2 The mark of conformity (certification mark) shall be designed and coded to aid the detection of counterfeiting or other forms of misuse and, when practicable, shall be in the form of a nontransferable label or mark

on the product; otherwise, the mark or label shall be on the package or container of the product. Certificates of conformity, as in the case of services and other permissible situations, shall be included with other appropriate documents. The information appearing with the mark or on the certificate of conformity shall identify:

- (1) The producer of the product or service.
- (2) The product or service: name, type or model number, and supplementary information providing traceability.
- (3) The applicable standards or specifications. However, when this is impracticable, the applicable standard or specification shall be disclosed by other means, such as the product directory.
- (4) The certification body (and the testing/inspection organization, if different) in a form that discloses any organizational relationship to the producer. When the name of an association or organization describes the relationship between the association or organization and the program participants, such name fulfills this requirement.

(5) In the case of certificates of conformity, the following information shall be added:

- (a) Lot, batch, or other identifying source of the product or service covered by the certificate.
- (b) Date of issue of the certificate.
- (c) Signature and title of the authorized officer or other evidence of company authorization.

6.3 Use of and conformance with these procedures shall in no way authorize, imply, or require the use of any mark or certificate of conformity, except as authorized by the certification body.

6.4 The certification mark authorized and used shall be owned and controlled by the certification body and shall be registered as a certification mark under the Trade Mark Act of 1946.

6.5 As permitted by the certification body, the certification mark may be used in advertising, publicity, or promotions.

6.6 The use of marks or certificates of conformity and other public declarations shall be unambiguous and provide no basis for misinterpretation. The marks, certificates, and declarations shall be clearly distinguished from any other claims, markings, or labels not related to the authorized use of the mark or certificate of conformity. They shall clearly state:

- (1) What products are covered
- (2) What characteristics are covered by the certificate or declaration

7. Validation

7.1 The certification program shall provide for a system of both initial and continuing validation to determine that products or services conform to the standards or specifications and other program requirements. The certification body shall prescribe detailed requirements for the system and be responsible for its operation by itself performing required inspections, surveillance, and testing, or by overseeing these activities carried out on its behalf by other bodies.

7.2 The validation function shall be performed by a third-party testing and inspection agency. The general requirements for the testing and inspection body shall be as described in Section 8.

7.3 The process of validation shall consist of the following actions on the part of those responsible for its conduct:

(1) Determination that the producer has the necessary facilities, test equipment, and control procedures to ascertain whether the product or service complies with the program requirements and, as applicable, to review and determine action of the suitability of the quality-assurance system. Such action will include review of the system and essential program records and, as applicable, witnessing inspections and tests required by the system.

(2) Initial determination by uniform procedures that representative samples of products or services comply before such products or services are authorized to bear the mark of conformity under the follow-up provisions of the certification program.

(3) Periodic, systematic inspections and tests at a frequency necessary to determine that the producer's program is functioning properly; also, unannounced inspection and testing of the products or services, including: (a) monitoring of the quality-assurance program of the producer, when applicable, and (b) more frequent or otherwise reinforced inspections when a need for additional follow-up is indicated.

(4) Inspection and audit of the quality-assurance program of the producer when such program is utilized as part of the validation system.

7.4 The information required to perform these actions shall be specifically set forth so that consistent rulings will result. Likewise, where testing is required, information covering testing protocol requirements and other criteria shall be specifically set forth and available in advance to participants in the program.

8. General Requirements for Testing/ Inspection Bodies

8.1 Organization. Whether it is itself the program's certification body or has been appointed to carry out the testing/inspection function by the certification body, a testing/inspection body in a third-party certification program shall:

- (1) Be legally identifiable
- (2) Have an organization structure, including an appropriate quality system, adequate facilities, appropriate equipment, and competent personnel, whereby it can maintain the capability to perform satisfactorily the technical functions for which it has been assigned operational responsibility
- (3) Have a technical manager, however named, who is qualified in the operation and who has responsibility for ensuring that the specified criteria are met
- (4) Provide procedures for clear demarcation between testing/inspection activities conducted as part of the third-party certification program and any auxiliary or unrelated activities
- (5) Ensure that testing/inspection procedures are continuously coordinated with the administrative and other operating functions of the certification body
- (6) Have adequate security rules and measures for the protection of proprietary rights and confidential information
- (7) Place any part of the work to be subcontracted with an organization complying with these requirements

8.2 Records and Reports. As provided by the rules and procedures of the certification program, a testing/inspection body shall establish and maintain a record system in accordance with the requirements of the program. The body shall retain on record for an appropriate period all original observations, calculations and derived data, calibration records, and final reports. Records for each test shall contain sufficient information to permit satisfactory repetition of the test.

8.2.1 Reports on validation and audit testing and inspection carried out in respect to participants in the certification program shall include at least the following information:

- (1) Unique identification of the report (such as date or serial number), and a page number for each page of the report
- (2) Name and address of the participant under inspection or testing, or both
- (3) Identification and description of the test items
- (4) Identification and description of the participant's facilities, as applicable

(5) Identification of the test specifications, methods, and procedure

(6) Description of the sampling procedure, where relevant

(7) Any deviations, additions to, or exclusions from the test specification or inspection procedures, and any other information relevant to a specific test or inspection

(8) Measurements, examinations, and derived results, supported by tables, graphs, sketches, and photographs, as appropriate

(9) Names and titles of the persons having technical responsibility for the report, and the date of issue

8.2.2 The inspection/testing body shall afford the participants reasonable cooperation to enable them to monitor the performance of the inspection or test in relation to their contract.

8.3 Calibration

8.3.1 Measuring and testing equipment shall be calibrated, where appropriate, before being put into service, and thereafter according to an established program.

8.3.2 Where relevant, in-service testing equipment shall be subjected to checks between regular calibrations.

8.3.3 The testing/inspection body's program for calibrating its equipment shall be designed and operated so as to ensure that its measurements are traceable, where the concept is applicable, to the national standards of measurement maintained by the National Bureau of Standards and, where appropriate, to international standards of measurement specified by the International Committee of Weights and Measures. When the certification program does not require traceability to national or international standards, the testing/inspection body can be required to provide evidence of the correlation or accuracy of its test results.

8.3.4 Reference standards of measurement held by a testing/inspection body shall be used for calibration only.

8.3.5 Reference standards for measurements shall be calibrated by a competent organization that can provide traceability to a national or international standard of measurement.

8.3.6 Reference materials shall be traceable to national or international standard reference materials where possible.

8.4 Quality System

8.4.1 The testing laboratory shall operate an internal quality-assurance program appropriate to the type, range, and volume of work performed. The quality-assurance program shall be documented in a quality manual that is available for use by the laboratory staff. The quality manual shall be maintained by a respon-

sible member of the laboratory staff in such manner as to be both relevant and current.

8.4.2 A person or persons having responsibility for quality assurance within the laboratory shall be designated by the laboratory management and have direct access to top management of the laboratory.

8.4.3 The quality manual shall contain the following information:

- (1) Structure of the laboratory, which should be illustrated by organization charts, where appropriate
- (2) Operational and functional duties and services pertaining to quality, so that each person concerned will know the extent and the limits of her or his responsibility
- (3) General quality-assurance procedures
- (4) Quality-assurance procedures specific for each test, as appropriate
- (5) Proficiency testing, use of reference materials, and any other information that establishes the quality system, where appropriate
- (6) Satisfactory arrangements for feedback and corrective action whenever testing discrepancies are detected
- (7) Procedure for dealing with technical complaints

8.4.4 The quality system shall be systematically and periodically reviewed by or on behalf of management in order to assure the continued effectiveness of the arrangements, and corrective action initiated. Such reviews shall be recorded, together with details of any corrective action taken.

8.5 Staff

8.5.1 There shall be a job description for each technical position category that includes the necessary education, training, technical knowledge, and experience.

8.5.2 Information on the relevant qualifications, training, and experience of the technical staff shall be maintained by the laboratory.

8.5.3 Staff having responsibility for making initial recommendations for acceptance of producers' quality-assurance systems on products shall be qualified in the appropriate disciplines. Staff having responsibility for subsequent monitoring of a producer's quality control, if not professionally qualified, shall be supervised by qualified staff as a condition that such monitoring will have been properly conducted.

8.6 Testing and Measuring Equipment

8.6.1 The testing laboratory shall be furnished with or have access to all items of equipment required for correct performance of tests and measurements for which it is responsible.

8.6.2 All equipment shall be properly maintained to ensure protection from corrosion and other causes of deterioration. Instruction for a proper maintenance

procedure for those items of equipment that require periodic maintenance shall be available.

8.6.3 Any item of equipment that has been subjected to overloading or mishandling, that gives suspect results, or that has been shown by calibration or otherwise to be defective shall be taken out of service and clearly labeled until it has been shown by test or calibration to be performing its function satisfactorily.

8.6.4 Records shall be maintained for each major item of equipment.

8.6.4.1 Each record shall include the following information:

- (1) Name of the item of equipment
- (2) Manufacturer's name, type identification, and serial number
- (3) Date received and date placed in service
- (4) Current location, where appropriate
- (5) Details of maintenance

8.6.4.2 In the case of measuring equipment, the record shall also include the following:

- (1) Date of last calibration, and calibration reports
- (2) Maximum period of time between successful calibrations

8.6.5 A label or tag indicating the date of the last calibration and the due date of the next calibration should be attached to equipment requiring calibration.

8.7 Test Methods and Procedures

8.7.1 The testing laboratory shall have adequate documented instructions on the use and operation of all relevant equipment, on the handling and preparation of test items (where applicable), and on standard testing techniques, where the absence of such instructions could jeopardize the efficacy of the testing process. All instructions, standards, manuals, and reference data relevant to the work of the testing laboratory shall be maintained up-to-date and be readily available to the staff.

8.7.2 The testing laboratory shall use methods and procedures required by the specification against which the test items are to be tested. The specification shall be available to staff performing the test.

8.7.3 All manual calculation and data transfers shall be subject to appropriate checks.

8.7.4 When these results are derived by electronic data-processing techniques, the stability of the system shall be such that the accuracy of the results is not affected. This generally implies an ability to detect malfunctions in the hardware during program execution and to take appropriate action.

8.8 Environment

8.8.1 The environment in which the tests are undertaken shall not invalidate the test results or adversely affect the required accuracy of measurement. The

test premises shall be protected as required from excessive conditions, such as excessive temperature, dust, moisture, steam, vibration, electromagnetic disturbance, or interference, and shall be maintained accordingly. The premises shall have the equipment and energy sources needed for the testing. When the testing so requires, they shall be equipped with devices to monitor the environmental conditions.

8.8.2 Adequate measures shall be taken to ensure good housekeeping in the test laboratory.

8.9 Handling of Items to Be Tested

8.9.1 A system for identifying the samples or items

to be tested or calibrated shall be applied, either through documents or through marking to ensure that there can be no confusion regarding the identity of the samples or test items and the results of the measurements made.

8.9.2 At all stages of storage, handling and preparation for test, precautions shall be taken to prevent damage to the items (such as contamination, corrosion, or the application of stresses), any of which would invalidate the results. Any relevant instructions provided with the items shall be observed.

8.9.3 There shall be clear rules for the receipt, retention, and disposal of samples.

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American National Standards

The standard in this booklet is one of 8000 standards approved to date by the American National Standards Institute.

The Standards Institute provides the machinery for creating voluntary standards. It serves to eliminate duplication of standards activities and to weld conflicting standards into single, nationally accepted standards under the designation "American National Standards."

Each standard represents general agreement among maker, seller, and user groups as to the best current practice with regard to some specific problem. Thus the completed standards cut across the whole fabric of production, distribution, and consumption of goods and services. American National Standards, by reason of Institute procedures, reflect a national consensus of manufacturers, consumers, and scientific, technical, and professional organizations, and governmental agencies. The completed standards are used widely by industry and commerce and often by municipal, state, and federal governments.

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New York, N. Y. 10018



Standard Guide for Laboratory Accreditation Systems¹

This standard is issued under the fixed designation E 994; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

INTRODUCTION

Accreditation is a term frequently used in recognizing the technical capability of a laboratory. In general, accreditation is conferred on a laboratory which has undergone successful evaluation and which continues to conform to the requirements and criteria of an accreditor, for the areas of operation covered by the accreditation. This does not imply that only accredited laboratories are technically competent since not all laboratories seek or require accreditation. For that matter, accreditation may not be available because no accreditor exists in the area of operation of some laboratories. This guide identifies important features of laboratory accreditation systems where such exist, are under development, or are being contemplated. Laboratory accreditation systems should not be confused with product certification systems.

1. Scope

1.1 This guide identifies important features of systems which accredit testing laboratories, inspection bodies, or other organizations involved in testing, measuring, inspecting, and calibrating activities. For the sake of brevity, the term "laboratory" is used in this guide to represent testing laboratories, inspection bodies, or other organizations involved in testing, measuring, inspecting and calibrating activities.

1.2 This guide provides guidelines for the qualifications and selection of assessors, the conduct of on-site assessments, the implementation of proficiency testing, and the evaluation of laboratories leading to accreditation.

1.3 *This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of whoever uses this standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Applicable Document

2.1 E 548 Practice for Preparation of Criteria

for Use in the Evaluation of Testing Laboratories and Inspection Bodies²

3. Significance and Use

3.1 This guide is applicable where the systematic assessment of the competence of a laboratory by a user or other party takes place, even in situations where no formal accreditation is awarded. This guide is not intended to be used in direct contract agreements between accrediting bodies, assessors, or accredited laboratories.

3.2 This guide is written in general terms and therefore some sections may not be applicable for specific circumstances. The document addresses assessment practices of major concern for most situations.

4. Laboratory Accreditation System Features

4.1 A laboratory accreditation system should:

4.1.1 Have documentation defining the rules

¹ This guide is under the jurisdiction of ASTM Committee E-36 on Criteria for the Evaluation of Testing and Inspection on Agencies and is the direct responsibility of Subcommittee E 36.10 on Generic Criteria.

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² Annual Book of ASTM Standards, Vol 14.02.

and operations of the accreditation system including the requirements of any contractual arrangements between the accrediting body and the accredited laboratories, and for any assessor retained by the accrediting body on a contract basis.

4.1.2 Publish the accreditation criteria, evaluation procedures, and associated fees, if any, in a manner appropriate for the type of laboratories involved.

4.1.3 Have a policy and procedures to prevent accreditation from being misrepresented as product certification.

4.1.4 Specify the scope of accreditation in terms of specific tests, types of tests, products, or specifically delineated functions as defined by recognized standards.

4.1.5 Accredite laboratories on the basis of evaluation against published specific criteria having an adequate degree of specificity to relevant specific tests, specific types of tests, or specific products, as appropriate. The specific criteria should be formulated by organizations or persons possessing the necessary technical competence in the relevant testing.

4.1.6 Have documented evaluation procedures for initial and announced or unannounced follow-up assessments, with a means for ensuring the correction of identified deficiencies.

4.1.7 Assess laboratories through an on-site review using assessors, singly or in teams, who have expertise in the area of testing for which accreditation is sought. Assessment should include a written report from the assessors.

4.1.8 Assess laboratories through periodic proficiency testing, when feasible, in addition to on-site review.

4.1.9 Publish, as appropriate, a directory of laboratories it accredits showing the specific scope of each accreditation.

4.1.10 Have documented procedures for revoking accreditation from laboratories failing to comply with accreditation criteria.

4.1.11 Have impartial or independent appeals procedures to resolve disputes associated with accreditation, including policies and procedures designed to minimize conflicts of interest and assure that accreditation is based on recognized competence without bias.

4.1.12 Have a procedure that solicits and encourages feedback from participants in order to promote uniform implementation of these guidelines among accredited laboratories.

5. Assessors

5.1 *Qualifications of Assessors:*

5.1.1 Assessors should be technically competent to assess the operations of a laboratory in those specific tests, types of tests, or products, or other specifically delineated functions for which accreditation is sought. They should be able to communicate effectively, both in writing and orally, and have the combination of qualifications and experience necessary to enable them to function effectively as members of an assessing team, as lead assessors, or independently, as applicable.

5.1.2 Assessors should have undergone instruction to the extent necessary to ensure their competence in assessment techniques. As appropriate, the instructions should cover the rules, operation, and criteria of the accrediting body and procedures for questioning staff, examining and evaluating the laboratory, and reporting the results.

5.2. *Records of Assessors*—Accrediting bodies should maintain up-to-date records on the qualifications of assessors such as:

5.2.1 Name.

5.2.2 Educational qualifications and professional status.

5.2.3 Experience as assessor.

5.2.4 Work experience.

5.2.5 For assessors other than employees of the accrediting body, and position held and the organization in which employed, and

5.2.6 Date of most recent updating of record.

5.3 *Acceptability of Assessors:*

5.3.1 The accrediting body should have policy and procedures for minimizing conflict of interest in the assignment of assessors. Laboratories undergoing assessment should be given the right to appeal assigned assessors and request mutually agreeable alternates. For assessors other than employees of the accrediting body, the contractual arrangements between the accrediting body and such assessors should be defined.

5.3.2 The accrediting body (together with organizations providing assessors and the assessors themselves as appropriate) should review the qualifications of each assessor on a continuing basis and, in particular, prior to any given assessment exercise. Organizations providing assessors or the assessors themselves are responsible for supplying evidence of acceptability to the accrediting body.

5.3.2.1 Based on its own evaluation, the ac-

crediting body may extend or cancel the acceptability of an assessor, or require retraining or requalifications. Such evaluation shall be documented.

6. On-Site Assessments

6.1 *Definition and Purpose*—On-site assessments consist of visits to a laboratory by one or more specialist assessors to provide an accrediting body with relevant information concerning the capability of the laboratory to meet established criteria for accreditation.

6.2 *Assessors Responsibility*—An assessor should:

6.2.1 Assess (by interview, by observing tests being performed or arrangement of practical audit tests) the knowledge and technical competence of staff in the area of accreditation.

6.2.2 Examine critical aspects of the laboratory's equipment, facilities, calibrations, test procedures, sample handling and control, data preparation and reporting, and quality practices related to the specific test, calibrations, measurements, or inspections for which the laboratory seeks accreditation, and

6.2.3 Provide the accrediting body with pertinent information concerning the organization and operation of the laboratory which will enable the accrediting body to evaluate compliance with defined accreditation criteria.

6.3 *Preparing for an Assessment*—Before an on-site assessment is conducted the accrediting body should prepare a briefing document or checklist as a guide for assessors. It should typically include the information as supplied by the laboratory on various aspects of its operations, including as applicable:

6.3.1 Name and address of the laboratory, and the name of the key managers and supervisors.

6.3.2 List of the tests, types of tests, products, or specifically delineated functions as defined by recognized standards for which the laboratory is seeking accreditation.

6.3.3 Staff structure of the laboratory and relevant information on qualifications and experience of the supervisory staff.

6.3.4 General description of the laboratory's facilities for testing and related activities.

6.3.5 General information on the laboratory's quality control practices.

6.3.6 Full details of the test methods (test plans) used by the laboratory to perform the tests

listed in 6.3.2.

6.3.7 List of the major items of equipment used to perform the tests listed in 6.3.2 together with details on the calibration and standardization practices used.

6.3.8 Procedures used by the laboratory to evaluate and monitor the quality of its work.

6.3.9 Procedures used by the laboratory for sampling, identifying, handling, and tracking test specimens.

6.3.10 Procedures used by the laboratory for recording and retaining original test observations and calculations and the methods used for checking calculation and data transfer, and

6.3.11 Format used by the laboratory for reporting test results.

6.4 *Conducting an On-Site Assessment:*

6.4.1 It is usually helpful to begin an on-site assessment with an initial briefing interview with the involved senior staff of the laboratory and all members of the assessment team. This briefing and information exchange is to inform the laboratory's senior management of the team's objectives and methods of operation.

6.4.2 To provide uniformity, the assessment should be conducted with the aid of worksheets. The worksheets may take one of the following forms:

6.4.2.1 Brief list to serve as a reminder of the items to be covered during an assessment and over which the assessor is afforded great latitude in technical judgment.

6.4.2.2 Comprehensive checklist upon which the assessor verifies the presence or absence of some specific attribute, and

6.4.2.3 Checklists on which the assessor is expected to evaluate the laboratory's degree of compliance on the basis of a qualitative ranking.

6.4.3 The on-site assessment should be organized to cover the specific criteria of the accrediting body, and any other established requirements for accreditation. In general it should include a thorough examination of the laboratory's mode of operation from the time of sample receipt to a final test report. Equipment and records should be examined. Staff should be interviewed in order to gain a general assessment of their competency. If possible critical portions of test operations should be observed. Supervisors and managers should be interviewed regarding quality control practices. If inconsistencies between records, observations, and responses are detected it should

be determined whether such inconsistencies are symptomatic of the laboratory's operation.

6.4.4 It is valuable to conclude the on-site assessment with a briefing conference with the involved senior staff of the laboratory and all members of the assessment team. The assessor's preliminary report, notes, or worksheets should be reviewed and any observed and uncorrected deficiencies discussed. The assessor should leave with the laboratory a copy his preliminary report, notes, or worksheets if so designed, which will be used as the basis for the report he plans to file with the accrediting body.

6.5 *Assessor's Reports*—As soon as possible after an assessment the assessors should prepare and forward to the accrediting body completed worksheets and a written report summarizing the on-site visit. The assessor's report should:

6.5.1 Identify observed and uncorrected deficiencies relating to the accreditation criteria.

6.5.2 Identify the results of observed proficiency testing, if any, and

6.5.3 Give recommendations on specific tests or testing areas for which accreditation should or should not be granted, together with supporting reasons, for only those items which have been or should have been discussed with laboratory personnel as set forth in 6.4.4.

6.6 *Surveillance and Reassessments:*

6.6.1 After a laboratory is accredited, full or partial reassessments should be conducted at periodic intervals to ensure that the required standards of management and operation are maintained. The frequency of reassessment and whether such visits are announced or unannounced are a matter of policy to be established by the accrediting body.

6.6.2 Partial reassessments should be conducted whenever major changes occur in a laboratory which may affect the reliability of its services. Changes such as movement of involved senior staff, the location of the laboratory, the ownership of the laboratory, its functions, or the type and ranges of major equipment may be valid reasons for undertaking at least partial reassessment.

6.6.3 Further reassessments may be required if the laboratory seeks accreditation for additional tests.

7. Proficiency Testing

7.1 *Definition and Use of Proficiency Testing:*

7.1.1 Proficiency testing is a means of evalu-

ating the performance of a laboratory through actual tests performed. Proficiency testing may be used to give relevant comparison data to augment other evaluations to determine the acceptability of a laboratory for accreditation, or may be used as a go or no go criteria for accreditation.

7.1.2 An accrediting body should make every effort to utilize proficiency testing as part of its evaluation procedures. However, good performance in a particular proficiency test only indicates the ability of a laboratory to obtain reliable results at a particular point in time under given conditions for those tests involved. Proficiency testing should be augmented by on-site assessment to ensure that the same operating practice and quality assurances are applied under routine testing conditions.

7.1.3 Proficiency testing may not be practical in all cases because of cost, lack of uniform or characterized test specimens, statistical soundness, or the inability to transport test specimens. The importance of proficiency test results in the accreditation of a laboratory should be judged by the accrediting body.

7.2 *Types of Proficiency Testing:*

7.2.1 Several types of proficiency testing procedures have been used depending on the nature of the product, the test method, and the number of participants. Some of the procedures are:

7.2.1.1 *Reference Laboratory*—A basic reference laboratory, such as national standards laboratory, provides an audit package or sample which has been carefully measured. Such audit packages may be "radial," tailored to a particular laboratory, or "circular" with an audit package going to a number of laboratories, simultaneously or in succession. This type of proficiency testing is typically used in the operation of calibration programs.

7.2.1.2 *Group of Reference Laboratories*—When no single laboratory has national recognition for setting a national standard, the result from a group of laboratories may be used.

7.2.1.3 *Participant Laboratories*—If there is a sufficient number of participating laboratories the test results of all participants may be pooled to establish a target result for individual participants. In such cases it is important that pooled test results include only test data from laboratories known to follow the established test method.

7.2.1.4 *Split Sample*—This procedure makes use of samples of products which are routinely

tested. The sample, assumed to be homogeneous, is split into two parts, with the laboratory testing one part and a reference laboratory testing the other part. Typically, the reference laboratory tests its portion of the sample only occasionally.

7.2.1.5 Intra Laboratory Proficiency—Occasionally, split sample testing arrangements are used in establishing control charts at a laboratory. These charts are designed as an internal quality control which allows the laboratory to check its output frequently. Such measurements might be considered proficiency testing if an accrediting body requires the results to be compared occasionally with the performance of other laboratories.

7.3 Proficiency Testing System Design.

7.3.1 Procedures and Samples—The type of proficiency program and the nature of the samples to be used should be explicitly identified by the accrediting body, bearing in mind the specific aims of the program and various other relevant considerations which may be technical, practical or economic.

7.3.2 Selecting Samples for Test—The characteristics of the samples to be tested should be known and stable to the degree required for the purpose of the test. Satisfactory procedures for randomizing samples, as appropriate, should be employed.

7.3.3 Sample Handling—Documented procedures for proper identification and safeguarding of the samples (such as environment and shock protection) during procurement and shipment to the laboratories should be specified and implemented. If the samples must be returned to the accrediting body, requirements for this should also be specified.

7.3.4 Sample Preparation and Test—Specific directions should be given on how the laboratory is to treat the sample once it is received (such specification might well include environmental conditioning, and sample preparation for the actual test). The sample should be clearly identified and the test procedure to be used clearly specified to the laboratory.

7.3.5 Preparation and Communication of Results—Directions should be clearly given to the laboratory on the method of presentation of test data, including the parameters to be recorded and the layout required. Ideally, standardized data sheets for conveying results should be provided.

7.3.6 Analysis and Evaluation of Results—The accrediting body should specify the procedures it will use to analyze, compare and evaluate the test data. Such procedures should be based on accepted statistical principles. The detailed analysis may depend on the number of participants with more rigorous statistical procedures employed as the number of laboratories participating increases.

7.3.7 Action Based on Results—The accrediting body should have written procedures clearly defining its response to the different possible outcomes of a proficiency test. Proficiency test results are typically used as just one of several factors in evaluating the performance of a testing laboratory. Usually, such test results must be within a specific target range before a laboratory can be accredited. Where unsatisfactory performance is indicated, the accrediting body may identify particular areas of weakness in a laboratory's operations and suggest remedial action.

7.3.8 Reporting Results—The accrediting body should have a policy for reporting the results of proficiency testing. In general, laboratories want to receive feedback of their performance as soon as possible to determine how close their measurements were to target values and how well they performed compared to the group. Several methods exist for providing feedback. These include individual test reports prepared for each participant and issued after each test, or a collective overall report showing the performance of all participants. In the latter format, to retain anonymity, each laboratory is generally identified by a code number.

8. Questionnaires

8.1 Definition and Use of Questionnaires:

8.1.1 Questionnaires may be used for gathering information about a laboratory for the purpose of evaluation. A questionnaire may be part of an application which a laboratory completes when accreditation is requested, or it may be a stand-alone document especially tailored for the circumstances by the accrediting body once an application has been received.

8.1.2 The aim of questionnaires should be to elicit sufficient information upon which evaluation may be made without causing undue burden for written materials of questionable value. They should be designed so that short answers satisfy most questions.

8.1.3 Questionnaires alone can never serve as a replacement for an assessment conducted on-site. In order to improve efficiency, the information gathered from questionnaires should be used to prepare assessors for on-site visits.

9. Evaluation of Laboratories

9.1 *Technician Peer Evaluation:*

9.1.1 An accrediting body should use technical peers to evaluate the relevant information obtained which relates to a laboratory's performance. A technical peer is a person with extensive experience in the field of testing, in testing procedures, or in some other technical skill pertinent to the evaluation.

9.1.2 Technical peers may be used singularly or as part of a committee or team to review information from the following sources:

9.1.2.1 The assessor(s) formal report of the on-site visit to the laboratory.

9.1.2.2 Results of proficiency testing.

9.1.2.3 The application which has been completed by the laboratory and any other related information.

9.1.2.4 Information from questionnaires, and

9.1.2.5 Communication from the laboratory which describes steps taken to correct deficiencies which the assessor identified during the on-site visit.

NOTE—At this stage, the deficiencies identified by the assessor do not necessarily represent the authoritative opinion of the accrediting body.

9.1.3 If a technical committee is used it may be formed in various ways depending on the needs and policy of the accreditation system. Two possible committee configurations are:

9.1.3.1 A formal assembly of technical peers named to serve the accrediting body for a specified period of time, with formal rules and structure, or

9.1.3.2 An informal assembly of technical peers who are brought together on an ad hoc basis by the accrediting body to review the information and make recommendations.

9.1.4 Normally, a staff person acts as secretary to the committee, providing copies of the information, secretarial services, and the like. Members of the committee are often technical peers who are assessors for the accrediting body. Some committees may be divided into subcommittees to address particular technical specialties.

9.1.5 The recommendation of the technical

committee with a summary of technical findings is the basis upon which the accreditation decision is taken. Assessor(s) who have visited the laboratory as part of the assessing team are not normally included as members of the technical committee reviewing qualifications of that laboratory, although the assessor(s) may be asked to respond to questions of the technical committee to provide clarifying information.

9.1.6 When a technical committee includes members other than full time employees of the accrediting body, the accrediting body should have and implement rigorous procedures to safeguard the confidentiality and anonymity of the laboratory being evaluated.

10. Deciding on Accreditation

10.1 *Decision Mechanisms*—There are two ways in which the decision to accredit a laboratory may be reached, both similar in character but different in participation:

10.1.1 *Management Council*—The accreditation system may establish a management council composed of senior executives (public or private sector) which is responsible for granting accreditation. The council reviews the evaluation provided by the technical peer evaluators and decides to grant or deny accreditation. Except in cases which may prove to be controversial or difficult a council chairman may be empowered to act on behalf of the council.

10.1.2 *Accrediting Body*—The accrediting body itself may review the evaluation and decide upon accreditation.

10.2 In each case, if the decision is to deny accreditation to a laboratory, the management council or accrediting body should formally advise the laboratory of the deficiencies which must be corrected before accreditation can be granted. In practice, most deficiencies have already been eliminated, based upon the informal guidance of the assessor during the on-site visit.

10.3 A verification should be requested from the laboratory in the form of a letter stating how the deficiencies have been eliminated. In those instances where a deficiency is particularly crucial to the performance of a test, a visit or other form of verification may be necessary.

10.4 An accreditation system should have an appeal mechanism for cases where accreditation is denied. The appeal mechanism may involve a complete reassessment by different assessors or

may consist of a formal review of all actions taken. Policies and procedures designed to minimize conflicts of interest and assure that accreditation is based on recognized competence without bias should be in place.

11. Awarding Accreditation

11.1 *Type of Documentation:*

11.1.1 When a decision is made to accredit a laboratory, a formal accreditation document such as a letter or certificate should be prepared, signed by the appropriate officer, and transmitted to the laboratory.

11.1.2 The accreditation document should identify the laboratory by name and address and indicate the scope of the accreditation including a complete list of the test methods or other descriptors which specify precisely the testing or services for which accreditation is granted, as appropriate.

12. Notification of Accreditation

12.1 *Directory:*

12.1.1 If the accrediting body publishes a directory of accredited laboratories, the directory should identify each laboratory along with the terms of its accreditation expressed by a complete list of test methods or other descriptors which specify precisely the testing or services for which accreditation is granted.

12.1.2 The accrediting body should also specify to its accredited laboratories the limitations imposed on how they may publicize their accredited status, use their accreditation documents, and display any existing logo.

13. Significance of Accreditation

13.1 *Accreditation System Information*—In order for users of accredited laboratories to understand and appreciate the significance of ac-

creditation, the accreditation body should make the following information about itself available.

13.1.1 Title of the accreditation system.

13.1.2 Authority under which the system was established (governmental legislation, private sector initiative and the like) whether mandatory or voluntary, the data established and the source of funding for its operation.

13.1.3 Extent, nature, and limits of the system including the tests and types of tests for which it confers accreditation.

13.1.4 Publications of documentation concerning the accreditation system including promotional materials and directories of the laboratories it has accredited.

13.1.5 Fees charged to participants or users of the system.

13.1.6 Requirements, restrictions or limitations on the use of the system logo, if any, by accredited laboratories and users of laboratory services.

13.1.7 Criteria and procedures used for accrediting laboratories.

13.1.8 Assessment techniques employed including the rigor and frequency of assessment (questionnaires, announced or unannounced on-site reviews, random visits, proficiency testing, and the like).

13.1.9 Source and nature of assessors used, the authority that grants or recommends accreditation, and the duration for which accreditation is granted.

13.1.10 Appeal procedures available to laboratories for resolution of disputes associated with accreditation, and

13.1.11 Primary contact (name, address and phone number) who can process an application or in other ways respond knowledgeably to inquiries about the accreditation system.

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 1916 Race St., Philadelphia, Pa. 19103.

Chapter 296-402

ELECTRICAL TESTING LABORATORY ACCREDITATION

WAC

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WAC 296-402-010 FOREWORD. This chapter is promulgated in accordance with the provisions of chapter 19.28 RCW which covers electricians and electrical installations.

To qualify for certification as an approved electrical products testing laboratory, the criteria of this chapter shall be complied with.

WAC 296-402-020 PURPOSE AND SCOPE The purpose of this chapter is to provide recognition and accreditation of electrical products testing and certification laboratories for the state of Washington so the general consuming public can be assured that electrical products have been tested for safety and identified for their intended use.

Any electrical product, device, system, material or installation which is accepted, or classified, identified, or certified, or listed, or labeled by a Washington State accredited electrical products testing laboratory shall be deemed to have been successfully evaluated for safety.

WAC 296-402-030 DEFINITIONS. The definitions set forth in this section shall apply throughout this chapter.

- (1) "ANSI" means American National Standards Institute.
- (2) "Certified electrical product" means an electrical product that is certified under this chapter:

(a) To which a label, symbol, or other identifying mark of an approved testing laboratory has been attached to indicate that the manufacturer produced the product in compliance with appropriate standards or that the product performs in a specified manner.

(b) That is not decertified.

(3) "Certification mark" means a specified approved testing laboratory identification indicating that a certified electrical product has been manufactured in accordance with the requirements of appropriate standards or tested for specific end uses.

(4) "Certification program" means a specified set of testing, inspection, and quality assurance procedures, with appropriate implementing authority directed toward evaluating products for certification of compliance to the requirements of appropriate standards.

(5) "Department" means the department of labor and industries.

(6) "Labeled" means an electrical product to which a label, symbol, or other identifying mark of an approved laboratory is attached.

(7) "Laboratory operations control manual" means a document consisting of specified procedures and information for each test method responding to the application requirements of the product standard.

(8) "Quality control manual" means a document consisting of general guidelines for the quality control of the laboratory's method of operation. Specific information is provided for portions of individual test methods whenever specifics are needed to comply with the criteria or otherwise support the laboratory's operation.

WAC 296-402-040 ORGANIZATION. The laboratory shall be an independent, third-party testing and inspection organization with no organizational, managerial, or financial affiliation with manufacturers, suppliers, or vendors of products covered under its certification programs.

(1) The laboratory shall not be owned by manufacturers or vendors.

(2) The laboratory administration shall not be controlled by manufacturers or vendors.

(3) The laboratory shall be legally constituted and permitted to perform certification work.

(4) The laboratory shall not be engaged in the promotion or design of the product being evaluated, tested, or certified.

(5) The laboratory shall have sufficient diversity of clients or activity so that the loss or award of a specific contract regarding certification would not be a determinative factor in the financial well-being of the laboratory.

(6) The employment security status of the personnel of the laboratory shall be free of influence or control of manufacturers or vendors of products certified.

WAC 296-402-050 PROFESSIONAL AND ETHICAL BUSINESS PRACTICES. The laboratory shall be operated in accordance with generally accepted professional and ethical business practices and shall agree in writing that as a minimum it will be its policy to:

(1) Perform the examinations, tests, evaluations and inspections required under the certification programs in accordance with the designated standards and procedures.

(2) Assure that reported values accurately reflect measured data.

(3) Limit work to that for which competence and capacity are available.

(4) Treat test data, records, and reports as proprietary information.

(5) Respond and attempt to resolve complaints contesting test results and certifications.

(6) Be capable of performing all examinations, tests, evaluations, and inspections for certification programs for which it is approved according to the latest effective version of applicable safety standards as adopted by rule, and require that all certified products produced after the effective date comply with such standards.

(7) Maintain an independent relationship between its clients, affiliates, or other organizations, so that the laboratory's capacity to render test reports and certifications objectively and without bias is not adversely affected.

(8) Notify the department within thirty calendar days should it become unable to conform to any of these criteria.

WAC 296-402-060 QUALITY CONTROL SYSTEM. the laboratory shall maintain a quality control system to help assure the accuracy and technical integrity of its work as follows:

(1) The laboratory's quality control system must include a quality control manual or a laboratory operations control manual containing written procedures and information in response to the applicable requirements of the product standard. The procedures and information may be explicitly contained in the manual or may be referenced so that their location in the laboratory is clearly identified. The written procedures and information must be adequate to guide a testing technician and inspector in conducting the tests and inspections in accordance with the test methods and procedures required for the certification programs for which accreditation is sought.

(2) The laboratory shall have a current copy of its quality control manual available in the laboratory for use by laboratory personnel and shall make the manual available to the department for review and audit.

WAC 296-402-070 PERSONNEL. The laboratory shall be staffed by competent personnel who shall have the necessary education, training, technical knowledge, and experience for their assigned functions to perform the tests, examinations, reevaluations, and inspections for certification programs for which accreditation is sought.

(1) There shall be a job description for each senior technical position category.

(2) The laboratory shall assure the competency of its staff through the observation and/or examination of each relevant staff member in the performance of tests, examinations, and inspections that each member is assigned to perform. The observations must be conducted at intervals not exceeding one year by one or more individuals judged qualified by the person who has technical responsibility for the operation.

(3) The laboratory shall make available the description of its training program for assuring that new or untrained staff will be able to perform tests and inspections properly and uniformly to the requisite degree of precision and accuracy.

(4) The laboratory shall maintain records, including dates of the observation or examination of performance of personnel. Information on the relevant qualifications, training, and experience of the technical staff shall be maintained by the laboratory and shall be furnished to the department on request.

WAC 296-402-080 CALIBRATION — VERIFICATION AND MAINTENANCE OF FACILITIES AND EQUIPMENT. The laboratory shall provide evidence of the calibration, verification, and maintenance of the facilities and equipment specified for each test method for certification programs for which accreditation is sought by means of the following:

(1) A description of the procedures used in calibrating, verifying, and maintaining the test equipment and facilities, including as applicable:

(a) Calibration and verification equipment or services used.

(b) Reference standards and materials used.

(c) Measurement assurance, corroborative reference, or other programs in which the laboratory participates.

(d) Specified maintenance practices.

(2) Calibration and verification records, including as applicable:

(a) Equipment description or name.

(b) Name of manufacturer.

(c) Model, style, and serial number, or other identification.

(d) Equipment variables subject to calibration and verification.

(e) Statement of the instrument's allowable error and tolerances of readings.

(f) Calibration or verification schedule (intervals).

(g) Dates and results of last calibrations or verifications and schedule of future calibrations or verifications.

(h) Name of laboratory person or outside contractor providing the calibration or verification services.

(i) Traceability to National Bureau of Standards or other standard reference authority as required.

WAC 296-402-090 PLANS FOR CERTIFICATION PROGRAMS. The laboratory shall maintain plans for its certification programs for which accreditation is sought which shall include, as applicable, instructions for:

(1) Equipment maintenance and verification checks.

(2) Sample selection.

(3) Data collection, analysis, and reporting.

(4) Quality control checks and audits.

WAC 296-402-100 RECORDS. The laboratory shall maintain records and prepare reports of those testing, inspection, and certification activities associated with each program for which approval is sought. The laboratory shall make available to the department, upon request, a typical completed test or inspection report with the name of the client and source of any product deleted. Test and inspection reports shall contain, as applicable:

(1) Name and address of the laboratory.

(2) Pertinent data and identification of tests or inspections.

(3) Name of client.

(4) Description and identification of the sample including, as necessary, where and how the sample was selected.

(5) An appropriate title.

(6) Identification of the test, inspection, or procedure as specified for the certification program.

(7) Known deviations, additions to, or exclusions from testing, inspection, and certification activities in order to be appropriate to new or innovative products not contemplated by the standard.

(8) Measurements, examinations, derived results, and identification of test anomalies.

(9) If necessary, a statement as to whether or not the results comply with the requirements of the standard.

(10) Signature of person(s) having responsibility for the report.

(11) Data generated during testing if not included in the test report, such as raw and data, calculations, tables, graphs, sketches, and photographs, shall be maintained.

(12) Sample control forms documenting the receipt, handling, storage, shipping, and testing of samples or a written description of the procedures and separate records that are maintained to control these operations.

(13) The laboratory shall have copies of applicable standards and other documents referred to or used in performing each test or inspection for product certification for which approval is sought.

(14) The laboratory shall maintain records of its quality control checks and audits for monitoring its test work associated with its certification programs, including:

(a) Records of products assurance (follow-up) test results.

(b) Records of detected errors and discrepancies and actions taken subsequent to such detection.

(15) The laboratory shall maintain a record of written complaints and disposition thereof.

(16) The laboratory shall retain records required by these criteria for a minimum of three years.

WAC 296-402-110 PRODUCT CERTIFICATION PROGRAM. (1) General. The testing laboratory shall be approved only to certify those products identified by the laboratory in its application and as authorized by the department. The certification program shall contain the procedures and authority to ensure that the certified product complies with the standards (requirements) established by the program.

(2) Electrical product safety standard used. The standard used as the basis of the certification program shall be a state approved product safety standard that is determined to provide an adequate level of safety or define an adequate level of safety performance.

(a) Generally, such standards shall:

(i) Be recognized in the United States as an electrical product safety standard.

(ii) Be compatible with and be maintained current with periodic revisions of applicable national codes and installation standards.

(iii) Be developed by a standards developing organization under a method providing for input and consideration of views of industry groups, experts, users, consumers, and governmental authorities, and others having broad experience in the electrical products safety field.

(b) All ANSI safety designated electrical product standards are deemed acceptable without further qualification.

(c) If a testing laboratory desires to use a published standard other than an ANSI standard, the department shall evaluate the proposed standard to determine that it provides an adequate level of safety. If there exists an ANSI standard, or other published standard meeting the criteria of paragraph (a) of this subsection which has been recognized by the department for use in certification programs, the laboratory shall identify and justify all differences between the proposed standard and such ANSI standard or other standard previously recognized by the department.

(d) Where there is no published standard meeting the above cited criteria for the equipment under consideration, the department shall evaluate the proposed standard to determine that it provides an adequate level of safety. The laboratory shall identify and justify the adequacy of the standard or other specifications used as a source of requirements.

(e) The department shall review proposed standards to determine that they provide an adequate level of safety and shall present a recommendation concerning each proposed standard to the electrical advisory board at a regular or special board meeting for the board's approval.

(3) Evaluation of components. Components of certified products shall be evaluated for compliance with standards applicable to such components or found to be suitable for use in the product as stated in the end product standard.

(4) Certification agreement. Measures, such as the following, to provide for manufacturer compliance with the provisions of the product standard and laboratory control of the use of the certification mark shall be embodied in an agreement between the manufacturer and the testing laboratory:

(a) Require the manufacturer to provide such information and assistance as needed by the testing laboratory to conduct the necessary product conformity and production assurance evaluation.

(b) Require the manufacturer to provide the testing laboratory's representative access during working hours to the factory for inspection and audit activities without prior notice.

(c) Restrict the manufacturer to application of certification marks only to products that comply with requirements of the product standard.

(d) Secure the manufacturer's agreement to the publication of notice by the testing laboratory for any product already available in the marketplace that does not meet the safety standard.

(e) Whenever the standard covering the product is revised, require reevaluation of products as a condition of continued use of the certification mark.

(f) Provide for notification by the laboratory of the manufacturer's personnel responsible for and authorized to institute product recall in the case of a hazard.

(g) Provide for control of certification marks (or labels) by the testing laboratory.

(h) Require that the testing laboratory provide to the manufacturer a report of original product evaluation, which documents by test results and other data, when conformity with the applicable product standard is achieved.

(i) Require the manufacturer to provide the identification of the manufacturer or vendor of the product, and, if the product is produced in more than one location, the place of manufacture of the product.

(5) Identification of certified products. Certified products shall be labeled or marked with the certification mark of the approved testing laboratory.

(a) The certification mark shall:

(i) Be owned by the testing laboratory and be registered as a certification mark with the United States Patent and Trademark Office.

(ii) Not be readily transferable from one product to another.

(iii) Be directly applied to each unit of production in the form of labels or markings suitable for the environment and use of the product, except where the physical size of the unit does not permit, in which case markings may then be attached to the smallest package in which the unit is marketed.

(iv) Include the name or other appropriate identification of the testing laboratory.

(v) Include the product category where such is not completely obvious.

(6) Directory (list) of certified products. The testing laboratory shall publish annually a products directory to identify products that are authorized to bear the laboratory's certification mark (label). The products directory shall briefly describe the program, the products covered, the name of the manufacturer or vendor of the certified products, and the identification of the published standards or the compiled requirements on

which the program is based. The products directory shall be available to the public. Supplemental up-to-date information shall be publicly available at the office of the testing laboratory at any time during normal business hours.

(7) Original conformance (engineering) evaluation. Prior to authorizing the use of a certification mark on a product, the testing laboratory shall:

(a) Determine by examination and/or tests that representative samples of the product comply with the requirements (standards). Components of certified products shall also be required to comply with the safety standards (requirements) applicable to such components or found to be suitable for use as stated in the end product standard. Evaluation of the product design shall be made on representative production samples or on prototype product samples with subsequent verification that factory productions are the same as the prototype.

(b) Determine that the manufacturer has the necessary facilities, test equipment, and control procedures to ensure that continuing production of the product complies with the requirements.

WAC 296-402-120 PRODUCT ASSURANCE (FOLLOW-UP) ACTIVITIES. (1) General. Concurrent with and subsequent to authorizing the manufacturer to use the testing laboratory's certification mark, the testing laboratory shall establish a factory follow-up inspection program to determine continued compliance of certified products with the applicable standard.

(2) Follow-up inspection manual. The testing laboratory shall prepare and utilize an inspection manual setting forth the conditions governing the use of the certification mark on the products. The inspection manual shall include the identification of the products authorized for certification; identification of manufacturer and plant location at which manufacture and certification are authorized; description, specifications, and requirements applicable to the product; description of countercheck tests to be conducted in the laboratory; and description of the form and means of applying the certification mark.

(3) Follow-up procedures and activities. Follow-up procedures and activities shall include the following:

(a) Periodic unannounced inspections at the factory with testing at the factory or testing laboratory of representative samples selected from production and, if appropriate, from the market.

(b) Periodic auditing or surveillance of the manufacturer's quality assurance program through the witnessing of manufacturer's tests, review of the manufacturer's records, and verification of the manufacturer's produced data.

(c) Investigation of alleged field failures upon department request.

(d) Procedures for control of the use of the certification mark by:

(i) Keeping records of the release and use of certification marks.

(ii) Removal of marks from noncomplying products.

(iii) Return or destruction of unused marks when the authority to use the marks is terminated.

(iv) Legal action.

(e) Frequency of follow-up. The frequency of follow-up inspections shall be sufficient to provide a reasonable check on the means which the manufacturer exercises to assure that the product bearing the certification mark complies with the applicable standards. The frequency shall not be less than once each three months, unless adequate data is provided to the department to justify less frequent inspections.

WAC 296-402-130 LABORATORY APPROVAL PROGRAM IMPLEMENTATION. (1) The department may establish a standing committee for the purpose of recommending action regarding approval of electrical testing laboratories, and reviewing of applications, non-ANSI standards, and other technical criteria.

(2) The department shall develop forms and procedures which will enable applicants to submit the data necessary for evaluation.

(3) The department may waive on-site inspection for a testing laboratory showing evidence of current recognition by another state determined to provide an accreditation program acceptable to the department.

WAC 296-402-140 INITIAL LABORATORY EVALUATION. (1) The department shall:

(a) Accept requests for testing laboratory certification.

(b) Make an administrative review to ensure completeness and accuracy of information.

(c) Review the request.

(d) Arrange for laboratory on-site inspection by a technically qualified representative of the department to evaluate compliance with accreditation criteria. The cost shall be borne by the applicant.

(2) Notification of evaluation and evaluation results. The department shall notify the applicant of the recommendation of the department and time and place of the hearing to consider the request.

(3) Fees. There shall be an initial filing fee accompanying the application, an initial accreditation fee, and a biennial renewal fee as established from time to time by the department. Evaluation costs including travel expenses, and any additional related expenses shall be borne by the laboratory. On-site inspections requiring fees, shall not be made more than once a year, unless additional inspections are required by the department or requested by the laboratory.

Initial filing fee	\$500.00
Initial accreditation fee:	
One product category	\$250.00
Each additional category for next nineteen categories	\$100.00 each
Maximum for twenty categories or more	\$2150.00
Biennial renewal fee	50% of the amount of the initial accreditation fee

(4) Number and category. Each accredited testing laboratory shall be identified by the number of electrical product category(ies) that the department has determined the laboratory is qualified to evaluate. The accreditation shall indicate the electrical product category(ies) for which accreditation is issued.

(5) Approval. The department shall accept or deny laboratory approval. Such approval shall be subject to reexamination when deemed necessary by the department.

(6) Appeal. If an applicant disagrees with the action of the department regarding accreditation or qualifications, an appeal may be made to the electrical advisory board within thirty days of the notice by the department.

WAC 296-402-150 RENEWALS. (1) At least thirty days prior to the expiration date of any such accreditation, the electrical testing laboratory shall forward to the department an application for renewal. The department, upon receipt of the completed form and fee, shall renew accreditation for a period of two years or notify such applicant of the department's refusal with reasons thereof. Accreditation may be renewed for one or more electrical product category(ies) and renewal may be refused for one or more electrical product category(ies).

(2) Appeal. If an applicant disagrees with the action of the department regarding accreditation or electrical product category(ies), an appeal may be made to the electrical advisory board within thirty days of the notice by the department.

WAC 296-402-160 CONDITIONS OF ACCREDITATION. (1) Evidence of accreditation. The accreditation of any testing laboratory shall be evidenced by a letter of accreditation from the department.

(2) Period of accreditation. The accreditation of a testing laboratory shall be valid for a period of two years from the date of acceptance by the department. The period of validity shall be stated in the letter of accreditation.

(3) Maintenance of qualifying conditions. Every accredited testing laboratory shall continue to satisfy all the conditions specified in this chapter during the period of the accreditation.

(4) Reports. The accredited laboratory shall furnish the department an annual report detailing the extent of its activities for the year, and covering the products which it has certified during the year. The report shall include information concerning:

- (a) The number of factory inspections.
- (b) List of certified products.

WAC 296-402-170 PENALTIES. Any person and/or laboratory that fails to comply with the requirements of these rules and regulations or that files a false report may have accreditation revoked for one or more electrical product category(ies) and shall bear such cost which may accrue to the department or its agent(s) as a result of the violation. A laboratory whose accreditation has been revoked may apply again for accreditation no sooner than one year after the date of revocation of accreditation.

WAC 296-402-180 NOTIFICATION OF CHANGE. Testing laboratories accredited under these rules and regulations shall notify the department within thirty working days of any of the following:

- (1) Change in company name and/or address.
- (2) Changes in major test equipment.
- (3) Changes in principal officers, key supervisory and responsible personnel in the company including the director of testing and engineering services, director of follow-up services, and the laboratory supervisor.
- (4) Change in the standard(s) covering the certified product(s).
- (5) Change in independent status.

WAC 296-402-190 REVOCATION AND SUSPENSION PROCEDURES. (1) Revocation and suspension. The department on its own initiative may suspend or revoke the accreditation of any testing laboratory found to be in noncompliance with these rules and regulations, the laws of the state of Washington, or having substantial evidence of the laboratory's conduct in unethical business practices.

(2) Notice and conference. Prior to suspension, revocation, or failure to renew the accreditation of a laboratory, written notice of such intent shall be served by registered mail by the department. Within ten calendar days of receipt of such notice, the affected laboratory may request a conference before the department. Should the electrical testing laboratory disagree with the decision of the department, an appeal may be made to the Electrical Advisory Board. Direct an appeal to Chairman, Electrical Advisory Board, 520 South Water Street, P.O. Box 9519, Olympia, Washington, 98504.

(3) Effect of suspension and revocation. If the accreditation is suspended, revoked, or not renewed, the laboratory shall immediately notify the involved manufacturers whose products are covered by the accreditation that such products manufactured subsequent to the revocation and offered for sale in the state of Washington can no longer bear the laboratory's label that identified it as a certified product.

6-1823E ✓
Bannister
2/6/90

Original sponsor(s): REP. COTTEN

1 IN THE HOUSE

BY THE LABOR & COMMERCE COMMITTEE

2 CS FOR HOUSE BILL NO. 406 (L&C)

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 SIXTEENTH LEGISLATURE - SECOND SESSION

5 A BILL

6 For an Act entitled: "An Act relating to the sale or transfer of consumer
7 electrical products."

8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

9 * Section 1. AS 45.45 is amended by adding a new section to read:

10 Sec. 45.45.910. SALE OR TRANSFER OF CONSUMER ELECTRICAL PROD-
11 UCTS. (a) Unless exempted by the department under (d) of this sec-
12 tion, a person may not sell, offer to sell, or otherwise transfer in
13 the course of the person's business a consumer electrical product that
14 is manufactured after the effective date of this Act, unless the
15 product is clearly marked as being approved by an approved third-party
16 certification program.

17 (b) A person may not sell, offer to sell, or otherwise transfer
18 in the course of the person's business a consumer electrical product
19 that is manufactured before the effective date of this Act, unless the
20 product is clearly marked

21 (1) as being approved by an approved third-party certifica-
22 tion program; or

23 (2) with a warning label that complies with (e) of this
24 section.

25 (c) A person may not sell, offer to sell, or otherwise transfer
26 in the course of the person's business a consumer electrical product
27 that has been exempted under (d) of this section, unless the product
28 is clearly marked with a warning label that complies with (e) of this
29 section.

1 (d) If a consumer electrical product is a work of art or an item
2 that has an unusual application that makes approval by a third-party
3 certification program unavailable, the department shall upon request
4 exempt the item from (a) of this section. The department shall estab-
5 lish by regulation guidelines to identify consumer electrical products
6 that qualify for an exemption under this section.

7 (e) The warning label required by this section must be a bright-
8 ly colored label that contains in simple, direct language a warning
9 that the electrical product is not approved by an approved third-party
10 certification program. The department shall adopt regulations estab-
11 lishing the exact content, color, design, and use of the warning
12 label.

13 (f) In this section,

14 (1) "approved third-party certification program" means a
15 program that meets the requirements of ANSI Z-34.1 - 1987, American
16 National Standards for Certification - Third-Party Certification
17 Program, published by the American National Standards Institute;

18 (2) "consumer electrical product" means an electrical
19 product that is marketed for and commonly purchased by the general
20 public and that is

21 (A) an assembled device that has an electrical circuit
22 that operates at 110 volts AC or higher;

23 (B) a device that when assembled has an electrical
24 circuit that operates at 110 volts AC or higher; or

25 (C) an individual component part that is intended to
26 be part of an electrical circuit that operates at 110 volts AC or
27 higher;

28 (3) "department" means the Department of Labor.

29 * Sec. 2. AS 45.50.471(b) is amended by adding a new paragraph to read:

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(29) violating AS 45.45.910(a), (b), or (c).

Original sponsor(s): REP. COTTEN

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IN THE HOUSE BY THE LABOR & COMMERCE COMMITTEE
CS FOR HOUSE BILL NO. 406 (L&C)
IN THE LEGISLATURE OF THE STATE OF ALASKA
SIXTEENTH LEGISLATURE - SECOND SESSION
A BILL

For an Act entitled: "An Act relating to the sale of consumer electrical products."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 45.50.471(b) is amended by adding a new paragraph to read:

(29) selling or offering to sell a consumer electrical product that is not listed by an approved third-party certification program or that is not clearly marked as being approved by the program; in this paragraph,

(A) "approved third party certification program" means a program that meets the requirements of ANSI C-34.1 - 1987, American National Standards for Certification, Third Party Certification Program, published by the American National Standards Institute;

(B) "consumer electrical product" means an electrical product that uses as its original power source 110 volt AC or higher and that is marketed for and commonly purchased by the general public.