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FAX TRANSMISSION

To: Docket Management Facility

From: Philip T. Laudicina

Fax Number: 202 - 493 - 2251

Date: July 6, 2000

Attention: **USCG-1999-6096 - 37**

SUBJECT: 46 CFR PARTS 110 AND 111 - MARINE SHIPBOARD ELECTRICAL CABLE STANDARDS

Gentlemen,

Attached you will find a copy of the UL Publication titled "Method of Development and Implementation of UL Standards for Safety. This publication describes the process of how UL 1309 was written. It is important to note that UL 1309 is also CSA C22.2 No. 245 and is a binational standard. Therefore, the standard was developed using the UL process as well as the process used by CSA. It was stated at the June 28th meeting by Mr. Jeff Eby that only individuals in Canada were permitted to "vote" on the standard. This is the process CSA uses in their Standards development. Voting is not part of the UL standard development process and all interested parties are invited to comment on all proposals.

Sincerely,

Reviewed by:

PHILIP T. LAUDICINA (Ext. 22231)
Staff Engineer
Conformity Assessment Services

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Senior Staff Engineer
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NUMBER OF PAGES INCLUDING THIS COVER SHEET: 24

METHOD OF DEVELOPMENT, REVISION AND IMPLEMENTATION OF UL STANDARDS FOR SAFETY



Underwriters Laboratories Inc. ®
An independent laboratory testing for public safety.

METHOD OF DEVELOPMENT, REVISION AND IMPLEMENTATION OF UNDERWRITERS LABORATORIES' STANDARDS FOR SAFETY

INTRODUCTION:

The principal business of Underwriters Laboratories Inc. (UL) is to evaluate electrical and mechanical products, building materials, construction systems, fire protection equipment, and marine products, to determine that their design provides for the reduction of the risk of injury to persons and damage to property incident to their use; to identify such products correctly through a system of marking that permits their recognition by consumers, authorities having jurisdiction, and others; and to establish conformance of the products with applicable requirements, through contractual arrangements with manufacturers for UL's audit of production. UL's Standards for Safety play an important part in UL's process of evaluation, identification, and audit.

Unlike those of most other standards-developing organizations, UL's Standards and requirements represent the basis upon which UL's registered marking may be affixed to complying products by subscribers to UL's services. Accordingly, UL must be careful that its Standards provide a reduction of risk acceptable for the using public.

Thus manufacturers, consumers, individuals associated with consumer-oriented organizations, academicians, government officials, industrial and commercial users, inspection authorities, insurance interests, and others provide input to UL in formulating UL Standards of Safety and keeping them consonant with social and technological changes. However, participation in the development of a Standard by a representative of a government body does not imply endorsement of the Standard by that body.

INITIAL EVALUATION:

UL's evaluation of new product or system usually precedes the publication of a product or system safety Standard (hereinafter referred to as a "Product Safety Standard" or a "Standard"). When the first submittal of a new product is received, UL's engineers draw upon their cumulative experience and upon appropriate safety requirements already included in existing Standards of UL and of other organizations, both national and international. UL's engineers then devise and apply criteria suitable for judging the product.

In cases in which the product or its method of evaluation is likely to be extremely complex or controversial, UL may work with an Industry Advisory Group¹ (IAG) to develop tentative requirements prior to actual establishment of Listing, Classification,

¹ See Page 12 for a definition of this group.

Recognition, or Certificate Service by UL.² Prospective submitters may, upon presentation of essential product submittal information, obtain information as to the tentative requirements to be used by UL in evaluating a similar type of product.

The evaluation that results in the first Listing, Classification, Recognition or Certificate Service in a new product category becomes the basis for the requirements to be met in subsequent submittals of products in similar categories. After there has been an opportunity for field experience and feedback to occur, such information is used in judging the adequacy of these requirements and in establishing criteria that can be used as the basis for a draft of a Proposed Product Safety Standard.

CHOICE OF METHOD OF DEVELOPMENT:

When deciding to develop a new Standard or a new edition of an existing Standard, UL must also decide how the Standard will be developed. Following UL's basic policy of submitting UL Standards for recognition as American National Standards, UL subjects a new Standard or new edition of an existing Standard to the procedures of the American National Standards Institute (ANSI) to determine its acceptability as an American National Standard. UL may choose to use ANSI's Accredited Organization Method (outlined in the Appendix); or may choose the development procedure illustrated in Chart 1 followed by ANSI's Canvass Method as illustrated in Chart 2. Both methods afford due process to all those who will be affected by the Standard; and both methods develop evidence of a consensus.

NOTICE TO PUBLIC OF INTENT:

UL announces the intent to develop a Standard by sending a press release, including some details about the scope of the Standard, to publications likely to be seen by those having a substantial interest in the subject of the Standard. These publications include ANSI's STANDARDS ACTION, trade journals, government publications, and other publications, as appropriate. The press release invites those interested in participating in the work by correspondence to contact UL and volunteer to do so. The names and addresses of those who respond are placed on a mailing list for use when drafts of the Standard are available for review and comment.

OPEN STANDARDS DEVELOPMENT ACTIVITIES:

UL's standards-development activities are open to participation by persons from the many diverse interests that may be involved, and by the general public, not only when the Accredited Organization Method outlined in the Appendix is followed, but also when the more often used procedure illustrated in Chart 1 followed by the Canvass Method is employed.

² See page 20 for "Services Available from UL."

Development of a Standard usually starts when UL appoints a working group of representatives of industry known as an Industry Advisory Conference³ (IAC) or Industry Advisory Group, as previously mentioned. This group works with UL engineers who have knowledge and experience in the products category, and is responsible for screening and reviewing the initial draft. In most cases, the initial draft of requirements proposed by UL engineers is based on (1) the requirements that UL has applied in evaluating products previously investigated by UL in the category, (2) reported field experience with the product, (3) a survey of known Standards in the product category, and (4) compatibility with applicable nationally recognized installation and use codes.

Following discussion with the IAC or IAG, the draft, which will be modified if necessary or desirable, is circulated for review and comment to the appropriate Engineering Council(s)⁴ of UL, to concerned government agencies not represented on such Council(s), to manufacturers who subscribe to UL's Standard Revision service for the appropriate Standard, and to those on the appropriate UL Open Forum List.⁵ If the draft covers a product used by consumers, it is circulated to the Consumer Advisory Council of UL,⁶ to the Conference of Technical Users of Consumer Products of UL,⁶ or to both. If the draft covers a product used by industrial or commercial groups, it is circulated to the appropriate Commercial and Industrial Equipment Users Conference of UL,⁶ to the Conference of Technical Users of Consumer Products of UL, or to both. The openness of the procedure - the opportunity it affords for parties of diversified interests who may be affected by or are interested in the new requirements to review and comment on them - is illustrated in Charts 1 and 2.

An Ad Hoc Standards Development Committee may be formed as necessary to resolve problem areas that may arise during standards development. The Committee may include concerned interests who have not otherwise participated.

After receipt of comments and suggestions from all these sources, UL makes such modifications or revisions in the draft as appear to be proper, necessary, or desirable. If technical changes are involved, a revised draft is prepared and is again submitted to all who have participated in the development of the Standard for additional comments and suggestions. Additional meetings with the IAC or IAG may be required at this point.

After all comments have been considered and satisfactorily resolved or answered, and after any necessary changes have been made, the draft is issued as a published Standard of Safety of UL. The published Standard is made available to manufacturers, inspection authorities, insurance interests, and others who are concerned with the subject matter of the Standard.

³ See Page 12 for a definition of this group.

⁴ See Page 12 for a definition of this group.

⁵ See Page 13 for a definition of this group.

⁶ See Page 12 for a definition of this group.

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CHART 1
UL'S STANDARDS DEVELOPMENT METHOD
(New Standards and Revision of Existing Standards)

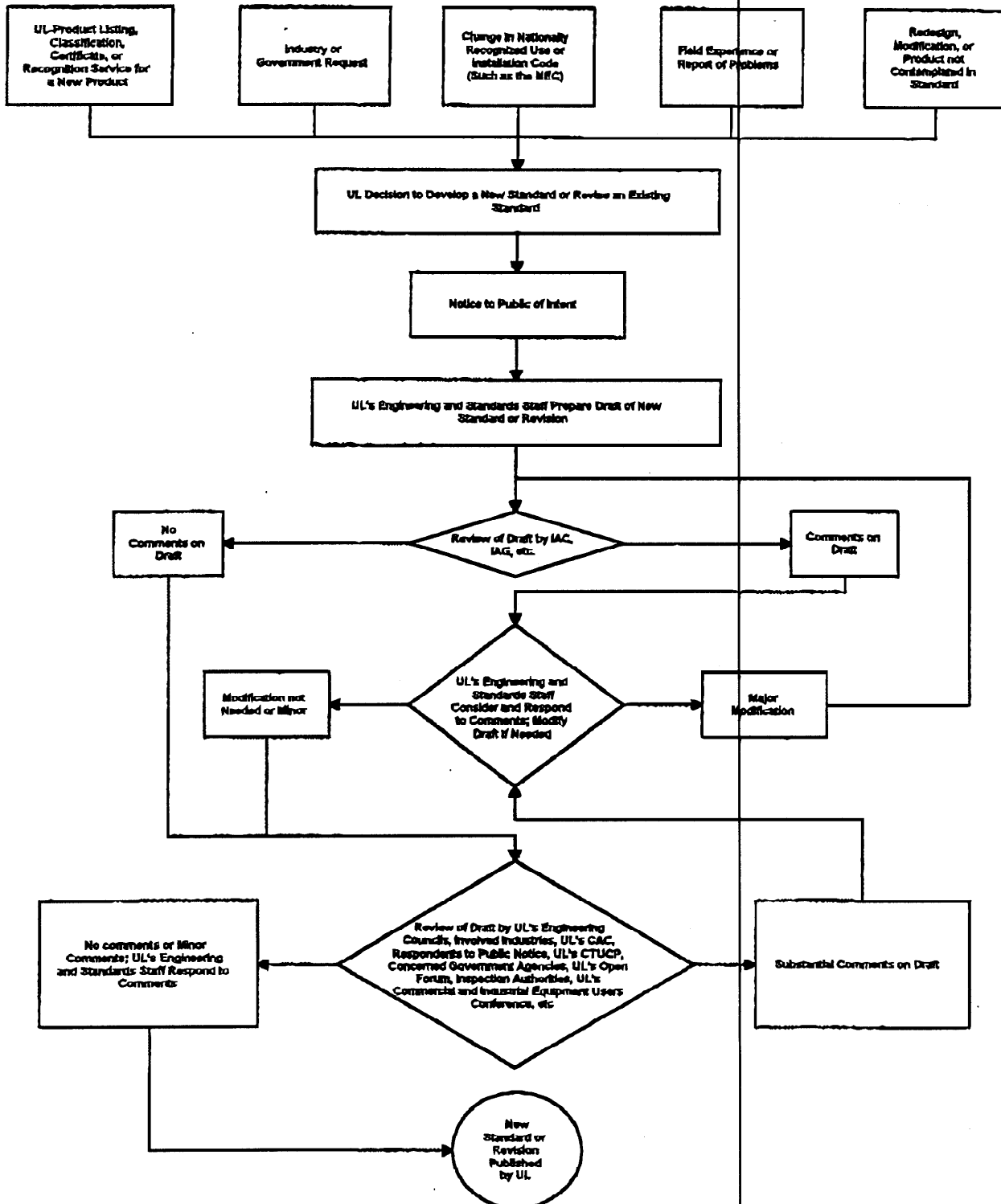
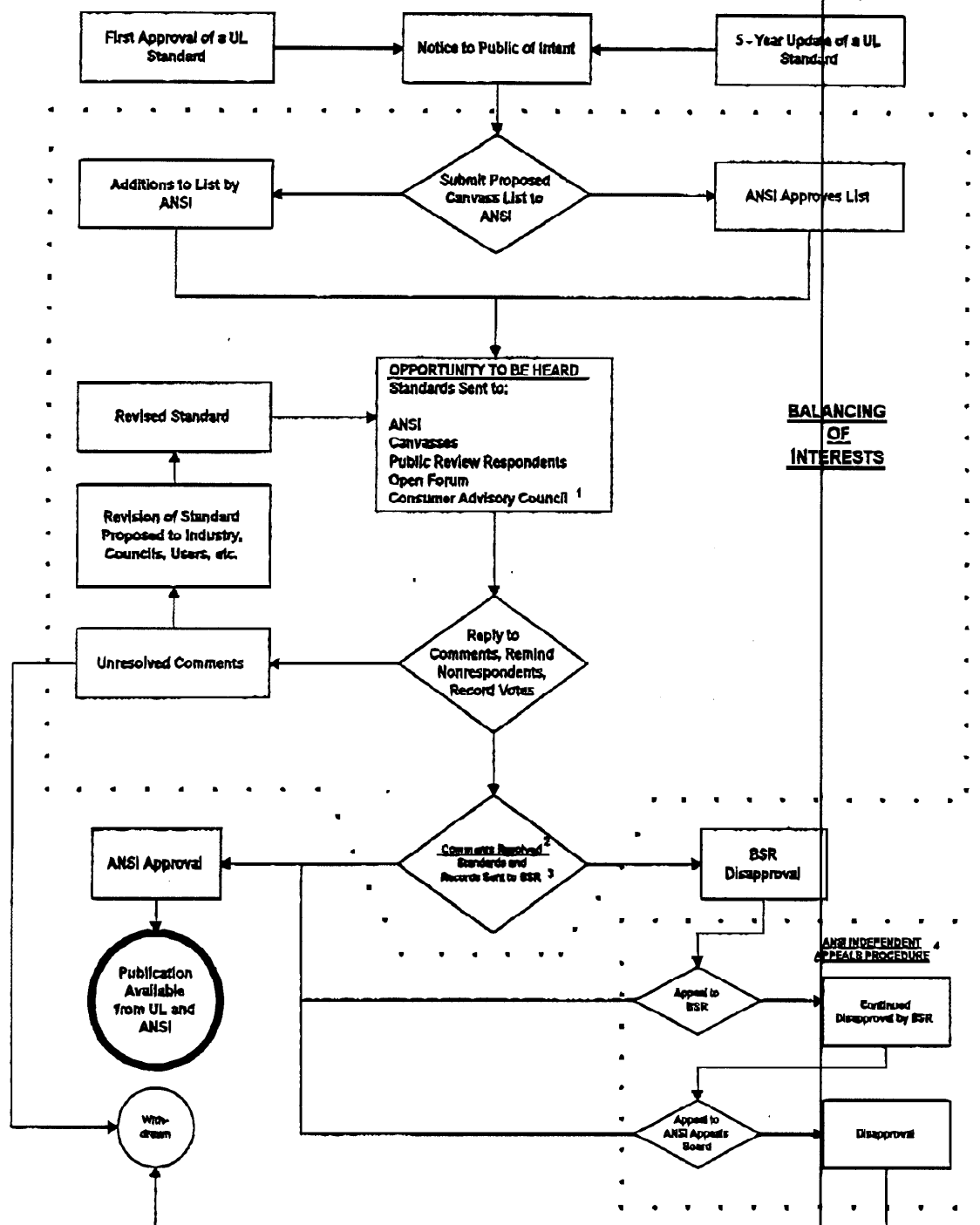


CHART 2

OPEN STANDARDS DEVELOPMENT ACTIVITIES

(Canvass Method for ANSI Approval of UL Standards)



1. Consumer or Product Standards Only.
2. Can Be Sent to BSR with Unresolved Comments Under Certain Conditions.

3. ANSI Board of Standards Review.
4. See Chart 3 for "UL's APPEALS MECHANISMS."

BALANCING OF INTERESTS:

UL Standards for Safety are developed under procedures that provide for participation, review, and comment from industry, government, insurance groups, consumers, other interested parties, and the general public. These procedures take into consideration the needs and opinions of a wide variety of interests concerned with the subject of the Standard and afford due process to all those who will be affected by the Standard.

A UL Standard for Safety developed by means of the Accredited Organization Method is developed through the use of a committee balanced among diverse interests in accordance with ANSI procedures. The final draft is submitted to UL's Standards Review Council⁷ (UL-SRC), which determines if (1) the procedures for development have been followed, (2) a high degree of acceptance has been achieved, and (3) all comments have been considered and satisfactorily resolved or answered. It is then submitted to ANSI's Board of Standards Review as outlined in the Appendix.

Using the ANSI Canvass Method, UL circulates a Standard to a balanced list of organizations and other known to have substantial concern with the subject of the Standard, such as users, producers, distributors, retailers, regulatory bodies, insurance interests, and utilities. The votes of those canvassed are used to develop evidence of a consensus on which approval as an American National Standard is based. ANSI defines consensus as "substantial agreement reached by concerned interests according to the judgement of a duly appointed authority, after a concerted attempt at resolving objections. Consensus implies much more than the concept of a simple majority but not necessarily unanimity."

When the Canvass Method is used and the time to arrive at a consensus is short, a public meeting of the canvasees may be called. The canvasees consider and discuss the proposed Standard before casting their votes. Those not present may cast written ballots.

Even before a UL standard for Safety has been submitted to ANSI using the Canvass Method, the needs and opinions of a wide variety of interests concerned with the subject of the Standard have been considered. In addition to considering the comments of those who expressed a desire to participate by responding to the public notice that a Standard would be developed, UL routinely solicits and considers comments from its Engineering Councils, Open Forum, Conference of Technical Users of Consumer Products, and Consumer Advisory Council or Commercial and Industrial Equipment Users Council.

⁷ See page 13 for a definition of this group.

OPPORTUNITY TO BE HEARD:

The opportunity for all interested parties to be heard exists in all UL methods of developing Standards for Safety. The purpose of the UL-SRC (employed under the Accredited Organization Method outlined in the Appendix) is to determine, among other matters as previously mentioned, if all comments have been considered and satisfactorily resolved or answered. Selection of members of the UL-SRC is balanced as described in the definition on page 13. One of the duties of ANSI's Board of Standards Review, under both methods of standards development, is to determine that all substantially concerned parties have had an opportunity to express their views and that these views have been carefully considered. Even before a UL Standard is processed through ANSI, UL systematically involves a wide variety of interests and viewpoints by public announcement of the intent to develop the Standard, and by exposure to UL's Councils and other groups as mentioned earlier. Every comment received is carefully considered.

RECORDS - MAINTAINED AND ACCESSIBLE:

UL maintains records of votes cast in processing its Standards through ANSI under both the Accredited Organization Method and the Canvass Method; and of votes cast by its Consumer Advisory Council. When an agency of the Federal Government selects UL to develop a Safety Standard, UL maintains such records as the agency specifies. Records summarizing discussions at meetings are published and are distributed to all who subscribe to UL's service in the product category, to the appropriate Engineering Council(s), and to other interested parties. All these records are maintained by UL and are accessible to all interested parties.

APPEALS MECHANISMS:

As previously noted (both in the text and in the charts), all comments, complaints, and requests for interpretations received during the development of a UL Standard for Safety are considered, and are either resolved or answered in detail. UL's operating procedures contain, as an essential part, the right to appeal any decision, including a decision dealing with comments, complaints, and interpretations regarding UL's Standards for Safety and their development.

This right to appeal exists through each successively higher level of authority in UL's supervisory chain up to and including the office of the President. See Chart 3. If, at this point, differences still exist relative to technical or engineering interpretations, ways and means are available for referring the problem, particularly a problem pertaining to installation, to one of UL's Engineering Councils for advice.

If a disagreement involves a method of measurement of the interpretation of test results, the question may be referred to the National Institute of Standards and Technology (NIST) provided that, in the opinion of NIST, the importance of the case justifies its consideration by NIST, and the parties involved agree in writing to accept and abide by the finding of NIST. Any costs involved in such an appeal are borne by UL and the party appealing a decision. See Chart 3.

To serve as a supplement, but not as a replacement, for the other appeals mechanisms, there is also available the "Technical Appeals Board (TAB)"^a of UL. The specific purpose of the TAB is to serve as an advisory body to consider matters of technical substance, but not matters of policy, about which any party and UL may hold an unresolved difference of opinion. The TAB serves as a body to which the views of UL and the party appealing a UL decision may be submitted. See Chart 3. This method of resolving a difference of opinion is used only after all other administrative appeals channels in UL have been exhausted.

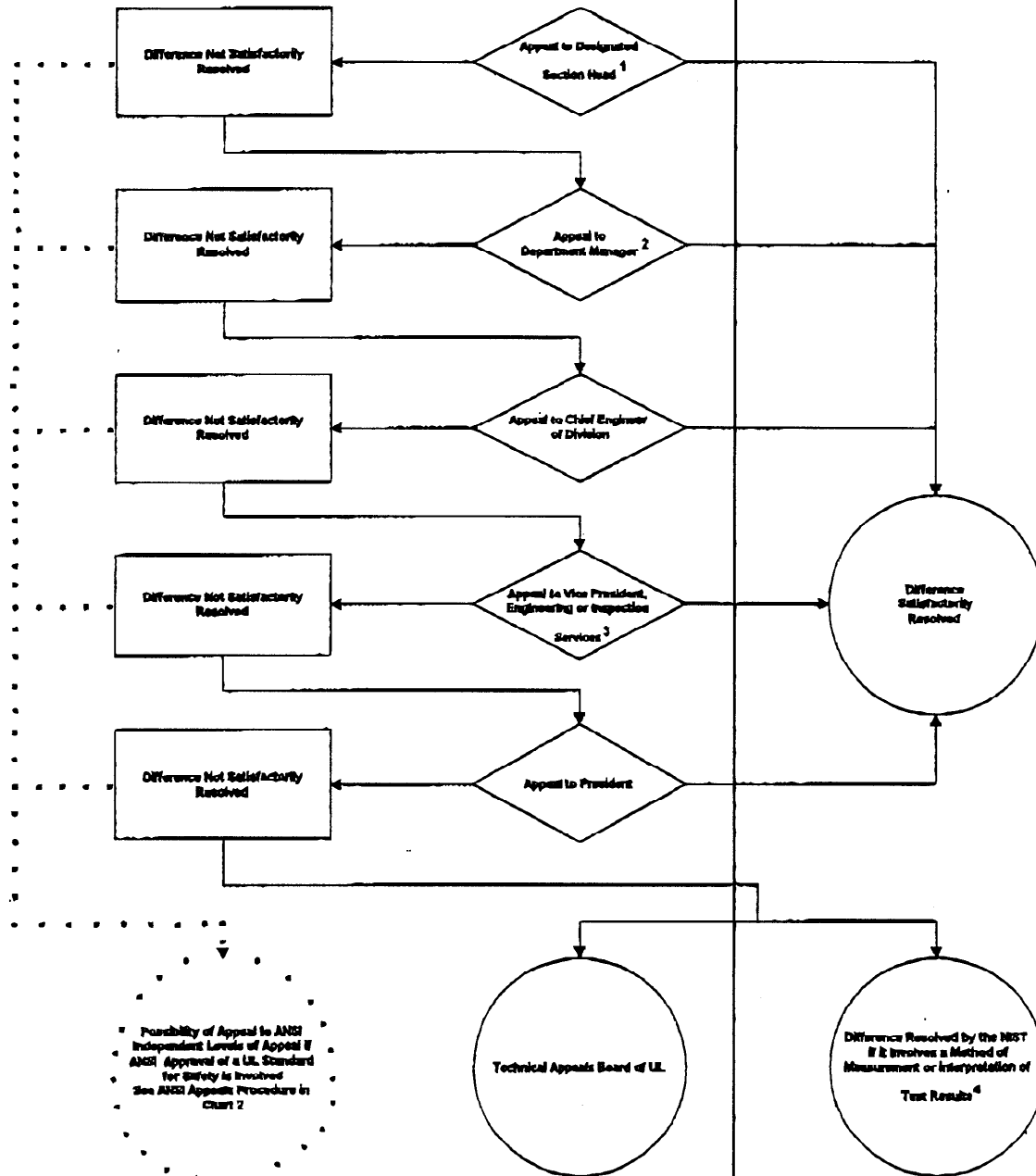
PERIODIC REVIEW AND REVISION:

Because UL Standards for Safety must be kept abreast of technological advances, of changes in consumer and government concern for safety, and of field experience with the product category, UL utilizes its management and experienced engineering personnel to constantly screen and review all UL Standards, looking toward their acceptability in providing a reduction of risk in conforming products commensurate with the state of the art and the public interest. As a result of this assessment and review, changes are frequently initiated in UL requirements. This, together with the other forces to which UL is responsive in its work, creates a continuing stimulus for improving and updating UL Standards for Safety.

^a See page 13 for a definition of this group.

CHART 3 UL'S APPEALS MECHANISMS

Including Handling of Comments, Complaints, and Requests for Interpretations
Regarding UL's Standards for Safety and Their Development



1. Associate Managing Engineer of the Engineering Department Section having primary responsibility for the category, including the technical aspects of the standards development activities for the category.

2. From this level through that of the President, may be prevented in one of UL's Engineering Councils (particularly if involving an installation problem).

3. Depending on the area being appealed, appeal is made either to the Vice President of Engineering or to the Vice President of Inspection Services.

4. Provided that, in the opinion of the National Institute of Standards and Technology, the importance of the case justifies its consideration by NIST; and the parties involved agree to accept and abide by the finding of NIST.

Furthermore, because nationally recognized installation and use codes (with which UL Standards are intended to be compatible) are periodically revised to meet changes in the state of the art and conditions of use, UL Standards for Safety must be correspondingly revised. Again, UL engineers prepare a draft of proposed revisions for discussion with the IAC or IAG. The entire revision process, and subsequent implementation, is identical in all respects to that of development, promulgation, and implementation of a new Standard.

All UL Standards, even those that are least active, are updated once or more every five years. Many UL Standards undergo revision more than once in a single year.

EFFECTIVE DATE:

When a Standard has been issued or revised by UL, it is necessary that an effective date be established for compliance of products with any new or revised requirement. This date is established by UL after discussion with the concerned UL Engineering Council(s), concerned industry group(s), and others such as government bodies, who rely upon UL's findings in the discharge of their public safety responsibilities.

All products covered by UL in the product category must be reviewed and brought into compliance with the requirements in the Standard by the effective date if they are to maintain their eligibility to bear one of UL's registered markings, or as in the case of a component, if they are to be included in UL's Recognized Component Directory. Newly submitted products in the category must also conform to the requirements of the new or revised Standard by the established date.

EXCLUSION OF ANTICOMPETITIVE EFFECTS:

UL makes every effort to use performance requirements and to avoid construction requirements that tend to limit design. As products are periodically redesigned and modified to make use of new materials and manufacturing techniques, materials or construction not contemplated when a Standard was prepared may be incorporated in a product submitted to UL. The product may comply with the literal text of the UL Standard but have features that do not comply with the intent of the requirements. Each published UL Standard provides that a product complying with the requirements in the Standard will not be eligible for Listing (or other UL service) if, when it is examined and tested, it is found to have features that do not comply with the intent of the requirements. In this case, a revision of the Standard is proposed to clarify the intent.

On the other hand, a product employing materials or having a construction differing from those covered by a Standard will be examined and tested by UL according to the intent of the requirements and, if found to be substantially equivalent, may be Listed. This procedure is specifically stated in each UL Standard. If the equivalent product does not comply with the literal text of the Standard, a revision of the Standard is proposed.

Thus, built into UL Standards are requirements that facilitate changes and eliminate undue restrictions on design. This equivalency concept makes it possible to convert any construction requirement into a performance requirement.

As mentioned under "Initial Evaluation," UL's evaluation of a new product is not prevented by the lack of a specific Standard to cover it. This also facilitates the introduction of a new product to the public.

Because UL believes that products and materials conforming to UL's Standards for Safety make a significant contribution to public safety, the following information is included in each published UL Standard.

"UL's Standards for Safety are copyrighted to protect UL's publication rights, not to restrict their use in product design or evaluation."

FEDERAL GOVERNMENT STANDARD:

When an agency of the Federal Government selects UL to develop a particular Product Safety Standard for use by the agency in safeguarding the public, UL utilizes such development procedures as the agency specifies. If a balanced committee of representatives of all interested parties is prescribed, UL organizes and utilizes ad hoc committees in the development of the Standard in accordance with the agency's procedures. Each group is designated as a UL Product Safety Standard Committee⁹ and is further identified to associate it with the particular product.

⁹ See page 13 for a definition of this group.

DEFINITIONS OF GROUPS INVOLVED IN UL'S STANDARDS DEVELOPMENT, REVISION AND IMPLEMENTATION PROCESS

Commercial and Industrial Equipment Users Conferences of UL are composed of knowledgeable commercial and industrial users of products not generally categorized as consumer products. Members are invited by UL to participate in the preparation and review of proposed requirements for such products. There is one or more such users conference for the products handled by each Engineering Department of UL.

Conference of Technical Users of Consumer Products (CTUCP) of UL is composed of representatives of government organizations (federal, state, or local) that do not regulate but do have an involvement and interest in product safety, independent product testing laboratories, mail-order and department stores that have consumer product evaluation operations, product servicing organizations, and vendor organizations.

Consumer Advisory Council (CAC) of UL is composed of individuals selected by UL from representatives of organized consumer groups throughout the United States, from representatives of large mail-order and department stores who have knowledge of and reflect a close concern for consumers, from representatives of government who have responsibilities involving consumers, from home economists, from academicians concerned with consumer education, from representatives of consumer-oriented magazines, from consumer related groups within the American National Standards Institute, and from persons who were formerly associated with public safety activities. The Consumer Advisory Council members advise UL in establishing levels of safety for consumer products. They also provide additional user field experience and information in the area of product safety and assist in educating the general public in the limitations and safer use of specific consumer products.

Engineering Councils of UL are composed chiefly of persons having enforcement authority in the public safety field, government officials having responsibility in establishing safety standards, and others having knowledge and experience in the specific areas of interest. Members of these Councils are chosen by UL to reflect a wide spectrum of field experience and viewpoints, from a widely dispersed geographic area. Members of UL's Engineering Councils do not include subscribers or representatives of subscribers to the services of UL.

Industry Advisory Conferences (IAC) of UL are composed of employees of manufacturers subscribing to UL's Follow-Up Service in a particular product category, and UL engineers who have knowledge and experience in the specific product area under consideration. Industry members are chosen from both large and small businesses, and from manufacturers who belong to trade associations and those who do not. They are selected for their knowledge and recognized judgment and function as representatives of industry, not as representatives of any one manufacturer or trade association.

Industry Advisory Groups (IAG) of UL differ from Industry Advisory Conferences of UL only in that they include representatives of other groups such as utilities, material and component suppliers, and government bodies, in addition to UL engineers and subscribers to UL service in the product category.

Open Forums of UL are composed chiefly of consumers, inspection authorities, persons from the academic community, and others who have specific knowledge or interest in the subject covered by the Standard and who have expressed a desire to review and comment on UL's Standards for Safety. There is an Open Forum group for each Engineering Department of UL; that is Burglary Protection and Signaling; Casualty and Chemical Hazards; Electrical; Fire Protection; Hearing, Air-Conditioning, and Refrigeration; and Marine.

Product Safety Standards Committees (PSSC) of UL are composed of members chosen and classified from among the following categories: consumers, manufacturers, importers (if appropriate), employers, employees, government representatives (including inspection groups), specialists, insurance interests, installers, erectors, utilities (if appropriate), and independent wholesalers and retailers. Those selected are substantially concerned with the scope of a Standard under consideration. If it appears that there is an existing nationally recognized standards-development group whose scope includes the subject under consideration, that group will also be among the categories from which members of the committee are chosen. No more than one-third of the members are drawn from any one category. A nonvoting Chairman and Secretary are appointed by UL.

Standards Review Council (SRC) of UL comprises no less than twenty-one members selected from the categories of insurance, consumer interests, government bodies or agencies, education, public safety bodies or agencies (having enforcement responsibility), safety experts, public utility representatives, and manufacturers and vendors. No more than three members are chosen from any single category. Members serve three-year terms, and may be reappointed. A UL corporate staff engineer serves as Chairman without vote. It is the responsibility of the Standards Review Council to see that a proposed draft is the result of full consideration of all comments and that it represents a high degree of acceptance on the part of the Technical Advisory Group and the Product Safety Standard Committee members.

UL Subscribers comprise those manufacturers (domestic and foreign), importers, retailers, installers, etc., who by contractual agreements with UL, accept UL's Factory Follow-Up Service and who properly identify acceptable products through a system of marking that permits recognition by consumers, authorities having jurisdiction, and others.

Technical Advisory Groups (TAG) of UL are composed of concerned industry personnel, representing both trade and nontrade association categories; UL staff members; and other specialists interested in a product under consideration (for example, consumers and inspectors) and who are substantially concerned with the scope and provisions of the Standard.

Technical Appeals Board (TAB) of UL consists of nine members, one from each of the following eight classifications plus an additional "government" member who serves as Chairman during consideration of a specific matter, and who is drawn from a concerned or interested Federal Government agency or department. The classifications from which members are drawn are: insurance, government, public safety body or agency, education, safety expert, consumer, at-large, and standardization expert. The term of service of members is, in general, three years. The Chairman (the additional "government" member) is chosen on an ad hoc basis by mutual agreement between UL and the other party involved in a controversy. The purpose of the Technical Appeals Board is to serve as a body to which the views of UL and a party appealing a UL decision may be submitted after all other appeals channels in UL have been exhausted. The Technical Appeals Board considers matters of technical substance, but not matters of policy.

APPENDIX

UL'S "ACCREDITED ORGANIZATION METHOD" FOR DEVELOPING AMERICAN NATIONAL STANDARDS

OPEN STANDARDS DEVELOPMENT ACTIVITIES:

Underwriters Laboratories Inc. (UL) is accredited under the American National Standards Institute's (ANSI's) Accredited Organization Method for developing evidence of consensus for product or system safety Standards (hereinafter referred to as a "Product Safety Standard" or a "Standard") intended for recognition as American National Standards. Accreditation is based on UL's procedure to develop and promulgate Product Safety Standards and provides for participation, review, and comment by members of industry, government, insurance groups, consumers, other interested parties, and the general public. This is an outline of the various steps (see Chart A) through which a proposed UL Product Safety Standard is processed using this procedure from the time the need for the Standard is established until it is recognized as an American National Standard.

The development of a Product Safety Standard usually occurs as the result of the need of UL to publish performance and construction criteria so that uniform requirements will be applied to products having a commonality of function in a particular category under UL's Listing, Classification, Certificate, or Recognition Service; and to coordinate the performance and construction of these products with the requirements set forth in recognized national installation codes. A project to develop a Product Safety Standard is also undertaken by UL if requested to do so by either industry or government.

DEVELOPMENT OF THE INITIAL DRAFT:

Under UL's procedure, the supervision of a Product Safety Standard is assigned to the appropriate standards group functioning at UL. The standards group, working with UL's staff engineers and the UL-Industry Advisory Conference* for the product, assembles the initial draft of requirements for the Product Safety Standard.

* UL's acceptance as an accredited source of American National Standards took several years. The original submittal of UL's proposed standards-making method to ANSI was made in May 1973. Members of ANSI's Board of Standard Review and others, as a result of the "public review" instituted in accordance with ANSI's procedures, had questions or comments on the proposal; and it was redrafted several times. Through the cooperative efforts of both organizations, UL received approval of its Accredited Organization Method by ANSI on November 18, 1976. The approval was announced in the January 28, 1977 issue of ANSI's STANDARD ACTION. This outline is an editorial rewrite of the formal document approved by ANSI.

** See page 12 or 13 for a definition of this group.

When completed, the initial draft of the proposed Product Safety Standard is submitted to the UL-Technical Advisory Group (UL-TAG) for their review. The UL-TAG comprises concerned industry personnel, representing both trade and nontrade association categories; UL staff members; and other specialists interested in the product (for example, consumer and inspectors) who are substantially concerned with the scope and provisions of the subject Standard.

This review, conducted at a meeting of the UL-TAG, is to see that the draft provides proper reduction of the risks of injury inherent in the product and its subsequent use, or that a product intended to combat a hazard is capable of performing in the intended manner, and that it can be installed and used in accordance with applicable nationally recognized installation codes.

A simple majority quorum of the UL-TAG members must attend the meeting; and a simple majority of those attending, not including UL personnel, must agree to the circulation of a letter ballot to all appointed UL-TAG members. To permit the presentation of the initial draft of the proposed Product Safety Standard, modified or augmented as agreed upon at the meeting, to the Product Safety Standard Committee of UL, a two-thirds letter ballot return is required. The affirmative votes cast must represent at least a simple majority of the total UL-TAG membership. If a member wishes to be recorded as "not voting," the required majority is computed on the basis of the members who do vote.

NOTICE TO PUBLIC OF A PROPOSED STANDARDS-DEVELOPMENT PROJECT, AND SOLICITATION OF PUBLIC COMMENT:

When a project is initiated by UL, a notice announcing UL's intent to develop a Product Safety Standard and requesting comments and an indication of a desire to participate in the standards project is sent to:

- A. Organizations known to be concerned with the scope of the proposed Standard. ANSI is asked to assist UL in developing a list of such organizations.
- B. Members of the involved UL "Open Forum."
- C. UL subscribers^{*} in the product category covered by the scope of the proposed Standard.
- D. Concerned government agencies that are not already represented on the involved UL Engineering Council(s).^{*}
- E. Known representatives of nonsubscriber manufacturers and national interests substantially concerned with the scope of the proposed Standard.
- F. Involved trade associations, if not already included in the list developed with the aid of ANSI.
- G. The appropriate UL Engineering Council(s).^{*}

^{*} See page 12 or 13 for a definition of this group.

H. The Conference of Technical Users of Consumer Products², if appropriate.

I. The Consumer Advisory Council² of UL, if a consumer product is the subject of the proposed Standard.

J. The appropriate Commercial and Industrial Equipment Users Conference² of UL, if a product used by industrial or commercial groups is the subject of the proposed Standard.

K. The American National Standards Institute.

BALANCING OF INTERESTS:

The draft copy of the Product Safety Standard, as approved by the UL-TAG including all changes, additions, or deletions made in the initial draft, is then submitted to the UL-Product Safety Standard Committee (UL-PSSC) for their review.

To prepare a Summary Report, a simple majority of the participating members of the UL-PSSC attending a meeting is required (provided a quorum - two-thirds of all voting members - attends the meeting). If the review is conducted by letter ballot, a response from at least two-thirds of the members is required to prepare the Summary Report. The Summary Report includes the disposition of all negative comments, including the reasons for nonacceptance of any such comments. If a UL-PSSC member asks to be excused from voting, the majority is computed on the basis of the total number of members voting.

The UL-PSSC also reviews the draft to establish that it meets the guidelines detailed in the second paragraph on page 15. If not, the UL-PSSC revises the draft, after discussion with the proponent group, so that these guidelines are met.

OPPORTUNITY TO BE HEARD:

Summary Report

The Summary Report includes a new draft of the Product Safety Standard modified in accordance with the recommendations made by the UL-PSSC. This report is sent for comments to:

A. All members of the UL-TAG and UL-PSSC,

B. All UL subscribers known to be affected by the Product Safety Standard, and

C. All persons who expressed an interest in the subject by responding to the announcement of the standards-development project.

² See page 12 or 13 for a definition of this group.

Revised Drafts of the Proposed Standard

Taking into consideration all of the comments received as a result of the review of the Summary Report, the designated UL standards group, working with UL staff engineers, if necessary, prepares a revised draft of the proposed Standard. This revised draft, and a full report of the manner in which all negative comments were resolved, are discussed with the UL-TAG and then with the UL-PSSC for an opinion concerning the changes made. A new Summary Report, including the revised draft, is then sent again to the groups listed above.

At this time, ANSI is asked to announce in STANDARDS ACTION that a draft of the proposed Product Safety Standard is available from UL for additional public review and comment.

The procedure described above is repeated until all technical comments have been considered. All technical comments are either resolved or, if this is not possible, a clearly stated reason is established for not accepting each unresolved comment.

The Standards Review Council of UL

The final draft of the Product Safety Standard is submitted to the UL-Standards Review Council (UL-SRC) with a complete summary of the disposition of all negative comments, including the reason for any non-acceptance of such comments.

For the work on a Product Safety Standard to be considered complete, at least two-thirds of the UL-SRC members voting by letter ballot must reply affirmatively. If a member asks to be excused from voting, the two-thirds majority is computed on the basis of the total number of members voting. In either case, the affirmative votes must be not less than a simple majority of the total voting membership of the UL-SRC.

If the draft is to be considered at a meeting of the UL-SRC, a simple majority quorum of the total membership must attend. At the meeting, a simple majority of those present, not including UL personnel, is necessary to agree that the UL procedures for developing a Product Safety Standard under the Accredited Organization Method of ANSI have been followed, that a high degree of acceptance has been achieved, and that all comments have been considered and satisfactorily resolved or answered.

Submittal to the Board of Standards Review of ANSI

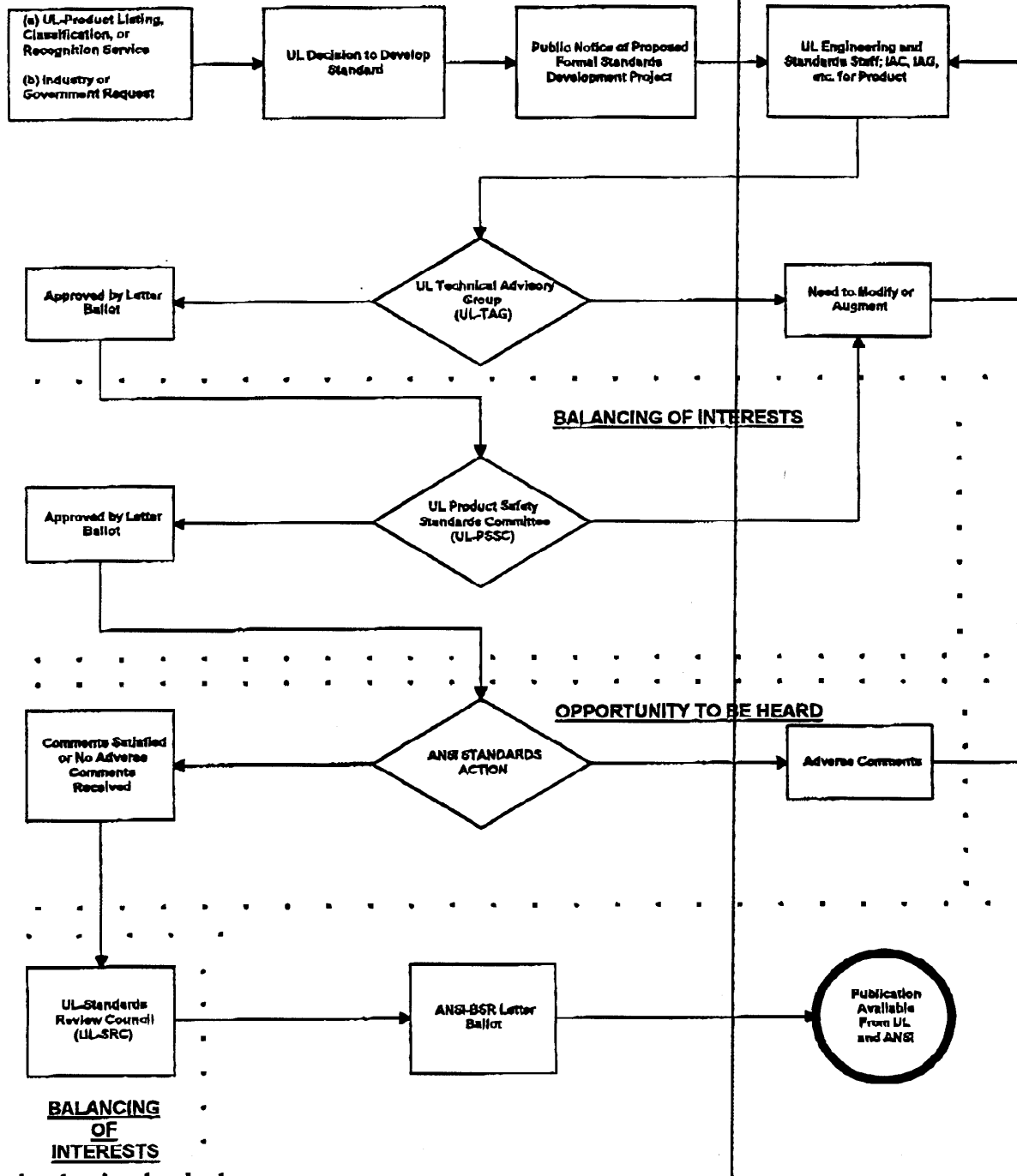
When the UL-SRC has accepted the final draft of the Product Safety Standard, it is submitted to ANSI's Board of Standards Review as a proposed American National Standard. The submittal also includes a record of the results of the voting of the various groups to which the Standard has been submitted for review (including the names of those who responded), the comments received, and information as to the disposal of the comments, including the comments that were accepted and those that could not be resolved.

Upon notification that the Product Safety Standard is recognized as an American National Standard, it is published by UL and ANSI and is made available to all interested parties.

PERIODIC REVIEW AND REVISION:

UL is also responsible for maintaining the Standard by processing appropriate revisions as necessary and seeking updating of the Standard as an American National Standard in accordance with ANSI's procedures at least once every five years.

CHART A
OPEN STANDARDS DEVELOPMENT ACTIVITIES
(Accredited Organization Method for Developing Product Safety
Standards Intended for Recognition as American National Standards)



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For additional information regarding documents in electronic format, please refer to page iv. To order UL's Catalog-of-Standards, contact the Standards Department at UL's Northbrook office at 708-272-8800, extension 43331.