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The Role of Nongovernmental Standards in the Development of Mandatory Federal Standards Affecting Safety or Health†

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In recent years the federal government has increasingly regulated the health and safety characteristics of products, processes, the workplace, and the environment. Since the middle of the nineteenth century, and particularly in the last half century, private organizations have developed tens of thousands of standards that serve to coordinate the productive efforts of American businesses. While many of these "nongovernmental" standards apply to the same products and processes that have become the subject of federal regulation, the relationship between the private standards system and the many federal agencies responsible for developing federal health and safety regulations has not been formalized or even well defined. Many observers have voiced concern that nongovernmental standards do not adequately reflect the interests of consumers, workers, and small businesses.

In this comprehensive article, Professor Hamilton examines decision-making in the most prominent private standards-writing organizations and suggests that they provide a valuable store of experience and expertise that federal agencies cannot readily duplicate,

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even though they do not, and perhaps cannot, adequately represent some interests. After analyzing the experience of several federal agencies that have attempted to use nongovernmental standards in developing federal health and safety regulations, Professor Hamilton argues for a more consistent approach to the use of these standards. To this end, he proposes a framework for the development of a uniform federal policy of coordination and cooperation with private standards-writing organizations that best utilizes the experience and expertise of the private organizations while ensuring adequate protection of health and safety interests consistent with the agencies' mandates.

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I. Introduction and Scope Note

A. The Role of Nongovernmental Standards in Modern America

The private sector of the economy invests extensive resources each year in developing and revising written standards for products, materials, systems, services, processes, and practices. Many of these standards, referred to generally hereafter as “nongovernmental standards,”¹ are developed following elaborate procedures that involve public notice, opportunity to comment, and the participation of many groups and different interests. In their totality, nongovernmental standards concern virtually every aspect of modern society. They exist in bewildering variety and serve many purposes. For example, “gasoline” in Portland, Maine and Portland, Oregon is essentially the same product suitable

1. Nomenclature in the standards area has its pitfalls. Standards produced by the nongovernmental sector are “voluntary”; standards produced by state or federal governmental action are “mandatory.” However, many voluntary standards are adopted or incorporated by reference through governmental action, *see* text accompanying notes 158-60 *infra*, thereby becoming mandatory in fact though voluntary in origin. *See* ASTM, THE VOLUNTARY STANDARDS SYSTEM OF THE UNITED STATES OF AMERICA 1 (1975), which describes standards as “voluntary” because (1) participation in standards development is voluntary and (2) the standards produced by the system “usually” are intended for voluntary use. The phrase “private standards” is sometimes used as a synonym for “nongovernmental standards,” but the former phrase has been objected to because it causes confusion with “proprietary standards,” *i.e.*, standards developed by a single industrial firm for its exclusive use, and because some standards-setting organizations do not consider themselves “private” in the usual sense of the term. The term “voluntary standards” will be used hereafter to refer to a specific type of nongovernmental standards.

for use in gasoline engines; steam boilers are constructed with steel of specified thickness and welds of specified quality to avoid explosions; the bases of all light bulbs are threaded uniformly to fit the sockets into which they are to be placed; all "two-by-four" lumber is the same size (though not necessarily two inches by four inches). Estimates of the total number of nongovernmental standards currently in use range from 20,000 to 60,000 plus.² Standards setting in the private sector is a huge operation involving hundreds of organizations,³ tens of thousands of individuals,⁴ and countless million manhours of volunteer labor.

The American Society for Testing and Materials (ASTM), a major organization engaged in preparing nongovernmental standards, has identified the following types of standards:⁵

(1) A standard *definition* creates a common language for a given area of knowledge. For example, a "chelating agent" for soaps and other detergents is defined by an ASTM standard.

(2) A standard *recommended practice* describes an accepted procedure for doing something.

(3) A standard *method of testing* prescribes an accepted way of measuring something.

(4) A standard *classification* delineates categories of objects or concepts. For example, diesel fuel is divided into three grades, based on such properties as flash point, viscosity, and sulphur content.

(5) A standard *specification* establishes the limits of the characteristics of a product or material.⁶

2. See, e.g., NATIONAL MATERIALS ADVISORY BOARD, NATIONAL RESEARCH COUNCIL, MATERIALS AND PROCESS SPECIFICATIONS AND STANDARDS 21 (1977). This study estimates that there are a total of 62,960 specifications and standards in both government and private sector systems, of which an estimated 4000 are government standards.

3. See NATIONAL BUREAU OF STANDARDS, U.S. DEP'T OF COMMERCE, DIRECTORY OF UNITED STATES STANDARDIZATION ACTIVITIES (Spec. Pub. No. 417 1975). This useful publication lists and briefly describes the standardization activities of 580 organizations. It does not include some government agencies (e.g., the Department of Defense) or any private corporations that participate extensively in standards-setting organizations.

4. The Federal Energy Administration (FEA) estimated that 55,000 individuals helped develop standards in the private sector. Letter from FEA to the Office of Management and Budget (OMB) (Apr. 14, 1977) (commenting on a proposed OMB Circular, 41 Fed. Reg. 53723 (1976), discussed at subpart V(B) *infra*.) The FEA letter gives no indication of the source or basis of its estimate. The annual cost of preparing private sector specifications and standards has been estimated to be \$320 million. NATIONAL MATERIALS ADVISORY BOARD, *supra* note 2, at 83.

5. ASTM, ASTM and Voluntary Consensus Standards 3 (undated brochure sent to all potential ASTM members).

6. Such a specification may be a *design* specification—e.g., how many studs in a wall of a building or how much manganese in a melt of steel—or a *performance* specification that sets a goal of performance—e.g., the strength of the wall or the ductility of steel—leaving the particular method of achievement to the designer's ingenuity. Specification standards may serve several different purposes. Many standards relate merely to *product interchangeability*. The light bulb standard mentioned earlier is an example: while the diameter of bulb and socket or the angle of threads over a fairly wide range is of little or no significance, what is important is that everyone

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Some voluntary standards organizations prepare codes for building construction, the handling of dangerous materials, and the general safety of buildings, processes, and installations. The National Fire Protection Association, for example, has developed numerous elaborate codes relating to fire prevention and related safety areas. These codes are usually designed for incorporation by reference by local, state, and federal agencies in municipal ordinances, regulations, or statutes, and many of them have been so incorporated.

B. The Scope of this Article

This Article considers the appropriate relationship between certain kinds of nongovernmental standards and mandatory rules or standards on the same subject adopted by federal agencies dealing with questions of health or safety. This relationship has become increasingly important, and increasingly uneasy, as the federal government's role in establishing health or safety standards has steadily grown during the last decade. New agencies with broad regulatory power in these specific areas have emerged—particularly the Occupational Safety and Health Administration (OSHA) and the Consumer Product Safety Commission (CPSC)—and many existing agencies have obtained broad new authority to establish safety or health standards for many specific classes of products and processes.⁷ The issues faced by agencies in

follows the same rules. Other classic examples include screw threads in nuts and bolts, the gauge of railroad tracks, the relationship between cameras and films or flashlights and batteries. *See generally* D. HEMENWAY, *INDUSTRYWIDE VOLUNTARY PRODUCT STANDARDS* 37-43 (1975). Other standards consist of a *description of a single product* for a host of purposes: to simplify the choices available to consumers (originally the objective for the initial development of voluntary standards, *id.* at 21-22); to insure the uniformity and interchangeability of single products, *e.g.*, two-by-four lumber or bricks; to provide constant relationships between people and products, *e.g.*, clothing sizes or typewriter keyboards; to enable products to fit into automatic dispensers; and so forth. However, the great bulk of single product description standards describes minimum quality standards, either in terms of permissible grades or in black-and-white classifications (“yes/no” or “acceptable/unacceptable”). Many of these are based on considerations of safety, *e.g.*, minimum standards for ladders or boilers, while others are based on economic considerations of quality, *e.g.*, preventing adulteration or deterioration of quality, assuring minimum sizes, minimum octane ratings, etc.

7. Examples include the Food and Drug Administration (medical devices); the Federal Highway Administration (highway signs), the National Highway Traffic Administration (motor vehicle safety), the Office of Pipeline Safety Operations (natural gas and liquid pipelines), and the United States Coast Guard, all in the Department of Transportation; the Nuclear Regulatory Commission (nuclear generating plants); the Mobile Home Standards Division in the Department of Housing and Urban Development (mobile home safety); the Federal Energy Administration; and the Geological Survey. While the substantive areas of concern of these agencies and those mentioned in the text vary widely, all are charged with the development of mandatory standards or rules in areas in which nongovernmental organizations have developed or are developing voluntary standards or rules relating to the same or similar subjects.

A partial list of agencies, departments, or significant subdivisions thereof with health or safety regulatory authority prepared by the office of the chairman of the Administrative Confer-

these areas often involve difficult judgments in which private economic costs are weighed against individual safety, community or individual health, and other values. The developer of a nongovernmental standard affecting health or safety must also balance these values. Many voluntary standards are based primarily on empirical or physical investigation or the available technology (often referred to as the "state of the art"). The standards considered here often involve judgmental concerns, partially based on research or testing but primarily involving a judgment as to safety or health on the one hand and cost on the other. Agencies considering the development of a mandatory standard for the same product or process must decide whether to accept the trade-off adopted in the nongovernmental standard or to develop a standard striking a different balance, usually one with greater emphasis on safety or health.⁸

The nongovernmental standards considered here may specifically and expressly address the same safety or health issue that the agency is addressing or may define the characteristics of a product or process in such a way that the safety or health consideration is in effect addressed by the standard, whether or not specifically stated (for example, a stan-

ence indicates that there are more than thirty such agencies. In 1969, Professor Posner counted thirty-two "federal consumer protection agencies." R. POSNER, REPORT OF THE ABA COMMISSION TO STUDY THE FEDERAL TRADE COMMISSION 45 (1969). The United States Department of Commerce has published a seventy-one page pamphlet, U.S. Dep't of Commerce, Guide to Standards Activities of Federal Agencies (1976) (Rep. No. OPS-75/1).

8. The sprawling private standards "industry" interacts with the federal government in several areas other than direct regulation of safety or health. The use of voluntary standards in procurement activities, for example, is a major subject entailing substantially different considerations. See NATIONAL MATERIALS ADVISORY BOARD, *supra* note 2, at 15-22. Similarly, the antitrust implications of voluntary standards raise significant issues. The Federal Trade Commission (FTC) has had a proceeding under way for some time dealing with antitrust problems that may ultimately lead to a trade regulation rule establishing standards and procedures for the standards-writing industry. See *Voluntary Standards Accreditation Act: Hearings on S. 825 Before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary*, 95th Cong., 1st Sess. 357, 358 (1977) (statement of Margery Waxman Smith) [hereinafter cited as *Hearings*]. Another important area not addressed is the impact of standardization activities on the law of products liability. Further, voluntary standards are widely used in a variety of contexts to define methods of testing, describe processes, define terms, or classify products or processes. For example, the Environmental Protection Agency (EPA) references many ASTM and American Public Health Association test methods in its air and water quality standards. 40 C.F.R. § 60.45(f) (1977); *id.* § 141.25(a). EPA regulations governing the testing of motor emissions require the use of fuels meeting a specified ASTM product standard. *Id.* § 87.91. See also *id.* § 86.177-6(a). The term "heavy diesel oil" is defined in a federal statute regulating oil spills by reference to an ASTM standard. 33 U.S.C. § 1001(d) (1976). Many terms used in mandatory standards are defined only in nongovernmental standards. These technical uses of nongovernmental standards may involve scientific and engineering questions that are often quite difficult, subtle, or controversial, and may very well have a significant impact on the possible scope of the regulatory effort. However, they usually involve empirical or physical questions rather than the direct societal judgment described above of what costs should be imposed for specific improvements in health or safety. In a broad sense, this difference can be likened to a comparison between standards establishing a speed limit and standards defining a speedometer or providing permissible margins of error for such an instrument.

dard for ladders that describes the product without specifically discussing safety characteristics). Obviously, many federal programs to some extent involve such standards. While the phrase "safety or health" generally should be construed broadly for the purpose of determining the scope and potential application of this Article, the Article is necessarily based on a limited sampling of agency functions. For example, no systematic examination is made of some important issues, such as the use of voluntary standards in the regulation of health care services provided with federal assistance. Nevertheless, the sampling should justify the development of general recommendations.⁹

C. Recent Attempts to Develop a Uniform Federal Policy Toward Nongovernmental Standardization Activities

In the last few years, considerable attention has been given to several proposals from diverse sources to develop a single, uniform federal policy toward nongovernmental standardization activities. These proposals include a Voluntary Standards and Accreditation Act, on which hearings were held in 1976 and 1977 but which has not been reported out of committee;¹⁰ two versions of a proposed circular issued for comment by the Office of Management and Budget (OMB) encouraging agencies to increase their reliance on nongovernmental standards in both the procurement and regulatory areas;¹¹ and most recently, a Recommended National Standards Policy for the United States, prepared by an ad hoc group consisting primarily of nongovernmental personnel.¹² This Article studies intensively and in detail the desired interrelationship in a single area but does not attempt to establish a single or uniform federal policy for all areas. The conclusions reached in this Article will continue to have direct relevance for agencies active in the safety or health area no matter which of the proposed uniform federal policies is ultimately adopted. The adoption of a uniform policy may simplify the task of federal agencies in implementing the recommenda-

9. Because regulation of environmental pollution and energy conservation entails the delicate balance of private and social costs, development of these regulations poses problems similar to those encountered in the development of regulations affecting safety and health.

10. *Hearings, supra* note 8; *Voluntary Standards and Accreditation Act: Hearings on S. 3555 Before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary*, 94th Cong., 2d Sess. (1976).

11. Proposed OMB Circular on Federal Interaction with Voluntary Consensus Standards-Developing Bodies, 43 Fed. Reg. 48 (1978); 41 Fed. Reg. 53723 (1976).

12. Request for Comments by the National Standards Policy Advisory Committee on A Document Entitled "A Recommended National Standards Policy for the United States," 43 Fed. Reg. 6298 (1978).

tions set forth in this Article by identifying appropriate nongovernmental standards for agency consideration.

The proposed legislation, the OMB circulars, and the recent Recommended National Standards Policy are each discussed at several points in this Article, principally in Part V below.

D. The Structure of this Article

This Article proceeds on the assumption that many lawyers, governmental and nongovernmental alike, are unfamiliar with the nongovernmental sector's standards-setting organizations, mechanisms, and procedures. Some familiarity with these mechanisms and procedures is essential to evaluate the complex issues raised by the relationship between these organizations and the governmental standards-setting agencies in the safety or health areas. Accordingly, Part II, Modern Nongovernmental Standards, is a rather full description of the nongovernmental standards-setting organizations and their history. Part III describes in fairly general terms the strengths and limitations of nongovernmental standards as presently developed. Part IV describes the actual use that has been made of such standards by several federal agencies. Part V briefly considers the various proposals for a uniform federal policy toward nongovernmental standardization activity. Part VI sets forth an analysis developing a proposed recommendation for consideration by the Administrative Conference.

II. Modern Nongovernmental Standards

Standards developed by the private sector may be roughly classified into three groups: (1) standards created by a single firm for its own products or raw materials (often called "proprietary standards"); (2) standards created by trade or professional associations for the practices, systems, processes, or raw materials of its members,¹³ sometimes with the concurrence of suppliers or other interests (often called "industry or professional standards"); and (3) standards created by a variety of or-

13. Trade organizations either produce or review and coordinate voluntary standards that usually are a consensus of only producers or suppliers. The standards may cover safety, interchangeability, test methods, and other product characteristics that the association members believe are technically desirable to standardize. They describe what the industry is prepared to supply, but often they require a sophisticated purchaser to understand them. In some cases, users of the product are able to participate, at least to some extent, in the development of the standards. In other cases, associations work with user organizations in specification development (e.g., the Aerospace Industries Association reviews National Aeronautics and Space Administration and Department of Defense specifications). As indicated in the text, a number of industry or professional standards have gained national acceptance. NATIONAL MATERIALS ADVISORY BOARD, *supra* note 2, at 39.

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ganizations after persons with many interests have an opportunity to participate in the formulation of the standard and reach a substantial consensus regarding the desirability of the proposed standard. Standards of the third type are often described as “consensus standards” or standards produced by a “consensus process.” These standards are by far the most important since they have had the greatest consideration and review and usually command the widest respect and adherence. Some standards that have not been developed by a consensus process, however, are widely respected and used. Historically, many consensus standards originated as proprietary or industry standards.¹⁴ Further, some associations that help prepare consensus standards also prepare industry standards. As the number of points of view consulted increases, the difference between an industry standard and a consensus standard tends to diminish.

This Article is exclusively concerned with standards of the third category, the creation, development, and revision of which are described in the balance of Part II. The processes and procedures followed in their development resembles in some respects private notice-and-comment rulemaking. Because they have had the greatest consideration and review by many interests, their resolution of safety or health issues would appear at least to merit the serious attention of agencies considering the adoption of mandatory standards covering the same products or processes.

The terminology describing such standards lacks uniformity. As indicated above, they are often referred to as “consensus standards” or, more commonly, “voluntary consensus standards,” a terminology that is adopted in the OMB circular.¹⁵ However, the word “consensus” may be used to refer to the process of approval itself, to the notion that a general agreement has been reached by all affected interests, or more narrowly to agreement among only those interests presented or consulted. Both the Senate bill and the Recommended National Standards

14. A proprietary standard created for internal corporate use may become widely used and broadly accepted either because of the dominance of the promulgating corporation in the market or because of the inherent quality of the standard coupled with the willingness of the corporation to make the standard available. Purchase specifications or product specifications prepared by federal or state governmental agencies, corporations, and other purchasers are also a source of voluntary standards.

15. Proposed OMB Circular on Federal Interaction with Voluntary Consensus Standards-Developing Bodies, 43 Fed. Reg. 48 (1978).

That even relatively sophisticated persons can inadvertently depart from generally accepted usage is evident from the title of a report on voluntary standards policies entitled *Industrial Standards*. Long Range Planning Service, Stanford Research Institute (Rep. No. 431, Jan. 1971). See Cavanaugh, *Need: A National Standards Policy*, ASTM STANDARDIZATION NEWS, June 1977, at 12, 14 (the SRI report is “incidentally and, typically, erroneously entitled”).

Policy avoid the word "consensus" and use the phrase "national standards" to refer to standards of the third type.¹⁶ However, this usage causes confusion with the American National Standards, which are described in the following subsection. In the balance of this Article the simple phrase "voluntary standards" is used to describe standards of the third type. Though proprietary or industry standards in a sense are voluntary standards and are sometimes so described, they are not referred to by that term as used in the balance of this Article.

A. An Overview of the Organizations Establishing Voluntary Standards

In most foreign countries, the development of standards is directed by one or more governmentally-approved or governmentally-sponsored agencies.¹⁷ In the United States, this important function has remained in the hands of a complex of private, nongovernmental organizations. These organizations frequently overlap, and their complex interrelationships may be bewildering.

1. American Society for Testing and Materials.—The American Society for Testing and Materials (ASTM) is a nonprofit corporation exempt from federal income taxation under the Internal Revenue Code.¹⁸ It was formed for the specific purpose of developing standards on characteristics and performance of materials, products, systems, and services, and promoting related knowledge. ASTM is a huge organization with over 25,000 members of various types;¹⁹ about 15,000 of ASTM's members participate actively in standards writing through membership on one or more of approximately 130 technical committees that virtually blanket all areas of the economy. Active members include engineers, scientists, mathematicians, physicians, operating executives of small and large businesses, marketing managers, and indi-

16. The proposed Voluntary Standards Accreditation Act of 1977 defines a "national standard" as "a standard developed and adopted for use throughout the United States" that is developed according to the rules and procedures promulgated thereunder. *Hearings, supra* note 8, at 548-49. In the "Recommended National Standards Policy for the United States," 43 Fed. Reg. 6301 (1978), a "national standard" is defined as a "standard which has, or could reasonably be expected to have, a significant effect upon a substantial number of U.S. citizens."

17. SCIENCE POLICY RESEARCH DIVISION, CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS, 93RD CONG., 2D SESS., VOLUNTARY INDUSTRIAL STANDARDS IN THE U.S. 90 (Comm. Print 1974) [hereinafter cited as STANDARDS REPORT].

18. I.R.C. § 501(c)(3).

19. ASTM had 26,175 members as of December 31, 1977. ASTM, ASTM Directory (Oct. 1976).

viduals from numerous other professions, including some attorneys.²⁰ ASTM's technical committees are extremely large, varying in size from a few hundred people to over 1300 people in the case of Committee D2, which deals with petroleum products. Each committee in turn is divided into subcommittees that themselves may be extremely large (in the hundreds) and may be further divided into sections, working groups, or task forces. Taking a random example to indicate the scope of ASTM, committees in the "B" group deal exclusively with Nonferrous Metals; Committee B8 deals with Electrodeposited Metallic Coatings and Related Finishes, and has eleven subcommittees, two of which are B08.02, Substrate Preparation, and B08.09, Precious Metal Coatings. While many ASTM committees deal with industrial processes and products, many also deal with diverse consumer goods such as paint, petroleum products, high chairs, tubs and shower stalls, cigarette lighters, and textiles.

ASTM identifies itself as the "world's largest source of voluntary consensus standards."²¹ It has created and now maintains some 5700 voluntary standards; its *Book of Standards* is over 38,000 pages (the index alone is over 275 pages). About fifteen percent of ASTM's operating income is from dues, which currently are three hundred dollars per year for sustaining members and thirty-five dollars per year for individual members. The principal source of its income is from the sale of publications, primarily standards.

In June 1977, I spent over two days attending ASTM committee and subcommittee meetings; attendance at these meetings ranged from over a dozen to more than forty at a single "working group" meeting. My impressions of this experience are described in subpart B(2) below.

2. *The National Fire Protection Association.*—Another major voluntary standards-setting organization is the National Fire Protection Association (NFPA). NFPA has developed about 250 standards, including codes, manuals, guides, and recommended practices, relating to virtually every aspect of fire safety and fire protection. These standards are published as the National Fire Codes in sixteen volumes running to more than 11,700 pages and are generally prepared in a form suitable for incorporation by reference by governmental agencies. NFPA standards writing also involves a wide variety of subjects that are tangentially related to fire safety, including boat fuel systems, distribution

20. Letter from Walter V. Cropper, Director, Developmental Operations Div., ASTM, to the author (Oct. 24, 1977).

21. ASTM, *Forward*, 1976 ANNUAL BOOK OF ASTM STANDARDS iii (1976).

of liquefied natural gas (LNG), mobile home safety, and many others. NFPA standards are developed and reviewed by 150 technical committees, consisting of more than 2500 persons. NFPA itself has a total membership of about 30,000: industry representatives constitute about forty percent; state and local government representatives, mostly fire marshals, fire chiefs, and similar officials, constitute about thirty-two percent; institutions, including educational institutions, constitute about thirteen percent; architects and engineers add about seven percent; trade and professional associations make up about two percent; and the balance is drawn from miscellaneous organizations. NFPA's industrial constituency includes numerous manufacturers and users of fire-fighting equipment, insurance companies, and the like. Manufacturers constitute about six and one-half percent and insurance companies eleven percent of NFPA's membership.

Like ASTM, NFPA's operating income largely derives from the sale of publications; sales contributed sixty-three percent of its operating income in 1976. One ASTM employee commented that the huge size and the dependence on publication sales for revenue of both ASTM and NFPA strengthens these organizations; both organizations are largely immune from pressure arising from threats of withdrawal by an entire industry or segment thereof.²²

3. *Professional and Technical Societies.*—A third major source of standards is the various professional and technical societies. The American Society of Mechanical Engineers (ASME) maintains over 400 codes in various fields of mechanical engineering, the best known of which is the Boiler and Pressure Vessel Code. Other professional and technical organizations contributing standards include the American Oil Chemists' Society, the American Society of Agricultural Engineers, and the Institute of Electrical and Electronics Engineers. Many of these organizations have large memberships and engage in standards writing on their own through committees that consist solely of members or of members and other interests.²³ These organizations also participate in standards writing through membership in the numerous committees maintained by ASTM, NFPA, ASME, and other organizations.

22. Letter from Walter V. Cropper, *supra* note 20.

23. The Institute of Electrical and Electronics Engineers (IEEE), for example, has over 160,000 members. More than 10,000 of them participate in standards-writing activities within IEEE, which has produced over 400 standards covering electrical cord, electronics equipment, test methods, rating methods, and similar matters. NATIONAL BUREAU OF STANDARDS, *supra* note 3, at 89.

4. *Testing Laboratories.*—Another group of organizations that produces standards is testing laboratories, the best known of which is Underwriters Laboratories, Inc. (UL). Its standards and test procedures for electrical products are so widely recognized by insurance companies and local codes that the UL label is familiar to everyone. UL also develops standards applicable to heating, air conditioning and refrigeration equipment, casualty and chemical hazards, burglary protection, fire protection test standards, and other areas. It is a major contributor of safety standards and currently has 408 published standards directly related to safety. Testing laboratories also maintain membership in ASTM, NFPA, and other organizations, and participate in standards writing through membership on the technical committees of these organizations. They also prepare standards based on their own laboratory experiences or through committees that they create, composed both of employees and other interests.

5. *Trade Associations.*—A final significant source of standards is trade associations, particularly well-known organizations such as the National Electrical Manufacturers Association, the American Petroleum Institute, the Aerospace Industries Association of America, the Association of American Railroads, the Electronics Industries Association, and the Association of Home Appliance Manufacturers. Since the membership of these organizations is generally limited to producers, the standards generated solely by their membership are usually classed as industry standards.²⁴ As is the case with testing laboratories, however, many of these organizations also participate in the development of voluntary standards through membership in technical committees of ASTM, NFPA, and other organizations, or by creating more broadly based technical committees, including both members and nonmembers of the associations.

6. *The American National Standards Institute.*—The American National Standards Institute (ANSI), a nonprofit corporation exempt from federal income taxation under the Internal Revenue Code,²⁵ is essentially a trade association of standards setters. Its membership consists of about 180 “organizational members” (including ASTM, NFPA,

24. As indicated earlier, these standards, often relating to products purchased by the industry, may be based on a consensus between the suppliers and the industry. For example, the American Petroleum Institute has established standards for oil field equipment—pipe, casings, storage tanks—with the assistance of suppliers of such equipment. These standards are widely accepted and used.

25. I.R.C. § 501(c)(3).

trade associations, nonprofit professional societies, and other developers of standards) and roughly 1000 "company members" (*e.g.*, industrial corporations, testing laboratories, and electric utilities).

ANSI functions as a centralized clearinghouse and coordinator for the voluntary standards program. It is actively engaged in approving standards submitted to it by others as American National Standards. This approval "implies a consensus"²⁶ and results in the standard being given an ANSI designation and being included in the ANSI list of American National Standards. According to ANSI, "consensus implies that all dissenting viewpoints have been considered, and that an objective effort has been made toward their resolution."²⁷ In reviewing standards, ANSI verifies the existence of a "consensus" and the need for the standard, but does not evaluate the standard itself. Under this program, ANSI has approved more than 8000 standards. The 1976 ANSI catalogue is 192 pages long; a complete set of those standards costs 9200 dollars plus another 365 dollars for binders to house them. American National Standards cover aspects of the American economy ranging from Specifications for Portland Cement (Standard A1.1-1970) to Practice for Solar Simulation for Thermal Balance Testing of Spacecraft (Standard Z302.2-1975).

The standards approved by ANSI come from two sources: (1) its organizational members, and (2) a network of so-called American National Standards Committees. Most American National Standards are developed by ANSI organizational members and submitted to ANSI for recognition and approval. More than half of all ANSI standards were developed by ASTM, and that organization now submits all standards it develops to ANSI. Some organization members, however, decide whether or not to submit each standard that they develop to ANSI on a standard-by-standard basis. Many ANSI members that develop standards that might qualify under ANSI procedures do not submit all of them for approval; they may feel that the standard does not have a broad enough interest or that questions may be raised about the existence of a consensus or the need for recognition as an American National Standard. In addition, some organizations that establish standards that probably would qualify as American National Standards under ANSI procedures have not joined ANSI and as a result usu-

26. ANSI defines the "implied consensus" as "[s]ubstantial agreement reached by concerned interests according to the judgment of a duly appointed authority." The duly appointed authority is the Board of Standards Review. ANSI, ANSI Procedures for Management and Coordination of American National Standards § 7.2 (1977).

27. *Id.*

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ally do not submit any standards for approval.²⁸ The result is a hodgepodge of sources of standards rather than a neat pyramid with ANSI at the apex. A further result is that some universally recognized standards have never been designated American National Standards. Because of these factors, ANSI's goal to serve as the nation's coordinator of standards has not been fully realized.²⁹ Nonetheless, in recent years the number of standards submitted to ANSI has increased significantly.

The other principal source of American National Standards is a network of committees called American National Standards Committees, created under ANSI auspices rather than by organizational members. These committees were created because at the time there seemed to be no suitable existing organization active in the area. Approximately twenty-five percent of all American National Standards are generated by the American National Standards Committees. ANSI usually designates an organizational member to sponsor and act as "secretariat" for each committee; these sponsors oversee the activities, handle the paperwork, and generally ensure the smooth functioning of the committee. Although ANSI has a close relationship with these committees, they are not technically a part of ANSI and, as a consequence, ANSI publicly states that it does not itself write standards but serves only as verifier and coordinator.³⁰ The sponsor or secretariat of an American National Standards Committee may, at the same time, itself develop voluntary standards through its own committees or employees. Further, organizations that develop standards often serve as members of American National Standards Committees or of committees created by other standards-developing organizations. The result is an extremely complex, interwoven pattern that cannot be described briefly.

Other aspects of ANSI's activities that help explain its peculiar role vis-à-vis the federal government should also be mentioned. First, ANSI acts as the representative of the United States in international standardization.³¹ Also, ANSI has often acted as the spokesman for the standards-writing community in dealing with Congress and with federal agencies. While this role has not prevented organizational mem-

28. Among these organizations are the National Sanitation Foundation and the Factory Mutual Engineering Corporation. ASTM, *The Voluntary Standards System of the United States of America 5* (1975). Although ANSI will accept standards developed by nonmembers, such submissions are rare.

29. *Id.* at 9. See also Long Range Planning Service, *supra* note 15, at 3.

30. ANSI, Q & A About ANSI (pamphlet dated Oct. 1975).

31. ANSI, ANSI Progress Report 19 (Mar. 1976).

bers from also dealing directly with Congress or federal agencies, ANSI is the only organization that claims to represent the standards-writing organizations as a body.

Finally, one important aspect of ANSI's operations should be described at somewhat greater length. From the foregoing description of the numerous organizations involved in standards development, it should be clear that they do not have their own discrete spheres of interest. Rather, many of them are huge, sprawling organizations with numerous diverse committees active in various areas. That a standard was originally written by ASTM, ASME, NFPA, or some other organization appears to be as much historical accident as anything else, although broad areas of concentration are apparent. For example, ASME wrote the original standard for natural gas pipelines, while NFPA wrote the later standard for liquefied natural gas pipelines. ASTM and the American Waterworks Association maintain essentially duplicative standards for local and municipal water distribution systems. Six organizations write standards applicable to various aspects of pleasureboats; four write standards for parts of electrical air conditioners. In the past a recurring criticism of the voluntary standards system has been the lack of overall coordination; similar criticisms are sometimes leveled today,³² and the absence of effective coordination is sometimes mentioned as a justification for additional federal involvement in standardization activities by nongovernmental organizations. The coordination efforts that now exist are the responsibility of ANSI, which has created nineteen "standards management boards," each charged with the management and coordination of standards in one substantive area. The boards consist of ANSI members "and others having major interest in, or programs of, standards development."³³ ANSI regulations provide that a

reasonable balance of membership among organizations, companies, and public interest groups shall be maintained on [Standards Management Boards]. The membership is drawn from

- (1) Organizational members of the Institute;
- (2) Governmental bodies;
- (3) Company members of the Institute; and
- (4) Individual experts.³⁴

32. See U.S. DEPT OF COMMERCE, VOLUNTARY STANDARDS AND TESTING LABORATORY ACCREDITATION 9 (1977).

33. ANSI Procedures for Management and Coordination of American National Standards § I.1 (Nov. 1977) [hereinafter cited as ANSI Procedures].

34. *Id.* § 1.4.2. The actual selection of members is made by the ANSI Executive Standards Council, the group with authority over ANSI's standards activities subject to the overall direction of ANSI's board of directors.

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Standards management boards engage in a variety of activities. They decide whether or not an American National Standards Committee should be created, they review the contemplated membership of the committee, they review proposed standards, and they attempt to coordinate the standards-writing efforts of various groups. They also try to resolve conflicts in the not uncommon situation of conflicting activities by different organizations. Standards management boards have also mediated situations in which complaints have been made that a technical committee has refused to consider or respond to requests for modification of standards. I examined a relatively small sampling of minutes of one board.³⁵ My impression was that boards are active and take their coordination efforts seriously.

ANSI is a relatively large operation. Its 1977 annual budget is just under four million dollars, of which fifty percent is generated from sales of publications,³⁶ thirty-three percent from dues, and the balance from miscellaneous sources.³⁷

B. The Development of Voluntary Standards

The modern standards literature is replete with descriptions of "consensus" voluntary standards, their superiority to other types of standards, their entitlement to special consideration and respect in a variety of contexts, and the procedures to be followed to produce such a standard. However, attempts to create a simple, concise definition of such a standard tend to flounder.³⁸ The definition involves concepts of procedural fairness in its development combined with involvement of all significant interests in a balanced way and substantial agreement on the contents of the standard by most of the participants in the process. Despite the diversity of standards-writing organizations, there is general agreement that a good procedure entails several essential elements:

- (1) persons or interests that may be materially affected by a proposed standard should be given reasonable notice of consideration of the standard;

35. These were the minutes of the Nuclear Standards Management Board.

36. ANSI primarily sells copies of the standards themselves. To the extent that the standards are printed by member organizations, ANSI performs a central clearinghouse function, purchasing the standards from the members and reselling them upon request.

37. See, e.g., ANSI Progress Report I0-II (Mar. 1977).

38. Consider, for example, the following attempt by ASTM: "A consensus standard is a standard produced by a body selected, organized, and conducted in accordance with the procedural *standards of due process*. In standards-development practice a consensus is achieved when substantial agreement is reached by concerned interests according to the *judgment of a duly appointed review authority*." ASTM, The Voluntary Standards System of the United States of America (Feb. 1975) (emphasis in original). See also Proposed OMB Circular on Federal Interaction with Voluntary Consensus Standards-Developing Bodies, 43 Fed. Reg. 48 (1978).

- (2) potentially affected persons or interests should have an opportunity to participate in the deliberations, discussions, and decisions relating to the standard;
- (3) minority points of view and objections to the standard should be carefully considered;
- (4) standards should be approved by considerably more than a simple majority of the affected interests, although unanimity is not necessarily required;
- (5) minorities should have a right of appeal to assure that procedural rights were protected and their views were given full consideration;
- (6) adequate records should be maintained to document that the mandated decisional process was actually followed and the views of minorities duly considered; and
- (7) the entire process should be open to public scrutiny and review.³⁹

These elements are usually subsumed under the rubric "due process."⁴⁰ The procedures followed by the numerous standards-writing organizations sometimes may not actually provide this form of due process. While ANSI until quite recently has made no systematic attempt to ensure compliance with these procedural requirements by all the numerous standards-setting organizations, it is my general impression, based primarily on conversations with persons familiar with the current standards development process, that most participants have become increasingly aware in recent years of the need to follow fair and open procedures, and as a result the closed system that largely prevailed in the not-too-distant past has been largely eliminated.⁴¹

It is generally accepted that a good consensus process must allow review and approval by a balanced group in which no single interest is given disproportionate weight.⁴² As described below, this requirement

39. See ASTM, ASTM and Voluntary Consensus Standards 8 (undated brochure sent to all potential ASTM members).

40. Historically, lawyers have had relatively little to do with the writing of voluntary standards, and the phrase "due process" as used here is simply a layman's term that signifies an open procedure guided by notions of equity and fair play.

41. See Opala, *The Anatomy of Private Standards-Making Process: The Operating Procedures of the USA Standard Institute*, 22 OKLA. L. REV. 45, 51-53 (1969).

42. The proposed Voluntary Standards Accreditation Act of 1977 requires that "membership of standards-development committees be balanced so as to include and insure effective representation of all affected interests including, but not limited to, consumers, small business concerns, users, manufacturers, suppliers, distributors, labor, environmental and conservation organizations, and State and local procurement and code officials." *Hearings, supra* note 8, at 553. The "Recommended National Standards Policy for the United States" also states that special attention should be given to the balance of the group, particularly in relation to the representation of "consumer" and "user" interests. 43 Fed. Reg. 6298 (1978).

ANSI includes the concept of "balance" in its criteria for accreditation of organizations wishing to submit proposed American National Standards and for membership on the American Na-

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creates fundamental theoretical and practical problems that probably can never be resolved to everyone's satisfaction and therefore represents the most vulnerable part of the voluntary standards development process.

1. *ANSI Regulation of "Evidence of Consensus."*—ANSI has promulgated regulations, entitled "Procedures for Management and Coordination of American National Standards," that recognize three ways of establishing evidence of consensus for voluntary standards. Under the accredited organization method an organization that has its own procedures for formulating a voluntary standard may obtain ANSI approval of those procedures. Thereafter, standards developed by that organization may be considered American National Standards simply upon certification by the organization that the appropriate procedures have been followed, including the public review and comment procedures required by ANSI. To obtain approval, an organization must provide (1) an opportunity for participation "by all national interests substantially concerned with the scope of the proposed standard";⁴³ (2) consideration of all negative votes; and (3) a supervisory body to assure that procedures have been followed. Additionally, the ANSI regulations require a "balanced membership on each standards committee among those interests having potential concern with the specific project."⁴⁴

A relatively small number of organizational members with diverse membership have qualified as accredited organizations. These include both ASTM and NFPA. In addition, some professional societies and testing laboratories (including UL) have created committees with balanced memberships and have obtained accreditation either of the committees themselves or of the procedures under which such committees operate. In order to illustrate the procedures actually followed by an accredited organization, a detailed study is made below of the procedures followed by ASTM, the largest single producer of voluntary standards. The second method of obtaining evidence of consensus is obtaining approval by an American National Standards Committee acting pursuant to detailed ANSI regulations. The operation of these committees is also described below in some detail. The final method of

tional Standards Committees. ANSI Procedures, *supra* note 33, at §§ 3.3(1)(b), 4.8.3.2. For an extensive analysis and review of the concept of "balance," see generally R. DIXON, STANDARDS DEVELOPMENT IN THE PRIVATE SECTOR: THOUGHTS ON INTEREST REPRESENTATION AND PROCEDURAL FAIRNESS (1978).

43. ANSI Procedures, *supra* note 33, at § 3.3(2)(a).

44. *Id.* § 3.3(2)(b).

obtaining evidence of consensus is the canvass method. An organization using this method prepares a proposed standard through its internal procedures and submits it for ballot to a "canvass list," or organizations representing a variety of interests: users, producers, distributors, retailers, testing laboratories, general employers, employees, regulatory bodies, insurance companies, utilities, consumers, and the like. Objections or comments must be addressed and resolved; changes in the standard and unresolved objections, together with the reasons therefor and the organization's response thereto, must be resubmitted to the organizations originally canvassed. Obviously, a critical aspect of this kind of consensus approval is the development of an appropriate (or balanced) list of organizations to be canvassed. The ANSI regulations require advance submission of the list and contemplate assisting the organization in compiling the list.⁴⁵ ANSI regulations also provide that in determining who should represent various interests, "national associations, technical societies, and governmental agencies shall be utilized whenever possible."⁴⁶ Other groups or individual companies should be included only when there are no national associations or societies or when a party having a substantial interest is not represented through a national group.⁴⁷

The canvass method has been traditionally followed by a variety of organizations, including UL, the National Electrical Manufacturers Association, professional societies, and trade associations. At the present time, some of these organizations may develop some standards by canvass and others through committees—either American National Standards Committees or committees formed pursuant to procedures that permit either the committee or organization to qualify as accredited organizations. The major problem with the canvass method is the low level of response, which is often below twenty-five percent. Several factors contribute to this: natural inertia, the difficulty of analyzing a complex standard that contains virtually no rationale for its provisions, and an indifference to the provisions of the standard itself. A representative of the Housing Research Group, Center for the Study of Responsive Law, made the following observation: "The response level from consumer viewpoints is much lower still, of course, since few consumer groups (and even fewer consumers-in-the-street) are equipped to write in and comment upon a standard without having

45. *Id.* §§ 5.2-3.

46. *Id.* § 5.2.

47. *Id.*

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been involved in writing it.”⁴⁸ In any event, several persons familiar with standards development commented that it is not uncommon for significant objections to or second thoughts about the proposed standard to surface after the canvass period has expired. Of course, subsequent objections and second thoughts may also arise when other methods of ascertaining consensus are used.

The great bulk of American National Standards being developed today involve accredited organizations or American National Standards Committees, and the remainder of this section is devoted to those organizations.

2. *Preparation of Voluntary Standards by ASTM.*—As mentioned earlier, I spent several days observing the operation of the ASTM voluntary standards-writing process during ASTM’s 1977 annual meeting in Denver.⁴⁹ I talked with a large number of different committee members and ASTM employees involved in the process and attended a number of working group, subcommittee, and committee sessions.⁵⁰ The description that follows is an attempt to give the reader a “feel” for the process over and above the dry description of procedures appearing in the ASTM governing documents.

(a) *General impressions.*—The ASTM annual meeting is not a single gathering in any sense; it is the meeting of several hundred autonomous and semiautonomous committees⁵¹ convened for the same week in five or six hotels in a single city for administrative convenience, favorable accommodation prices, and, I suspect, saving wear-and-tear on the senior ASTM officers who feel it necessary to be visible and available for discussion or small talk. Of course, ASTM officers usually enjoy this kind of social contact and believe that it contributes significantly to morale.

The attendance was large even in a single hotel in which related interest areas were grouped. Most people did not appear to know each other; acquaintances appeared to be based on common company affili-

48. Letter from Peter L. Maier, Housing Research Group, Center for Study of Responsive Law, to the author (Nov. 12, 1977).

49. The 80th Annual Meeting was held June 26 through July 1, 1977, at five different hotels.

50. I attended some committees or subcommittees because they happened to be meeting at the time I was in the particular hotel, some because they involved consumer products, and some at the suggestion of ASTM officials who knew that controversial matters were being considered.

51. One cannot easily obtain an accurate count of the number of meetings actually held because some meetings were cancelled. The forty-eight page brochure containing the schedule was also incomplete because at least one major committee did not send ASTM its schedule or the schedule of subcommittees. I estimate that sections, subcommittees, and committees together held roughly 800 meetings during this period.

ation, shared areas of specialization, or prior contacts within ASTM. Not surprisingly, ASTM and trade association personnel seemed to know relatively large numbers of people.

My most vivid impression of the Denver meeting was that *there were no lawyers*.⁵² The people talking at the cocktail parties and meetings, wrangling over language, over policy, over the limits of scientific knowledge in the use of types of fly ash in manufacturing Portland cement, and over things I did not understand at all, were scientists, engineers, trade association executives, and the like. The only visible indications that these people might lack the lawyer's essential talent of writing crisp and coherent legislative provisions were the widespread availability of an ASTM manual on style in writing standards and a desk in every hotel lobby maintained by a young ASTM employee offering editorial assistance in the details of writing standards. This pattern of non-lawyer writing of standards is apparently typical of most technical standards-writing organizations.

I was also impressed by the atmosphere of high morale and strong support of the goals of ASTM, the premier technical and testing society. This observation is based upon comments from a disparate group of people. Most of them believed that ASTM made scientifically sound decisions founded on technical rather than economic considerations. On several occasions I broached the idea that voluntary standards might represent a "lowest common denominator," a view that was usually met with incredulity. Further, during several committee discussions I heard comments that seemed flatly contrary to the speaker's economic interests as well as to those of his employer. Moreover, members view election to the chairmanship of an ASTM committee or subcommittee as a mark of distinction, an accolade by one's peers. Those elected to ASTM boards of directors and other posts command similar respect.

(b) "*Procedural due process.*"—The bylaws of ASTM⁵³ provide general principles for the procedures to be followed in approving ASTM standards:

- 7.1.1 Timely and adequate notice of a proposed standard undertaking to all persons known to the society to be likely to be materially affected by it.

52. There are, however, lawyers on some ASTM committees, particularly E30, Forensic Sciences; E40, Technical Aspects of Products Liability Litigation; and several committees dealing with product safety, particularly D10, Packaging; F8, Sports Equipment & Facilities; and F15, Consumer Product Safety.

53. ASTM Bylaws (Oct. 15, 1976).

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- 7.1.2 Opportunity for all affected interests to participate in the deliberations, discussions, and decisions concerned both with procedural and substantive matters affecting the proposed standard.
- 7.1.3 Maintenance of adequate records of discussions, decisions, and technical data accumulated in standards development.
- 7.1.4 Timely publication and distribution of minutes of meetings of main and subcommittees.
- 7.1.5 Adequate notice of proposed actions.
- 7.1.6 Maintenance of records of drafts of a proposed standard, proposed amendments, action on amendments, and final promulgation of the standard.
- 7.1.7 Timely and full reports on results of balloting.
- 7.1.8 Careful attention to minority opinions throughout the process.

The committee and subcommittee meetings I attended were all open to the public.⁵⁴ One could obtain copies of the documents discussed, although often the participants or visitors exceeded the supply. Comments from the audience were always entertained, whether the speaker was a member of the committee or a visitor.

The meetings were not tape-recorded and no stenographic record was made;⁵⁵ the minutes kept by the committee or subcommittee secretary were the only record of the committee or subcommittee action. These minutes (some of which were later read at meetings of the parent committee) clearly met the requirements of the ASTM bylaws quoted above but generally gave no indication of the grounds on which a decision was made.

At the beginning of each meeting all present received a "list of attenders" to sign. Most of these lists offered an ASTM member the opportunity to become a member of the committee or subcommittee.

54. Until about a decade ago, the voluntary standards development process was conducted in almost total secrecy. Writing in 1969, Opala commented that the term "consensus" is "obviously a very loose term without any fixed contents. Its referent [*sic*] must of necessity be left in each instance to the imagination or bias of its arbiters," and "[n]o one outside the Institute can ever know or learn how the consensus principle is applied in actuality . . ." Opala, *supra* note 41, at 53-54. As described in this subpart, the ASTM process is now almost totally open. See generally *The Effect Upon Small Business of Voluntary Industrial Standards: Hearings Before the House Subcomm. on Activities of Regulatory Agencies of the House Select Comm. on Small Business Pursuant to H. Res. 53, 90th Cong., 2nd Sess. (1967-1968)*.

A staff member of the Administrative Conference attended the 1978 annual meeting of the NFPA. That organization required identification of "guests" who observed committee meetings, but the meetings were open. In contrast, ASTM meetings were completely open and identification was not required. In other respects the NFPA procedures were similar to those followed by ASTM.

55. A few ASTM committees, notably F15, Consumer Product Safety, maintain a verbatim transcript of, or record, all meetings. This is a fairly new practice.

Apparently, there are no quorum requirements for open meetings of committees or subcommittees; however, most significant decisions are made by letter ballot. The overall process seemed "due," at least from my limited perspective.

(c) *Committee membership and the issue of "balance."*—The ASTM regulations concerning technical committees contain principles about balance on committees. Committee members are classified into three categories: producer, user, and general interest.⁵⁶ Producer representatives may not constitute a majority in any committee or subcommittee and may not serve as chairmen of such bodies.⁵⁷

ASTM clearly encourages participation by all who may be affected by the development of a standard. Notices of a committee's intention to develop a new standard regularly appear in ASTM's monthly magazine, *Standardization News*, together with requests for assistance. Each committee considers requests by ASTM members for voting membership. An application can be denied only if the applicant would create an imbalance of the voting interests, or is not technically qualified or knowledgeable in the committee's area.⁵⁸ A consumer is assumed to be knowledgeable. Membership denial may be appealed to ASTM's board of directors. Except for "consumers" and "general interest" members, ASTM classifies committee membership by "voting interest," *i.e.*, as representing an entire company or a "plant, branch, or other primary division of a company or corporation having a separate interest" so far as the standard is concerned, "including all individual members of the Society affiliated with" the foregoing interest.⁵⁹ Thus, individual members represent their employers.⁶⁰ As a result, a major corporation has but one vote on a committee or subcommittee and cannot dominate that committee by having thirty or forty of its employees join.

Although at first glance the classification of industrial interests as "producer," "user," or "general interest" might appear to be a simple

56. Some committees include a fourth category: retailer/distributor. *See* ASTM, Regulations Governing ASTM Technical Committees § 3.7.1.9 (1973) [hereinafter cited as ASTM Regulations]. ASTM is currently wrestling with both specific and general classification problems. Its goal is "to assure that no special interest group dominates the standards-generating process." *ASTM Looks to the 'Eighties: A Five Year Plan*, ASTM STANDARDIZATION NEWS, Aug. 1977, at 13. ASTM proposes to decentralize the establishment of criteria for classification to the committee level subject to ASTM oversight.

57. ASTM Regulations, *supra* note 56, at §§ 4.1, 5.6.2.

58. ASTM, ASTM and Voluntary Consensus Standards 8 (undated brochure sent to all potential ASTM members). *See* ASTM Regulations, *supra* note 56, at § 3.6.

59. ASTM Regulations, *supra* note 56, at § 1.3.

60. *Id.*

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process, organizations that have economic interests parallel to those of producers or users, such as consulting firms, trade associations, and distributing firms, must themselves be classified as producers or users. Moreover, a serious gray area exists with respect to suppliers of raw materials who may be classified as producers if they are directly affected by the standard.⁶¹ Additionally, the classification of a major corporation may vary from standard to standard; General Electric, for example, produces many goods but uses at least as many. ASTM classifies a member when he first joins a committee, and it periodically reviews classifications to preserve balance thereafter.

General interest groups on ASTM committees consist of interests that are not identified with either the buying or selling side of any question⁶² and often represent various kinds of proprietary interests. They include representatives of educational institutions, public libraries, scientific or engineering laboratories, labor organizations, consumer organizations, and employees of federal or state governmental agencies (many of which represent procurement interests). On most committees ASTM makes no attempt to include a consumer representative because qualified representatives are hard to find and, in any event, many committees deal with technical issues of only peripheral interest to the "consumer movement"; however, all committees dealing directly with consumer products have consumer representatives as members. For similar reasons labor organizations are often unrepresented on ASTM committees. As a result ASTM committees appear to balance industrial economic interests against each other, with the result that a wide diversity in outlooks is often lacking.

Another factor that strengthens this impression is the pattern of attendance and participation at committee meetings. Most industrial firms support participation by their employees as a part of their regular duties, while for those without such support, membership and attendance can be a financial burden. For example, subcommittee D27.06, Chemical Tests for Electrical Insulating Liquids and Gases, meets

61. See *ASTM Looks to the 'Eighties: A Five Year Plan*, *supra* note 56, at 13.

62. Discussing the term "general interest," an ASTM official stated:

It is becoming [increasingly] clear that very few persons or organizations have a "general interest"—their interest in any standardization matter corresponds to the reason for existence; in other words, some sort of proprietary interest. We don't like to use the term "public interest" because these two words have been more or less preempted by Mr. Nader. For obvious reasons, we can't use the terms "special interest." So in the final analysis what we have to do is develop a designation for general interest that will make it a meaningful term. The alternative is to think up a couple of other words that we can use instead.

Letter from Walter V. Cropper, Director, Developmental Operations Division, ASTM, to the author (Aug. 5, 1977).

three or four times a year. Recently it met in Denver, Norfolk, and Houston. Although some members affiliated with less affluent groups might be able to attend meetings at their own expense, the cost of travel and lodging for the various meetings each year is prohibitive for most. In partial recognition of this problem, ASTM has set aside funds—currently 50,000 dollars per year—to assist people who are interested in ASTM activities but who are financially unable to attend, and most of those using these funds consider themselves “consumer representatives.” Nevertheless, the attendance record of industrial interests is clearly better than that of general interest members. Even the attendance of government employees is sometimes spotty because of limited travel funds.⁶³

Still another factor tends to impede the realization of balance in ASTM committees. Because of the unwieldy size of committees and subcommittees, smaller groups perform much of the detailed work in writing standards. Very often the process of writing a standard must be combined with continued laboratory testing, and members active in this kind of work are apt to be affiliated with industrial concerns that maintain laboratory facilities. It is generally believed that it is impossible or impractical to apply balance to these working groups and that consensus at the subcommittee and the committee levels of ASTM provides sufficient protection against industry domination of the process.⁶⁴

63. For example, a staff study on the implementation of a voluntary standards policy by the Consumer Product Safety Commission commented that “as a result of budget restrictions, the travel of Commission personnel to meetings of voluntary standards organizations has been curtailed.” [1978] *CONS. PROD. SAFETY GUIDE (CCH), Newsletter* No. 231, at 3 (Jan. 19, 1978). Several government employees and other observers of the voluntary standards process have made similar comments to me.

64. Approval is also required by a letter ballot of the full membership, which, of course, is not “balanced.” The following extract from the minutes of a meeting of ASTM’s Committee on Technical Committee Operations (COTCO) describes the problem:

At the Board meeting in January 1977, President Wheeler introduced the subject of poor attendance at main committee meetings. As Society president, he has visited a number of committee meetings and found this to be a common problem. He was not questioning the fact that due process was observed, only that it could be said by those who are the detractors of the system that a few are making decisions affecting a great number of people. Mr. Mather pointed out the change that had taken place some years ago concerning committee reporting sessions at annual meetings. He said that COTCO had considered this subject to some extent and that the proposed revision of the committee regulations would remove the authority of the main committee to do things at their main meetings that are not subject to subsequent letter ballot confirmation. Several directors spoke to the fact that the purpose of the main committee meeting, coming at the end of the week, is to receive the reports of the subcommittees; the work of the committee, except for the letter ballots, has been completed by the time that takes place.

COTCO discussed the subject of attendance at main committee meetings. The main concern raised by the discussion is that any action taken on standards appears to be determined by a small minority of the main committee present at the meeting.

It was pointed out that the negative voter has many opportunities to appeal his negative position. If it was mandatory that a letter ballot be conducted following main

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Since the size of the ASTM committees and subcommittees tends to make them formal, ratifying organizations rather than active participants in standards development, however, that protection may be illusory. The working section or subcommittee levels, in which most of the difficult issues are discussed and the differences resolved, are usually the best attended. After these meetings most of the individual participants return home, and the subcommittee secretary or chairman presents the reports, proposals, and votes to the full committee. Consequently, at the committee meeting there are relatively fewer actively involved persons, and the reading of minutes of working groups or subcommittees held earlier in the week tends to be pro forma, with little discussion of the merits unless the standard is controversial. Presumably, the committee relies on the greater specialization and knowledge of the smaller groups, even though these groups lack balance. One is left with the overall impression of extensive industrial participation in and domination of the process.

Nonetheless, the four problems discussed above—judgmental rather than scientific classification of interests, lack of qualified representatives for some important interests, uneven attendance, and the importance of working groups that lack balance—are undoubtedly present to some degree in all “balanced” committees.

(d) The formal votes required for adoption of an ASTM standard.—Approval of a standard by ASTM requires formal approval at a committee meeting or by letter ballot at three stages.

(i) The subcommittee.—At least sixty percent of all members or voting interests must vote, and at least two-thirds of those voting affirmatively or negatively must vote affirmatively. The decision to have a letter ballot, for which the canvassing period is at least thirty days, must be made at a meeting.

(ii) The committee.—At least sixty percent of all members or voting interests must vote, and at least nine-tenths of those voting affirmatively or negatively must vote affirmatively.⁶⁵ The vote may be by letter ballot without a meeting or by voice vote at a meeting confirmed by a letter ballot immediately thereafter. Again, the canvassing period is at least thirty days.

committee action on a standard, this type of procedure would slow down the standards process. The option exists to conduct a letter ballot following main committee action or any action.

Minutes, ASTM Committee on Technical Committee Operations, at 5 (Apr. 5, 1977).

65. Approval of a subcommittee decision that a negative vote is nonpersuasive or nongermane requires only a two-thirds vote.

(iii) *The society.*—At least fifty ballots must be returned, and at least nine-tenths of those voting affirmatively or negatively must vote affirmatively. The ballot is included in the ASTM publication, *Standardization News*, which is mailed to the 25,000 ASTM members. The publication gives only the title of the standard, although members may obtain a copy of the proposed standard by marking the ballot “R.” Standards noted in the June 1977 *Standardization News* contain a deadline of July 15, 1977, for return of the ballot. Since most members will be totally unfamiliar with many proposed standards, an “Ab” vote is authorized; this abstention counts toward the fifty-member voting requirement but not toward the nine-tenths requirement.

The time periods described above take no account of the possibility of negative votes, revisions of standards that may require resubmission or reapproval, or tabling of a standard for further consideration or testing. In addition, processing and tabulating the letter ballots takes up much time. Notwithstanding an editorial in ASTM's *Standardization News* commenting that an ASTM subcommittee adopted a widely-used voluntary standard for cigarette lighters in less than one year while the Consumer Product Safety Commission had been struggling with a proposed mandatory standard for book matches for two years without success,⁶⁶ relatively few new standards make it through the ASTM procedures in such a short time. A spokesman for ASTM estimated that the average time is probably two or three years, and that longer periods are not uncommon. For example, one standard specification, Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete, was in the process of revision for seven years.

While ASTM regulations provide a fixed percentage vote for approval of a standard—that is, determination of consensus—they also include a provision that may require block voting by interests rather than per capita membership voting “when the decision might be changed by such a tally.”⁶⁷ This provision is designed to prevent a “ganging up” of producer and user interests.

(e) *The resolution of negative votes.*—Most subcommittee and committee meetings I attended had to contend with one or more negative votes, colloquially called “negatives.”⁶⁸ I am told that a “crude

66. Meltzer, *Standards of What?*, ASTM STANDARDIZATION NEWS, Dec. 1976, at 7.

67. ASTM Regulations, *supra* note 56, at § 6.3.

68. The following chart shows the actual voting patterns of letter ballots in three subcommittees or committees I observed:

rule of thumb” in ASTM is that more than five or six negatives cast against a proposed standard are enough to remand the standard to the working group for further consideration.⁶⁹

ASTM regulations also describe the handling of negatives. To be considered as such, a negative vote must be accompanied “by a written explanation based on either technical or procedurally improper consideration.”⁷⁰ ASTM treats negatives unaccompanied by an explanation as abstentions. Every valid negative must be considered by the subcommittee.

Members submit negatives for a variety of reasons, including disagreement with a proposed standard or revision, disagreement with its scope, uncertainty as to the validity of the values or numbers appearing in the standard or revision, objection to language in the standard or revision, or concern that the manner of data presentation is confusing or ambiguous. Apparently, the first step in resolving a negative is to telephone the person filing the negative to explore the nature of the objection and the possibility of its resolution by a change in language or format of the standard. If this modification is successful, the objector is requested to withdraw his negative, and withdrawal is duly noted in the committee’s or subcommittee’s minutes. The makers withdrew somewhat more than half of all negatives filed in the committees I visited after some appropriate changes in the standard or revision.

If the negative is not withdrawn, there are three possibilities. First, the negative can be rejected on the ground that it is not “related to the item balloted.” Negatives were rejected on this basis in two instances I observed when the objection was of the following type: “The proposed

Committee	Issue	Voting Patterns of Letter Ballots		
		Affirmative	Negative	Not Returned or Not Voting
D2:	(a)	27	0	18
	(b)	24	4	18
	(c)	52	4	53
D27.06:	(a)	29	5	10
	(b)	29	1	13
	(c)	32	0	11
Tech. Div. A:		38	1	7

In some other committees the number of negatives was larger than in these but I was unable to get an accurate tally since the committees did not take formal affirmative action on the proposal.

69. Letter from Walter V. Cropper, Director Developmental Operations Division, ASTM to the author (Nov. 9, 1977).

70. ASTM Regulations, *supra* note 56, at § 9.3.3.1 (main committees); *cf. id.* § 8.2.2 (subcommittees).

standard covers X, and I have no objection to that so far as it goes. But the real problem in this area is Y, and the standard should cover that." Second, the negative can be rejected as "not persuasive." A philosophical objection or an objection based on data that is suspect or obsolete may be so categorized. Several negatives were rejected on this ground in the committee or subcommittee meetings that I observed. Third, the negative may cause the tabling of the standard for further study or revision. I observed one proposed standard that was delayed in this manner as a result of objections based on new laboratory data from a recognized reliable source. The chairman requested committee members with access to laboratory facilities to arrange for further tests, and several indicated that they would try to do so.

It was suggested to me that technical objections raised by consumer representatives have sometimes been disposed of rather summarily as "not persuasive." A technical employee of Consumer's Union who is an ASTM member believed that his views had sometimes been rather quickly rejected on this basis. An ASTM representative, however, stated that the proper handling of negatives is a matter of high priority to the Committee on Standards, the standing committee overseeing ASTM standards development activities. He did not believe the incidents that were relayed to me had actually occurred, and stated that the Committee reviews the disposition of all negatives. An examination of a sampling of the minutes of the Committee on Standards appears to substantiate this statement.

Persons voting negatively may submit a minority or dissenting report, but that option is rarely exercised. The more normal course is to renew the negative at the committee or membership level. Negatives raised at the committee or membership level are referred to the subcommittee for resolution or consideration. While ASTM requires a letter ballot for approval of a standard or revision, a negative may be disposed of by a voice vote in a subcommittee meeting by two-thirds of those voting.⁷¹ A subcommittee rejecting a negative must fully explain its reasons in a report to the full committee, and the committee must confirm the action of the subcommittee by a two-thirds vote, unless the objection is substantially the same as one previously considered by the committee. ASTM has a form to be used for this purpose, which suggests that such negatives are numerous. In the one instance I saw of a committee review of a subcommittee determination that a negative was "not persuasive," the committee disposed of the matter after brief dis-

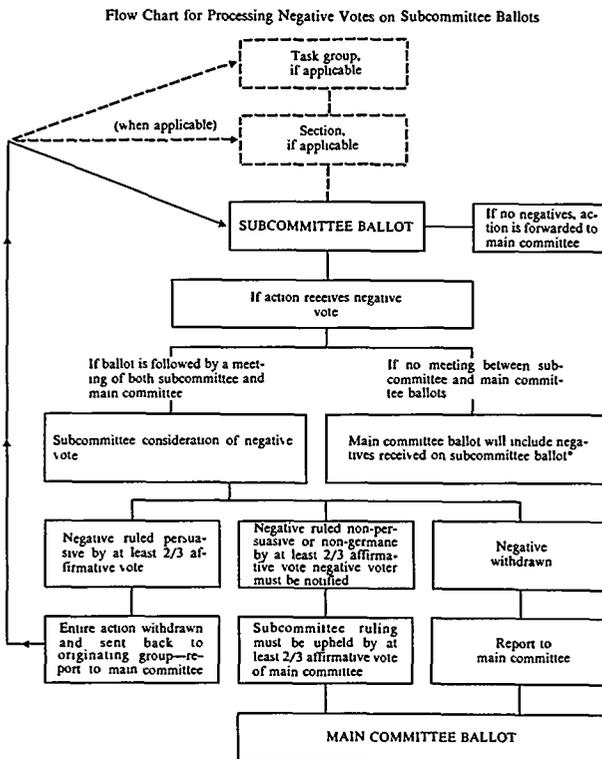
71. *Id.* § 8.2.2.

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cussion by a resolution stating that “on the basis of discussion in [the subcommittee] yesterday the negative [is] declared not persuasive.” Although only the person submitting the negative voted to support it, the ASTM representative attending the meeting intervened to insure that the record would include the grounds for the negative, the data on the basis of which it was declared unpersuasive, and the vote count.⁷²

(f) *Review by the ASTM Committee on Standards (COS).*— The Committee on Standards monitors and reviews ASTM’s standards development activities. It reviews all committee recommendations for actions on standards, verifies that the procedural requirements of ASTM’s regulations have been met, and accepts committee recommen-

72. This description oversimplifies the handling of negatives. The complexity of the process can be seen in the following flow chart, which describes the handling of negatives at the subcommittee level:



* These negatives will be considered by both subcommittee and main committee at next meeting.

ASTM Regulations, *supra* note 56, at 13. ASTM has prepared similar flow charts describing the handling of negatives at the committee and society levels. *Id.* at 14-15.

dations. It also considers general policies concerning standardization activities and relationships to other national and international standards organizations.

ASTM's board of directors appoints COS members for three-year terms. While they serve as individuals and not in a representative capacity, some attention is paid in the selection process to the nature of their employer's interest in standardization. Currently, the chairman and one member work for the federal government. COS meets three times a year.

I have reviewed the minutes of COS meetings for a twelve-month period. They reveal active COS participation in the standards development process. Comments in these minutes also provide revealing insights into the entire ASTM standards development process. For example, the minutes reveal that documentation describing the negative vote and the resolution by the Committee was always attached in each case when COS considered approved standards on which nega-

The following chart summarizes the voting requirements for the adoption or revision of ASTM standards at various levels.

Types of Actions on Standards and Corresponding Voting Requirements

Type of Review	Subcommittee	Main Committee	Society	Committee on Standards
Number of Returns Required for Valid Ballot	60% or more of members or voting interests	60% or more of members or voting interests	50 or more returns	
Requirement for approval based on sum of affirmative and negative votes	at least	at least	at least	
Standard, New	2/3	9/10	9/10	reviewed
Revision of	2/3	9/10	9/10	reviewed
Reapproval of	2/3	2/3	2/3	reviewed
Reversion of to Tentative	2/3	2/3	NA ^a	reviewed
Tentative Revision of	2/3	2/3	NA	reviewed
Adoption of Tentative Revision	2/3	2/3	9/10	reviewed
Withdrawal of	2/3	2/3	2/3	reviewed
Submission to ANSI of	2/3	2/3	NA	reviewed
Emergency Standard	2/3	^b	NA	reviewed
Tentative, Adoption of as Standard without Revision	2/3	2/3	2/3	reviewed
Adoption of as Standard with Revision	2/3	2/3	2/3	reviewed
New	2/3	2/3	NA	reviewed
Revision of	2/3	2/3	NA	reviewed
Withdrawal of	2/3	2/3	NA	reviewed
Proposed, New	2/3	2/3 ^c	NA	reviewed

^a NA = No action required.

^b Approval of Executive Subcommittee only.

^c May be voice vote at scheduled meeting. Proposed Standards have two-year life

Id. at 16.

tives had been cast. Moreover, negative voters were always invited to attend the meeting and present their views.⁷³ During the discussion of a negative vote on Committee D20, Plastics, "COS members were concerned with the consideration given to the negative voter. COS felt that this resolution of the negative should have been handled more specifically The COS expressed its concern that in the future D-20 be more responsive to the negative voter and that every effort to negotiate a satisfactory solution be recorded."⁷⁴ And when the negative voter on a standard developed by Committee F17, Plastic Piping Systems, requested that additional information be included with the documentation for this standard, a representative of F17 "clarified" the committee's action and pointed out that F17 had "set up a Task Force to further review the negative voter's position."⁷⁵

ASTM has another standing committee that deals with the structure and operation of technical committees. The Committee on Technical Committee Operations (COTCO) develops and maintains the regulations governing technical committee operations and serves the "judicial function" of interpreting and enforcing them. It seeks to achieve the most efficient operation of technical committees and engages in longer range planning. This committee considers, for example, the balance on technical committees and the names and areas of concern of such committees. It has also contributed to the planning and development of a five-year program for ASTM.

3. Procedures for the Development of Standards by American National Standards Committees.—Approximately twenty-five percent of ANSI-approved standards are generated by a network of committees created under ANSI auspices. The ANSI regulations provide in elaborate detail for the creation, operation, and control of these committees so that they will produce standards comporting with the consensus requirement.⁷⁶

73. Minutes, ASTM Committee on Standards, at 3 (July 1, 1977).

74. *Id.* at 4 (Nov. 8, 1976).

75. *Id.*

76. ANSI's B11 Committee, Safety Standards for Machine Tools, has summarized the procedure it follows in promulgating a safety standard. B11 is a large and active committee, and although the procedure used by other American National Standards (ANS) committees may vary in detail, I believe that the B11 procedure is representative.

1. Receive request from person(s) interested in developing a safety standard for a specific machine tool. Reason: To provide operator safety.
2. Form a working subcommittee consisting of a cross-section of interested builders and users of the equipment.
3. Write a draft standard (90-120 days).

(a) *Balance.*—Most members are organizations representing specific interests, although under some circumstances individuals may serve in a personal capacity, and corporations may serve if an organized group does not adequately represent them.⁷⁷ The relationship of members to the committee in question determines the classification of member organizations, and a limit on the number of members from any single classification provides balance on the committee.

Members of committees dealing with *products* standards are classified into the following groups:

- (1) producer interests—those directly concerned with the production of the product involved;
- (2) distributor and retailer interests—those independently concerned with the marketing of the product between producer and consumer;
- (3) consumer or user interests—those who use the product involved but are not involved with its production or distribution; and
- (4) general interests—those who have interests other than those described in (1) through (3).⁷⁸

To assure “substantial balance,” no one classification may have a majority without the consent of the other groups and ANSI.

4. Submit a draft to a list of (50-100) consultants—interested users selected by the working subcommittee members.
5. Make an oral report of the proposed standard at a meeting of the full (voting delegates and alternatives) B11 committee.
6. Revise draft based on comments received at B11 meeting.
7. Submit draft to B11 secretary for editorial review and submittal to B11 committee for letter ballot (30-45 days).
8. If approved by the B11 committee—draft standard sent to ANSI Safety Standards Management Board review committee for comment.
9. Draft standard submitted to ANSI for public review. ANSI lists it in *Standards Action* section of ANSI Reporter. Sixty (60) days are mandated for public review. (Steps 8 and 9 can be done concurrently with B11 Committee ballot, if requested.)
10. If no comments received in public review, B11 secretary formally submits draft standard to ANSI for approval by its Board of Standards Review (BSR), editorial review and publication.
11. Negative comments received by ANSI on public review are referred to B11 subcommittee for its review and comment. If technical changes are needed—another B11 letter ballot is required, (i.e., back to #7). If changes are not of a technical nature and do not affect the original intent of the committee approved standard the final draft is then submitted for BSR approval. If ANSI (BSR) approves, they (ANSI) make an editorial review and publish.

Status Report: ANS B11 Safety Standards for Machine Tools 2 (Apr. 15, 1977). Steps 9-11 refer to obtaining ANSI approval of the standard as an American National Standard through the Board of Standards Review. A more detailed discussion of the Board of Standards Review and ANSI procedures at that level is contained in subpart II(C) *infra*.

77. ANSI Procedures, *supra* note 33, at §§ 4.8.1-.2.

78. *Id.* § 4.8.3.1.

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Members of committees dealing with *safety* standards are classified in a more elaborate fashion where appropriate:

- (1) manufacturers of the product or material;
- (2) employers—purchasers or owners of the product;
- (3) employees affected by the safety standard;
- (4) governmental bodies having regulatory power or influence over the field in question;
- (5) specialists having expertise in the field of the committee's work, representatives of independent laboratories, or representatives of technical or other societies;
- (6) insurance interests;
- (7) installers and erectors;
- (8) utilities;
- (9) independent distributors and retailers; and
- (10) consumer interests.⁷⁹

ANSI also requires that “the public interest shall be adequately represented”; and to insure “substantial balance,” not more than one-third of the membership may come from a single category without the consent of the other categories and of ANSI.⁸⁰

Nevertheless, I suspect that the almost exclusive membership on these committees of associations representing economic interests rather than individual or corporate interests may adversely affect the efficacy of the elaborate provisions for balance. For example, Committee B11, Safety Standards for Machine Tools, has forty-six member organizations out of a total of fifty-two delegates; the list of association members reads like a “Who’s Who of American Trade Associations and Business Groups,” even though some are classified as manufacturers of machine tools, some as installers, some as employers, and so forth.⁸¹

79. *Id.* § 4.8.3.2.

80. *Id.*

81. A partial list of the organizations represented on Committee B11 and their classification are as follows:

Aerospace Industries Association of America, Inc.—Employers; The Aluminum Association—Employers; American Boiler Manufacturers Association—Employers; American Die Castings Institute, Inc.—Employers; American Federation of Labor and Congress of Industrial Organizations—Employees; American Insurance Association—Insurance Company Representatives; American Institute of Steel Construction—Employers; American Ladder Institute—Employers; American Metal Stamping Association—Employers; American Mutual Insurance Alliance—Insurance Company Representatives; American Society of Mechanical Engineers—Specialists; Automotive Original Equipment Manufacturers, Inc.—Employers; Can Manufacturing Institute—Employers; Computer and Business Equipment Manufacturers Association—Employers; Defense Industrial Plant Equipment Center—Employers; Electronic Industries Association—Employers; Forging Industry Association—Manufacturers of Products; Independent Cold Extruders Institute—Employers; Industrial Safety Equipment Association—Manufacturers of Products; International Association of Governmental Labor Officials—Governmental Bodies; International Union, United Automobile, Aerospace and Agricultural Implement Workers of America—Employees; Machinery Dealers National

Like the ASTM committees, American National Standards Committees are subdivided into working subcommittees and the subcommittees may be further divided into informal working groups. The detailed drafting of proposed standards takes place in these smaller groups. Committee B11, for example, has sixteen active subcommittees.

(b) *The secretariats.*—Each American National Standards (ANS) Committee has a sponsor (usually called a “secretariat”) whose function is partially administrative and partially substantive. It handles the distribution of drafts, the scheduling of meetings, the preparation and distribution of minutes, and similar matters. It also makes recommendations on applications for membership, it may appoint the committee’s officers, it arranges for publication of approved standards, and, to a limited extent, it has discretion in determining whether the results of balloting establish a consensus. ANSI selects the secretariats of the various ANS committees. Many are trade associations active in the pertinent area; for example, the secretariat of B11, Safety Standards for Machine Tools, is the National Machine Tool Builders Association. Other trade association sponsors of American National Standards Committees include such diverse groups as the American Hotel and Motel Association, the American Bankers’ Association, and the American Gas Association. Numerous other types of organizations also serve as secretariats, including professional associations, nonprofit organizations such as the National Safety Council, the Institute of Environmental Sciences, and the American Dental Association.

(c) *Consensus within the committee.*—ANSI defines “consensus” as “more than a majority but not necessarily unanimity.”⁸² It is often said that “votes are weighed rather than counted,”⁸³ so that the objection of a single significant interest may prevent the formation of a con-

Association—Manufacturers of Products; Manufacturing Jewelers & Silversmiths of America, Inc.—Employers; Motor Vehicle Manufacturers Association—Employers; National Association of Architectural Metal Manufacturers—Employers; National Association of Metal Name Plate Manufacturers, Inc.—Employers; National Electrical Manufacturers Association—Manufacturers of Products; National Machine Tool Builders’ Association—Manufacturers of Products; National Safety Council—Specialists; National Tool, Die & Precision Machining Association—Employers; Optical Manufacturers Association—Employers; Power Metallurgy Parts Association—Employers; Rubber Manufacturers Association—Employers; Steel Service Center Institute—Employers; Steel Shipping Container Institute—Employers; Tool & Die Institute—Employers; U.S. Department of Labor OSHA—Governmental Bodies; U.S. Department of Navy Bureau of Ships—Employers; Welded Steel Tube Institute—Employers. See Status Report: ANS B11 Safety Standard for Machine Tools 1 (Apr. 15, 1977).

82. *Foreword* to ANSI Procedures, *supra* note 33.

83. D. HEMENWAY, *supra* note 6, at 89.

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sensus even though a large numerical majority favors the proposed standard. The ANSI regulations with respect to ANS committees, however, like the ASTM regulations, are generally couched in objective terms and only partially support these concepts. Votes are usually by letter ballot returnable over a six-week period.⁸⁴ If a majority of the votes *cast* are in favor of a proposed standard, the secretariat may “use its discretion” whether to submit the standard to ANSI,⁸⁵ but if two-thirds of the total *possible* votes on the committee are in favor of the standard, the standard must be submitted to ANSI.⁸⁶ While it is unlikely that a standard opposed by a significant economic or commercial interest would command the affirmative vote of two-thirds of the entire committee, at least it is possible. Further, interests may be significantly underrepresented. For example, there are only two direct representatives of employees on Committee B11, Machine Tool Safety; to block an unacceptable proposal, labor clearly needs the concurrence of representatives of users or other interests.

(d) *Handling negative votes.*—A negative vote must be accompanied by a detailed explanation for committee consideration.⁸⁷ ANS committees must carefully review and attempt to resolve all such negatives,⁸⁸ following a procedure similar to that of ASTM committees described earlier. If the committee cannot resolve the issue, it forwards the negative votes and explanations to ANSI. If the committee changes the proposed standard to resolve a negative vote, the revision is recirculated to all committee members.

C. *Review by ANSI for Approval as an American National Standard*

ANSI observes the following requirements for determining whether to approve a voluntary standard as an American National Standard:

- (1) All substantially concerned parties should have an opportunity to express their views, and an objective effort shall have been made to resolve all dissenting viewpoints.
- (2) There should be evidence of national use or potential national use of a proposed American National Standard.

84. ANSI Procedures, *supra* note 33, at §§ 4.12.1-2.

85. *Id.* § 4.12.6.

86. *Id.* § 4.12.6.1. The regulations for a reaffirmation of an existing standard are analogous: if the standard does not receive a two-thirds affirmative vote it must be submitted as a proposed withdrawal, *id.* § 4.12.6.2; and if withdrawal of a standard is proposed, the affirmative vote of one-third of all possible votes requires submission to ANSI, *id.* § 4.12.6.3.

87. *Id.* § 4.12.5.

88. *Id.*

- (3) Before a proposed American National Standard is approved, any recognized significant conflict with any other American National Standard shall have been resolved.
- (4) Due consideration shall have been given to the existence of other standards having national or international acceptance in the given field.
- (5) There [inust be] no evidence that the standard is contrary to the public interest.
- (6) There [inust be] no evidence that the proposed American National Standard contains unfair provisions.
- (7) There [must be] no evidence of technical inadequacy of the proposed American National Standard.⁸⁹

The Board of Standards Review (BSR) reviews all standards submitted to ANSI for approval as American National Standards in essentially the same way regardless of the method used to establish consensus.

ANSI literature describes the function of the BSR as "judicial."⁹⁰ BSR ascertains whether procedural requirements have been followed and whether objections to a proposed standard exist that have not been considered by the group providing the standard, in effect determining whether an adequate basis of consensus exists. BSR does not review the substance of a standard or the substance of negative votes. In March 1977 BSR consisted of nine members, a chairman, and a vice chairman. The chairman was an executive of IBM Corporation, the vice chairman an executive of the American Petroleum Institute, and other members included executives of NFPA, UL, three industrial and engineering corporations, and officials of the National Bureau of Standards and the Eastern States Building Officials Federation. The members and officers are selected on the basis of individual qualifications and not because they represent certain organizations. There is no requirement of balance, although diversity of background appears to be a factor in selecting the members. The major criterion is an "ability to weigh the evidence and render impartial judgment."⁹¹

To determine the existence of possible objections to a standard, ANSI publishes an announcement in its biweekly publication, *Standards Action*, requesting comments on the standards being reviewed. The circulation of this publication is approximately 10,000. *Standards Action* describes the proposed standard only in general terms; to obtain

89. ANSI Procedures, *supra* note 33, at § 7.2.

90. ANSI, ANSI PROGRESS REPORT 19 (1977); ANSI, The Role of the American National Standard Institute 6 (brochure dated 1972).

91. ANSI, The Role of The American National Standards Institute 6 (brochure dated 1972).

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the proposed standard in its entirety, the commenter must order the standard from the appropriate organization and pay the required fee.⁹² Standards directly affecting the consumer must also be referred for comment to another group within ANSI, the Standards Screening and Review Committee of the Consumer Council.⁹³ Comments on the proposed standard are referred to the submitting organization or committee. The submitter must respond to negative or adverse comments, and the objector may notify the BSR chairman if he believes his objection has not been answered satisfactorily. A standard revised to meet the negative or adverse comment must be republished in ANSI.

If the BSR votes by written mail letter ballot, an affirmative vote of not less than two-thirds of the BSR membership is required to adopt the proposed standard as an American National Standard. Most matters, however, are handled by voice vote at meetings, in which only a simple majority is required. I examined the minutes of BSR meetings for a period of fifteen months ending in May 1977. Most of the issues considered involved disputes between standards-setting organizations active in related areas. My overall impression was that BSR takes its role seriously and insists on proof of both procedural compliance and the existence of a broad consensus. The minutes are sprinkled with split votes and votes in which the negative prevailed.

The requirements for approval of a standard by ANSI as an American National Standard are cumulative to those applicable to the adoption of the voluntary standard. The most visible and immediate

92. Two such notices, chosen at random from the June 17, 1977 issue of *Standards Action* read as follows:

Power Operated Pedestrian Door Standard, BSR A 156.10 (new standard). Applies to power operated doors for pedestrian use and some small vehicular traffic. This standard includes safety provisions that should reduce the chance of user injury or entrapment. It contains provisions covering mat sizes, coefficients of friction, and mat sensitivity. It also covers guide rails, signage, entrapment protection, panic break out provisions and sensing devices other than mats.

Order from: Builders Hardware Manufacturers Association
Attn: Richard Hudnut
60 East 42nd St., New York, N.Y. 10017

Single copy price: \$1.50

Flywheels for Engine Mounted Torque Converters, BSR/SAE J927b (new standard). Defines flywheel configuration to promote standardization of flywheels for engine flywheel-mounted torque converters.

Order from: Society of Automotive Engineers
Attn: Dept. 001
400 Commonwealth Drive
Warrendale, Pa. 15096

Single copy price: \$3.50

STANDARDS ACTION, June 17, 1977, at 2. The June 17, 1977 issue contained more than thirty similar entries.

93. See text accompanying notes 156-57 *infra*.

consequence is duplication of procedures. For example, an organizational member may provide published notice and an opportunity to comment as part of the process of developing the standard; later, ANSI provides a separate notice and comment period before approving the standard as an American National Standard. To minimize delays, BSR regulations now provide for concurrent public review through ANSI, at the request of the submitter during the later stages of the development process.⁹⁴

D. A Brief History of Standardization in the United States

The need for standards followed industrialization. As early as the 1840's, attempts were made to standardize screw threads to ensure interchangeability of a wide variety of basic industrial components. The modern standards-setting organizations, however, developed in the late nineteenth and early twentieth centuries. A major fire in Baltimore, Maryland in 1904, during which neighboring fire-fighting units found that their hoses did not fit Baltimore hydrants, and a boiler explosion in a Brockton, Massachusetts shoe factory in 1910, which killed 58 persons and injured 117 others, provided major impetus to the standardization movement.⁹⁵ ASME created the first private technical committee to write a code for boilers and other pressure vessels in 1911.⁹⁶ ASME itself was incorporated in 1881. Most of the other major standards-setting organizations date from about the turn of the century; ASTM was formed in 1898, NFPA in 1896, and UL in 1894. The National Bureau of Standards (NBS) of the Department of Commerce was created in 1901.⁹⁷

Prior to World War I the private sector developed standards with little central direction or governmental encouragement. However, the stresses of World War I highlighted major problems: various organizations developed inconsistent standards, some wrote standards with obvious anti-competitive purposes, and some standards appeared to be inadequate. In 1918, several professional and technical societies and three governmental departments, including AIEE, the American Soci-

94. BSR Regs. 6-6.3, ANSI Operating Procedures of the Board of Standards Review (approved Mar. 31, 1977); ANSI, *Concurrent Review*, Accelerating Approval as American National Standards (undated publication outlining the concurrent review procedure, XX 9372).

95. See D. HEMENWAY, *supra* note 6, at 1.

96. *Voluntary Industrial Standards: Hearings Before the Senate Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary*, 94th Cong., 1st Sess. 464 (1975). The early ASME was balanced; it consisted of one consulting engineer, two professors of engineering, two engineers employed by a boiler manufacturer, one engineer employed by a materials manufacturer, and one engineer employed by an insurance company.

97. 15 U.S.C. § 271 (1976).

ety of Mining & Metallurgical Engineers, ASME, ASTM, and the Departments of Commerce, War, and Navy created the first centralized clearinghouse for product and technical standards.⁹⁸ This organization, originally named the American Engineering Standards Committee,⁹⁹ underwent several reorganizations and name changes¹⁰⁰ before becoming ANSI in 1969.

The process of standardization accelerated during the 1920's, when then Secretary of Commerce Herbert Hoover established a Division of Simplified Practice to encourage standardization as a means of reducing waste.¹⁰¹ NBS prepared voluntary standards on its own and encouraged and assisted the development of such standards by the private sector, and although the relationship between NBS and the private sector has had its ups and downs,¹⁰² NBS participated actively in voluntary standardization activity for many years and still maintains a modest development program.¹⁰³

Prior to World War II, industry openly dominated the writing of voluntary standards: voluntary "standardization activities were once an exclusive domain of business for business by business."¹⁰⁴ Such activity was conducted in total secrecy and was subject to no published procedures.¹⁰⁵ There were, of course, diverse interests even then, and manufacturers, suppliers of materials, intermediate users of finished or semifinished products, insurance companies, state and local governments, and other interests found it mutually beneficial to discuss common problems and establish commonly acceptable principles with respect to products and processes.¹⁰⁶ During this period arose the

98. Opala, *supra* note 41, at 46.

99. *Id.*

100. In 1928 the organization was renamed The American Standards Association; in 1966 it was renamed the United States of America Standards Institute, Inc. It was given its present name in 1969, partially because its former name implied governmental endorsement of the voluntary standards. STANDARDS REPORT, *supra* note 17, at 27.

101. D. HEMENWAY, *supra* note 6, at 23.

102. For example, in 1928 ANSI's predecessor, the American Standards Association, formally requested NBS to withdraw from all voluntary standards-setting activity because it thought NBS's voluntary program conflicted with the activities of ASA Voluntary Industrial Standards.

103. 15 C.F.R. § 10.5 (1977). Recent standards developed by the National Bureau of Standards include safety standards for soft drink bottles (ANSI/VPS PS 73-77) and playground equipment (ANSI/VPS PS 66-75). See also, e.g., 42 Fed. Reg. 61885 (1977) (revocation of NBS standard on "Stainless Steel Plumbing Fixtures (Designed for Residential Use)" because of development of an "adequate" ANSI standard).

104. Opala, *supra* note 41, at 67.

105. For a critical description of the procedures followed by voluntary standards organizations, see SUBCOMM. NO. 5 TO THE HOUSE SELECT COMM. ON SMALL BUSINESS, THE EFFECT UPON SMALL BUSINESS OF VOLUNTARY INDUSTRIAL STANDARDS, H.R. DOC. NO. 1981, 90th Cong., 2d Sess. (1968). See also Opala, *supra* note 41, at 46.

106. Hemenway argues persuasively that industrial *buyers* are usually the motivating force behind standardization of products, and that *sellers* desire to preserve product differentiation ad-

greatest antitrust scrutiny of private sector standards.

World War II precipitated a reevaluation of the entire standards program. Standardization of consumer products to prevent hidden price increases through quality deterioration was needed because practically none of the private standards then in existence applied to consumer goods, and those that did were suspect. The ensuing debate over consumer product standards primarily focused on the relative roles of the federal government and the private standards organizations in the development of standards in new areas.¹⁰⁷

Shortly after World War II the principal standards-setting organizations took steps designed to broaden the interests represented in the standards-setting process, to open and democratize the process, and generally to move in the direction of commanding acceptance as *the* standards-setting process for the United States. Recognizing that consumer goods was an important but untouched area, consumer groups were nevertheless skeptical about becoming involved because historically they had not participated in the private standards sector.¹⁰⁸ The complete opening of the process to consumer involvement did not occur until the "consumer movement" of the late 1960's and early 1970's.

Two significant studies of the standards process appeared in 1960 and 1965. The Kelly Report¹⁰⁹ of 1960 to the Secretary of Commerce concluded that "there were so many groups issuing and promulgating standards that one can conclude 'that, in reality, the United States has no standards program.'"¹¹⁰ The Report stated that the absence of a truly national standards program should be remedied by phasing out the Bureau of Standards' role in standards development and relying instead on private organizations such as ASTM and ANSI's predecessor, and the Report concluded that a further study should be made of the entire area. That suggestion led to the creation of a new committee under the direction of Dr. Francis L. LaQue.¹¹¹ The 1965 LaQue Re-

vantages. The advantages to buyers, he suggests, include increased information about the composition of standardized products, greater interchangeability, and the advantages of simplification of choice; on the other hand, sellers are apt to desire standardization for anticompetitive reasons. D. HEMENWAY, *supra* note 6, at 68-79.

107. The studies emerging from this period are two unpublished "Wilson studies": C. L. Wilson, "Standards in Commerce: Basis for Action" (Dec. 1943) and C. E. Wilson, Chairman, "Report on the Policy Committee on Standards" (June 1945). Both reports are discussed in STANDARDS REPORT, *supra* note 17, at 17-19.

108. For example, no consumer groups were consulted in either of the "Wilson studies." STANDARDS REPORT, *supra* note 17, at 17-19.

109. Named after the Chairman, Mervin J. Kelly, then President of International Business Machines Corporation.

110. STANDARDS REPORT, *supra* note 17, at 21.

111. At that time, Dr. LaQue was Vice President of the International Nickle Company. Sub-

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port made wide-ranging recommendations that have had considerable impact on the relative roles of the government and private sectors. It urged Congress to reconstitute ANSI's predecessor as a corporation supported by direct federal appropriations to coordinate voluntary standards nationally. It also recommended greater democratization of procedures, more cooperative discussion with antitrust agencies, development of a certification program by ANSI, creation of a Division of Consumer Affairs within ANSI, recognition of ANSI as the official body representing the United States in international standardization activities, and creation of a federal interagency committee to mediate between government agencies and the standards-setting organization and to stimulate efficient use of such standards by the government.¹¹² Although Congress has implemented some of these recommendations, it has passed over several basic ones, including federal chartering and direct federal support of ANSI.

At about this point, consumerism and the development of mandatory product standards overtook voluntary standardization. Ralph Nader published *Unsafe At Any Speed*¹¹³ in 1965, which criticized the voluntary standards prepared by the Society of Automotive Engineers and approved by ANSI's predecessor. Nader's book was largely responsible for the 1966 National Traffic and Motor Vehicle Safety Act.¹¹⁴ Similar criticism of the safety of gas pipelines constructed in accordance with ANSI's B31.8 Code for Pressure Piping surfaced shortly thereafter, following a 1965 gas pipeline explosion in Louisiana that killed seventeen persons. Congress held extensive hearings on gas pipeline standards¹¹⁵ that led to the Natural Gas Pipeline Safety Act of 1968.¹¹⁶

sequently, Dr. LaQue served as President of ANSI (1969-1970) and head of the Office of Product Standards in the Department of Commerce (1974).

112. STANDARDS REPORT, *supra* note 17, at 23. The complete recommendations of the LaQue Report are reprinted as Appendix I to STANDARDS REPORT. See also Opala, *supra* note 41, at 48-49.

113. R. NADER, UNSAFE AT ANY SPEED (1965).

114. 15 U.S.C. § 1381 (1976).

115. *Gas Pipelines Safety Oversight: Hearings on Department of Transportation Progress in Implementing Natural Gas Safety Act of 1968 Before the Subcomm. on Surface Transportation of the Senate Comm. on Commerce*, 91st Cong., 1st Sess. (1969); *Natural Gas Pipeline Safety: Hearings on H.R. 6551 and S. 1166 and Similar Bills Before the Subcomm. on Communications and Powers of the House Comm. on Interstate and Foreign Commerce*, 90th Cong., 1st & 2d Sess. (1967-1968); *Natural Gas Pipeline Safety Regulations: Hearings on S. 1166 Before the Senate Comm. on Commerce*, 90th Cong., 1st Sess. (1967); *Safety of Interstate Natural Gas Pipelines: Hearings on S. 1553 Before the Senate Comm. on Commerce*, 89th Cong., 2d Sess. (1966). For a description of the subsequent development of standards for natural gas pipelines, see text accompanying notes 359-73 *infra*.

116. 49 U.S.C. §§ 1671-1684 (1970 & Supp. V 1975).

Congress established the National Commission on Product Safety in 1967,¹¹⁷ after considering more than 1000 industry standards applicable to consumer products, it concluded:

Unfortunately, these standards are chronically inadequate, both in scope and permissible levels of risk. They do not usually address themselves to all significant foreseeable hazards. They give insufficient consideration to human factors such as predictable risk-taking, juvenile behavior, illiteracy, or inexperience. The levels of allowed exposure to electrical, thermal, and mechanical and other energy exchanges are frequently too high

. . . .
In our judgment, safety standards should exclude from the market products which are unreasonably hazardous when used in a foreseeable manner. The "consensus" required in the past for standards approved by ANSI cannot guarantee such exclusion.¹¹⁸

Since 1970, Congress has produced a stream of legislation that to a greater or lesser extent contemplates the limited use of voluntary standards by federal agencies. The legislative histories of these statutes repeatedly express the concerns that the process is industry-dominated¹¹⁹ and that procedures followed may not be fair and open.¹²⁰ Such skepticism about the quality of voluntary standards is still widely shared by persons active in the consumer movement and others.

Two recent searching (and to some extent critical) reviews of the

117. S.J. Res. 33, Pub. L. No. 90-146, 81 Stat. 466 (1967).

118. NATIONAL COMMISSION OF PRODUCT SAFETY, FINAL REPORT OF THE NATIONAL COMMISSION OF PRODUCT SAFETY 48, 52 (June 1970).

119. For example, the two most recent books that discuss the voluntary standards sector both comment that it is "business oriented" or "industry dominated." N. ASHFORD, CRISIS IN THE WORK PLACE 250 (1976); D. HEMENWAY, *supra* note 6, at 90-91 (1975).

120. A recent illustration is the Federal Energy Administration Authorization Act of 1977, 15 U.S.C.A. § 788 (Supp. 1978). Section 32 of the Act requires that the Administrator consult with the Attorney General and Chairman of the FTC "concerning the impact of such standards on competition" before adopting a voluntary standard, and state in the public notice that the organization that promulgated the standard meets the following requirements:

(b) An organization complies with the requirements of this subsection in promulgating any commercial standards if—

(1) it gives interested persons adequate notice of the proposed promulgation of the standards and an opportunity to participate in the promulgation process through the presentation of their views in hearings or meetings which are open to the public;

(2) the membership of the organization at the time of the promulgation of the standards is sufficiently balanced so as to allow for the effective representation of all interested persons;

(3) before promulgating such standards, it makes available to the public any records of proceedings of the organization, and any documents, letters, memorandums, and materials, relating to such standards; and

(4) it has procedures allowing interested persons to—

(A) obtain a reconsideration of any action taken by the organization relating to the promulgation of such standards, and

(B) obtain a review of the standards (including a review of the basis or adequacy of such standards).

voluntary standards process were prepared by the Stanford Research Institute in 1972¹²¹ and ASTM in 1976.¹²²

E. "Horror Stories" About the Voluntary Consensus Process

Any consideration of the role voluntary standards have played in the American economy must take into account the various stories that have been told from time to time about specific abuses within the system. These stories have formed the grist of several legislative hearings and the basis for the contention made by some that the nongovernmental standards area is currently rife with abuse and in need of strong legislative correction. Ralph Nader's testimony before the Senate Judiciary Committee illustrates this attitude:

[T]rade product standards often harm consumers. The history of standards is strewn with abuses: standards essentially written by large corporations to exclude competitors from the marketplace, standards that misrepresent hazardous products as safe, standards that boost sales while benefitting only the producer, and standards designed to head off tough government safety requirements rather than protect the public.¹²³

The principal "horror stories" referred to by Nader and others at recent hearings¹²⁴ can be briefly summarized:

(1) In 1971, despite repeated pleas by the inventor, ANS Committee Z21 refused to approve an automatic vent damper device that promised noticeable savings in home heating costs. The "Vent-O-Matic" story received considerable publicity in a newspaper column by Richard Sherrill and was described on the television program *Sixty Minutes*. The committee's original decision not to approve the device was vigorously defended by ANSI, which claimed that the device was safe only if installed by professionals and potentially lethal if installed improperly. A Consumer Product Safety Commission (CPSC) employee familiar with this incident commented informally that he felt that there was justification for not approving the original device. In any event, the Z21 Committee recently approved the device, and a revised standard permitting its use is now in effect.¹²⁵

(2) A low water cut-off device for boilers developed by a small company promised to compete successfully with similar devices manufactured by McDonnell & Miller, Inc., the predominant supplier of

121. Long Range Planning Service, *supra* note 15.

122. ASTM, *The Voluntary Standards System of the United States of America* (1976).

123. *Hearings*, *supra* note 8, at 10 (statement of Ralph Nader).

124. *Id.* at 8-35.

125. ANSI Z21.66 (Approved Nov. 11, 1977). STANDARDS ACTION, Feb. 10, 1978, at 9.

boiler control devices. The allegation was made that McDonnell & Miller, through its close ties with an ASME committee, persuaded that committee in 1971 to issue a letter stating that the new device did not comply with the ASME Code, thereby effectively foreclosing the new device from the market.¹²⁶ After reporters from the *Wall Street Journal* began inquiring about this incident, a McDonnell & Miller employee physically destroyed some relevant letters.¹²⁷ Again, the controversy received considerable publicity and, again, ASME defended its finding of noncompliance.¹²⁸

(3) Another dispute raised the question whether the ANSI Screw Thread Committee, B1, acted improperly in rejecting a screw thread gauge produced by the Johnson Gage Company. ANSI described the dispute as "an honest technical dispute," not some form of trade restraint or collusion against a particular company or product,¹²⁹ and again vigorously defended the original decision; nevertheless, the B1 Committee subsequently accepted the Johnson Gage Company's screw thread gauge.

(4) Nader alleged that lighting standards promulgated by the Illuminating Engineering Society (IES) for classrooms, study halls, offices, and libraries are excessive and possibly harmful. To illustrate the excessive use of lighting equipment called for by those standards, Nader compared the IES requirements to lower ones recommended by the Federal Energy Administration, by a person described as the "acknowledged dean of library lighting consultants,"¹³⁰ and by unspecified ophthalmologists.

(5) Nader also alleged that ASTM's standards for polystyrene and polyurethane contained serious fire hazards, and that "plastic makers and ASTM had known of these serious fire hazards at least six years [before an FTC complaint filed in 1973], but had neither warned the public nor put a halt to the misleading claims."¹³¹ The FTC suit was ended by a consent decree signed by the plastic makers; ASTM was dropped as a party. Similar allegations have been made about the

126. *Voluntary Industrial Standards: Hearings Before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary*, 94th Cong., 1st Sess. 153, 155 (1975) (statement of Russell S. Rymer, Pres., Hydrolevel Corp.).

127. *Id.* at 196-99 (statement of John W. James, McDonnell & Miller, Inc.).

128. *Id.* at 201-14 (statement of Louis Stanton, Jr., Esq., Carter, Ledyard & Milburn, Counsel for ASME).

129. Memorandum from Donald L. Peyton, Executive Vice-President, ANSI, addressed to "Members of the American National Standards Institute" (Apr. 5, 1977) (section entitled "The Johnson Gage Case," at 1).

130. *Hearings, supra* note 8, at 17 (statement of Ralph Nader).

131. *Id.* at 11.

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permitted use of pre-1973 aluminum wire in residential homes. CPSC has brought a suit seeking to compel twenty-five manufacturers to publicize that an "imminent hazard" exists in more than 1.5 million homes due to their pre-1973 wiring.¹³²

(6) Small testing laboratories have publicly objected that attempts by them to obtain certification have been actively opposed by the giant Underwriters Laboratories in an apparent move to retain a virtual monopoly on testing activities.¹³³

(7) Despite the open membership policies of ASTM, several persons testified that they were denied membership or were not advised of scheduled meetings or pending proposals that were to be discussed at meetings. These witnesses indicated their belief that these incidents were intentional and were designed to maintain the technical committees as a closed "club."¹³⁴

There are other "horror stories" floating around that are not referred to in the latest hearings. A rather unselective Department of Commerce study¹³⁵ lists twenty-eight such stories, going back to the late 1950's, but makes no attempt to assess their validity. Rather curiously, the great bulk of these incidents involved building-related products, as did those summarized above.¹³⁶ A representative of a consumer-oriented organization has commented that he believed "the number of known, well-documented cases of abuse is at least forty and probably much higher,"¹³⁷ and a representative of the Senate Antitrust and Monopoly Committee staff publicly stated that the staff has received over one hundred complaints, most of which have not been investigated because of insufficient staff.¹³⁸

What is one to make of these various claims in light of the strong assertions by officers of standards-setting associations that policies and

132. Wall St. J., Oct. 27, 1977, at 21, col. 1; *id.* Oct. 28, 1977, at 20, col. 3.

133. See, e.g., *Hearings, supra* note 8, at 167 (statement of Leonard Frier, President, Met Electrical Testing Co., Inc.).

134. *Id.* at 101-02 (testimony of John O. Hayard, Apr. 18, 1977).

135. U.S. DEP'T OF COMMERCE, VOLUNTARY STANDARDS AND TESTING LABORATORY ACCREDITATION 74 (1977).

136. For this insight I am indebted to Carol Chapman, an economist with the National Bureau of Standards. She added: "If [the] FTC or the Senate Committee have anecdotes from other areas, they ought to make them public. Otherwise, it seems odd to regulate all standards organizations where the bulk of known problems relate to just one area." Letter from Carol Chapman, economist for the Standards Information & Analysis Section of NBS, to the author (Nov. 29, 1977).

137. Letter from Peter L. Maier, *supra* note 48.

138. Ray, *Congress Looks at the Voluntary Standards System and Reacts*, ASTM STANDARDIZATION NEWS, June 1977, at 19. This article is a reprint of a speech delivered by Mr. John Ray, Assistant Counsel to the Senate Antitrust and Monopoly Subcommittee, at the ANSI conference held in New York on December 7, 1976.

practices exist to preclude such incidents from arising? While it was not possible to investigate any of these incidents in detail, the information publicly available indicates that despite denials by ANSI, several of the asserted claims are plausible. Indeed, when asked informally about these claims, representatives of both ANSI and ASTM did not deny that some abuses may have occurred, particularly before 1970 when there was considerably less emphasis than today on procedural regularity. In substance, they¹³⁹ responded as follows:

(1) ASTM is a large, decentralized organization in which each of the numerous committees is largely autonomous. Some committee chairmen may not have received the message about open participation and membership as early as others. If, however, a person is denied membership or complains that he is not being given information, ASTM investigates, as the minutes of the ASTM Committee on Standards described earlier confirm. Also, they suggested that the denial or omission is often an inadvertent mistake by some individual rather than a calculated attempt to abuse the process.

(2) It is not uncommon for a majority of a technical committee to be content with the status quo even though someone has devised something that is as good or better. If the innovator complains, these problems are handled by the appropriate ANSI Standards Management Board. In the absence of a sound technical objection, the Board should indicate that the standard has to be broadened to cover the new product.¹⁴⁰

(3) There are thousands of standards decisions every year. It is remarkable that critics have found only a relatively few examples, which they use repeatedly. The one hundred complaints to the Senate Antitrust and Monopoly Committee are but a minute percentage of all standards decisions during the last few years.

To be sure, these views of ASTM and ANSI officers to some extent are colored by self-interest. The first three complaints listed above have been, or are in the process of being, resolved by the voluntary system. The attempt at resolution is a two-edged sword: because these incidents have been significantly politicized by legislative hearings, the attempt may be consistent with the consensus system working properly or a response to political pressure, or both.

The condemnation of a very large and complex system on the ba-

139. These comments were made by ASTM and ANSI employees during informal conversations with the author.

140. At this point an ANSI representative cited a standard involving electrical insulators that SMB recently required to be broadened to include a product that was "just as good."

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sis of a relatively few "horror stories" is, of course, a risky business.¹⁴¹ Such stories may represent only isolated occurrences or they may indicate deep and fundamental problems. Since even the smallest businessman unjustly injured by a voluntary standard may seek assistance from his local congressman or senator, however, one would expect much more numerous and persistent protests if these stories reflected widespread problems within the system. Nevertheless, these "horror stories" have had a powerful effect on attitudes toward the nongovernmental standardization process.

III. A General Evaluation of Modern Voluntary Standards

Voluntary standards exist in bewildering variety and serve many functions. Often it is entirely reasonable and appropriate for governmental agencies to utilize voluntary standards. This Article concludes, however, that governmental agencies should review all standards affecting health or safety cautiously and on a standard-by-standard basis, making amendments or adjustments in them when appropriate. An agency could effect such changes by adopting a revised version of the voluntary standard as its own mandatory standard or by working cooperatively with the promulgator to develop the voluntary standard. To support these basic conclusions, this part of the Article describes the general strengths and weaknesses of the modern voluntary standards process.

A. The Strengths of the Voluntary Standards Process

The voluntary standards process has several significant strengths that governmental agencies may not possess and may find difficult to duplicate. Governmental agencies should utilize these advantages to the fullest possible extent consistent with their legislative mandates.

The most obvious advantage of the voluntary standards process is the expertise of the technical committees, an expertise that probably cannot be matched by the technical staffs of most, if not all, agencies. Although governmental agencies can create advisory committees to obtain the private sector's expertise, this procedure is often impractical, always expensive, and probably inconsistent with the current desire of the Executive Branch to minimize reliance on advisory committees.

141. I would add that the number of such stories should not be the sole criterion; the seriousness or degree of harm done to the American public should also be taken into account. For example, if the "horror story" about excessive lighting levels is true, the cost to the American public is enormous, running into billions of dollars each year. Letter from Peter L. Maier, *supra* note 48.

A governmental employee working in a Washington, D.C. office may lack the real world experience to fully appreciate the impact of a proposed standard, but a truly unrealistic proposal most likely would not survive a broad consensus process in which a wealth of interests and points of view are represented. The same point can be made from a different perspective. Decisions affecting health and safety require tradeoffs between increased safety or health considerations on the one hand and increased costs and inconvenience on the other: the safest automobile would resemble an army tank more than the modern car. A balanced committee—that is, one that includes representatives of all substantial interests, each openly identified and free to present its views—working within one of the large standards-setting organizations in the private sector will balance these competing considerations at some point, although probably not the point chosen by other groups and almost certainly not the point selected by a Ralph Nader. Because of the previously noted industry orientation of most technical committees, the costs and complexity of increased safety or purity will almost certainly be weighted more heavily by these committees than by an individual whose primary concern is safety or health. One cannot say, however, that the balance struck by the technical committee is “wrong,” because the issue turns on value judgments. Most people may accept the choice made by a consensus, and yet total reliance on the judgments of the committees seems misplaced. The welter of legislative enactments vesting issues of safety or health in governmental agencies suggests that for many people the balance provided by the private sector often fails to accommodate health or safety considerations satisfactorily. The legislative histories of many of these statutes reveal a concern that the voluntary standards themselves were not adequate.

The consensus process has a final advantage. The modern industrial process constantly changes. New technology, new products, and new processes and procedures emerge. Active technical standards-writing committees composed of persons intimately familiar with current developments can revise standards to keep them abreast of developments with relative ease, whereas governmental agencies, for various reasons, often have great difficulty keeping standards current. The most extreme examples of the inability of agencies to keep mandatory standards as current as voluntary standards involve standards incorporated by reference. As described in the following section, some agencies, particularly the Occupational Safety and Health Administration (OSHA), have not revised such mandatory standards to reflect the lat-

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est revision of the voluntary standards until years after the revision has become effective. In part, this reflects the slowness of agency standards-setting.

B. Limitations on the Value of Voluntary Standards in the Regulatory Process

Some voluntary standards that clearly affect safety or health were prepared at a time when the issues seemed relatively uncomplicated and these effects were not fully considered or understood. For example, ASTM promulgated a standard for gasoline that emphasized high engine performance and efficiency, without considering the effect of fumes on the environment. Considerations of volatility were based solely on motor characteristics rather than on the specific atmospheric conditions in the Los Angeles basin.¹⁴² Similarly, OSHA discovered that many voluntary safety standards were totally obsolete and based on problems that long ago disappeared.¹⁴³ It is clearly undesirable to use such standards as the basis for a modern health or safety standard.

Nonetheless, most voluntary standards are not obsolete, most are periodically reviewed, and most appear to encompass safety and health considerations. When that is the case, persons active in the voluntary standards process have argued that the voluntary standard presents the best balance of economic costs and safety and health, and that the adoption of a different standard is in some degree a move away from the optimum. Yet, a consideration of this argument points out the major limitations on the widespread adoption of the voluntary standard. Preliminarily, consider an ideal world in which the following conditions prevail: (1) all interested groups are duly represented in the body charged with developing a voluntary standard; (2) each representative has accurate information about the consequences of a proposed compromise that will affect the group he represents; (3) each representative can articulate why a proposed compromise may be unacceptable; (4) no representative will accept a compromise unless it provides significant protection for the interests of the group he represents; and (5) the objection of any group will prevent the establishment of a consensus. Assuming that such an ideal group can reach a consensus on a standard at all, the standard agreed upon probably represents the best attainable. In effect, a point that satisfies all those consulted is selected on the line connecting increased protection to increased cost and complexity. It

142. This example was related to the author during informal conversation with members of the D2 Committee, Petroleum Products.

143. See text accompanying notes 175-90 *infra*.

seems to me that those in standards-setting organizations who argue for adoption of a voluntary standard by a regulatory agency implicitly equate the voluntary standards process actually followed with the idealized process described above, but it is manifest that the idealized process can never be fully attained in the real world. The major problems are balance on the committees¹⁴⁴ and the lack of a strong voice for significant groups on many committees. The latter problem appears to be endemic to the voluntary standards system, since even when a strong representative of an underrepresented group is on a committee, the method of voting does not ensure that the representative can prevent the formation of a consensus.¹⁴⁵

Three groups generally are not adequately represented in the consensus organizations.¹⁴⁶ Although voluntary standards organizations have made efforts to include these groups, they have not been completely successful, and indeed, probably cannot ever be totally successful.

1. Small Business.—Small businesses are affected by standards applicable to products, plant safety, and other matters. Whether they are affected differently than larger businesses is debatable, but some standards may affect small businesses distinctly because of their limited financial resources. Apparently, no organization currently represents small business as such when a separate interest seems evident.

Historically, relatively few small businessmen actively participated in the major standards-setting organizations, probably for economic reasons. The cost of joining ASTM or ANSI was doubtless a factor, although probably more important was the cost of traveling around the country, a necessary incident to active participation in the standards development process. Testimony before Congress in 1968 and 1977 emphasized that small business was not adequately represented in the standards development process.¹⁴⁷

144. For an interesting discussion concerning the practical problems involved in achieving "balanced" representation, see R. DIXON, *supra* note 42, at 35-41.

145. See text accompanying note 67 *supra*.

146. One person observed to me that there might be a fourth group: government agencies that as a matter of policy, either because of ignorance or because of a lack of resources, fail to participate in standards-writing activities in which they have a direct interest. My own limited experience of agency reaction to the voluntary standards process revealed only one agency that as a matter of policy did not participate at all in the process. See text accompanying note 385 *infra*.

147. See *Hearings, supra* note 8, at 374-411, 437-44 (statement of Donald L. Peyton, Executive Vice President, ANSI; and statement of Carl A. Beck, National Small Business Association). See generally *The Effect Upon Small Business of Voluntary Industrial Standards: Hearings Before the Subcomm. on Activities of Regulatory Agencies of the House Select Comm. on Small Business*, 90th Cong., 1st & 2d Sess. (1967-1968).

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ASTM challenges the assertion that small businesses are underrepresented in the standards development process. It estimates that if a small business is defined as one with fewer than 750 employees or annual operating income below fifty million dollars, small businesses constitute fifteen to eighteen percent of ASTM's total membership.¹⁴⁸ On a number of committees—including D22, Atmospheres; E21.10, Solar Heating and Cooling; and F12, Security Systems and Equipment—the percentage is much greater, usually greater than that of larger corporations. ASTM formed Committee F10, Meat Products, in cooperation with the National Association of Meat Purveyors, an organization composed of small businesses. In addition, individuals from small businesses often hold influential positions in ANSI, ASTM, ASME, and other organizations. Small businesses can participate in ASTM on an individual basis for an annual membership fee of thirty-five dollars; ASME charges no fee for participating. Membership in standards organizations provides the opportunity to meet members of the research community and to keep apprised of technological developments as well as to participate in standards development.

Despite the foregoing, people in the standards community view underrepresentation of small business on technical and other committees as a problem. ANSI recently entered into an agreement with the National Small Business Association seeking to broaden the participation of small businessmen in the standards-writing process by obtaining more comments on proposed standards. Implementation of this agreement is presently in its formative stages.¹⁴⁹ Moreover, small business participation may also occur through trade associations active in ANSI and the standards-writing organizations because trade associations may represent the interest of a large number of small businesses.

2. *Labor*.—There appears to be no representative of *non-unionized* labor in the consensus process. National unions have centralized staffs and considerable economic and political influence. If they participated extensively, unions might provide adequate representation for both the organized and unorganized, particularly on committees dealing with safety and health in the workplace. The AFL-CIO and many other industrial unions, however, treat the voluntary standards organizations coolly, viewing the consensus process as “inmanage-

148. Letter from Walter V. Cropper, *supra* note 69.

149. The National Small Business Association originally planned to send copies of proposed standards to selected small business members with a suggestion that they comment. I was advised informally that this original effort did not produce an appreciable number of comments.

ment's ball park"; consequently, they do not generally encourage staff participation.

There are usually one or two union representatives on the consensus committees' rosters, particularly if the committee deals with health and safety. Some craft unions participate extensively in areas of concrete interest to them; for example, the International Brotherhood of Electrical Workers has active members on each of the panels of the NFPA National Electrical Code Committee, and unionized fire fighters participate actively on many NFPA committees. Two labor representatives appear on American National Standards Committee B11, Machine Tool Safety.¹⁵⁰ There is not, by any means, a total boycott. Labor representation does not appear at all, however, on many committees and subcommittees dealing with issues of interest to the American worker, and in recent years some persons active in the labor union movement, particularly in the industrial unions, have declined invitations to join voluntary standards committees and organizations. This reluctance to participate is based on several factors. First, the union movement has traditionally concentrated on bread-and-butter economic issues and handled noneconomic issues through the political process, although this tendency has changed with the current emphasis on worker safety and health.¹⁵¹ Second, most unions lack the technical resources to engage in widespread voluntary standards setting. A representative of the United Steel Workers (USW), for example, commented that USW employed only two technical people, while "management" employs thousands. Obviously, this lack of technical resources would be partially overcome if the union changed its spending patterns. Third, unions view the resolution of controversies within the voluntary standards organizations as completely controlled by "management." To submit to a process in which they can be outvoted is anathema to the labor movement in whose eyes labor's vote should balance management's. Finally, some union officials fear that participa-

150. See note 81 *supra*. A person employed by ANSI suggested that this statement significantly understates the representation of employees on this committee. In addition to general interest groups, he argued, purchasers of machine tools have an interest in safe machine tools to protect their employees from physical harm. While there is obviously truth in this suggestion, the interest of employers is not identical with the interest of labor since employers are basically interested in inexpensive safe machine tools, while labor desires safe tools without much regard for cost.

151. A person familiar with the role of the labor movement commented that the labor movement has always been concerned with safety. Safety was first addressed through court action, then by workmen's compensation statutes, then by "voluntary" safety standards, then by crisis legislation at the state level, and finally administratively through OSHA. Letter from Sheldon Samuels to the author (Nov. 13, 1977).

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tion by labor under these circumstances gives a legitimacy to the voluntary standards process to which it is not entitled.

Labor fought hard for the adoption of the Occupational Safety and Health Act of 1970.¹⁵² The union movement tends to view the Act as a device to move safety and health issues away from the voluntary standards organizations into the more friendly terrain of the Department of Labor, in which labor's views would be given greater weight and its representation would be equal with management's. As described below, these expectations have been largely frustrated.

3. *Consumers.*—The underrepresentation of consumers raises the most difficult conceptual and practical problems. The consumer view is really a whole panoply of viewpoints on specific issues; for example, one consumer wants inexpensive products, another wants safe products, and a third wants a particular mixture of the two. It is difficult if not impossible to find a representative for such a bewildering variety of interests. There are self-styled consumer representatives who have no constituency at all, there is Ralph Nader, there is the Consumers Union, there are federations of housewives, of gun control opponents, of railroad buffs, and many others, all claiming to represent consumers or at least a segment of them. Selecting one or a few is almost certain to incorporate a consumer viewpoint that is not representative.

The fact that consumers are likely to be the only group to voice concerns about social costs that are noneconomic and external to the other represented interests greatly complicates the problem. Air and water pollution are classic examples of costs that are external to the various economic interests represented in the consensus process—the producer, the work force, the supplier, the user, and so forth. Who represents the resident of the Los Angeles basin on the ASTM committee defining gasoline? One suggested answer is that one or more governmental agencies, either state or federal, should provide that representation, a response that assumes that broad noneconomic interests are simply other interests to be represented in the consensus process similar to the interests of producers or users. When a governmental agency has the power to supplant voluntary standards with mandatory standards without regard for consensus, however, noneconomic interests may dominate the decision.

Voluntary standards organizations have made significant efforts to

152. 29 U.S.C. § 651 (1970).

broaden their base, particularly since "the age of the consumer" began in the late 1960's. These efforts include the following four innovations.

(a) *The creation of "Consumer Sounding Boards."*—These panels, utilized by ANSI, ASTM, UL, NFPA, and others, primarily provide an opportunity for groups of consumers to discuss problems with manufacturers, trade association personnel, and the like. They are little more than "rap sessions" that do not entail actual participation in the voluntary standards-writing process. Not surprisingly, different sounding boards may take significantly different positions on the same issue. CPSC, ASTM, and other organizations have provided these sounding boards with financial assistance for "soundings" on specific consumer products.

(b) *Direct participation by technically qualified consumer representatives on technical committees.*—A scattering of technically qualified persons from consumer-type organizations and other sources currently participate in the standards development process. Several employees of Consumers Union, for example, are on technical committees, principally those developing or reviewing standards for consumer products. Other technically qualified consumer representatives include members of other consumer organizations, academics, scientists from related disciplines, and persons retired from industry. Major problems with this class of representatives are finding them in sufficient number¹⁵³ and financing the cost of their participation. ASTM provides a modest amount of financial support, currently 50,000 dollars per year, to ameliorate the latter problem. Most of this support goes to persons serving on the ASTM committees dealing with consumer goods. ANSI also provides some financial support for such persons on an ad hoc basis. Further, in at least one instance a governmental agency directly interested in the work of a particular standards committee paid the transportation costs of a few qualified consumers to attend a technical committee meeting.¹⁵⁴ One member of a consumer-oriented organization expressed his opinion that there are qualified consumer representatives "out there" without the financial resources to participate.¹⁵⁵

153. A good example is UL's attempts to find consumers for its committee on the safety of television receivers. Many persons originally very interested dropped out "for reasons ranging from pregnancy and previous social plans to business conflicts and vacations." Hoffman & Farr, *Television Receivers: The UL Experience*, ASTM STANDARDIZATION NEWS, May 1977, at 21.

154. Letter from Robert J. Cangelosi, Acting Director, Division of General Medical Device Standards, Bureau of Medical Devices, Food and Drug Administration, to the author (Nov. 28, 1977).

155. Letter from Peter L. Maier, *supra* note 48.

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(c) *Appointment of nontechnical individuals to technical committees.*—A major hindrance to effective participation by persons who are not technically trained is their lack of knowledge and background. Those giving technical advice and assistance to such participants are likely to have disproportionate influence, or at least may appear to have such influence in the eyes of some participants in the standards development process. Nevertheless, several committees, particularly those concerned with consumer products, have included nontechnical consumer representatives.

(d) *Review by ANSI Consumer Council.*—ANSI created the Consumer Council in 1967, which reviews all consumer standards prior to their approval by ANSI. The review is provided by a standing committee, the Standards Screening and Review Committee.¹⁵⁶ While the organization submitting a proposed standard need not adopt the suggestions nor meet the objections of the Council, it must respond to them. Council members include individuals representing consumer interests as well as representatives of standards-developing organizations, corporations, and government. Home economists, representatives of major retailers, testing organizations, *Good Housekeeping* magazine, and Consumers Union are currently members of the Council.¹⁵⁷ A Council member with a “pure” consumer orientation described the Council’s review procedure as reasonably successful in bringing consumer problems and needs to the attention of major standards writers.

(e) *Indirect representation.*—Nonconsumer groups represented in the voluntary-standards process may provide consumer-oriented input because their interests sometimes parallel those of the “consumer.” Voluntary standards created with indirect consumer input are often quite satisfactory standards. I suspect that indirect consumer participation frequently influences development of NFPA fire prevention stand-

156. The bylaws of the Consumer Council describe the roles of this committee as including recommending “appropriate action to the Board of Standards Review,” as well as recommending draft standards for consumer products and services. ANSI, ANSI Operating Procedures of the Consumer Council, Reg. CC5.1.5 (approved Sept. 14, 1976).

157. An employee of ANSI suggested to me informally that representatives of large purchasing organizations, like Sears, provided a considerable degree of proconsumer expertise on the Council.

Other organizations, such as Underwriters Laboratories, have also created Consumer Advisory Councils. UL has, in addition, recently created a Conference of Technical Users of Consumer Products composed of representatives of governmental organizations “that do not regulate but do have an involvement and interest in product safety,” product testing laboratories, retail stores that have consumer product evaluation programs, and other organizations. UL Standards for Safety, Method of Development, Revision and Implementation of UL’s Standards for Safety 6 (July 26, 1978).

ards. Local fire marshals, for example, share consumer interest in fire prevention; therefore, it is not surprising that NFPA standards are often singled out as being of higher quality than many others.

4. *Other factors.*—Other factors also may lead to a less than optimal resolution of safety or health issues. For example, voluntary standards developers are generally aware of possible antitrust problems and the danger of establishing a standard so high that it excludes an apparently acceptable product of lower quality. To the extent that the higher quality product has improved safety or health characteristics, the antitrust laws encourage the acceptance of lower levels of safety or health. Of course, a correlation between quality and safety or health does not exist in the case of all products.

5. *Summary.*—The two major problems with use and acceptance by government agencies of voluntary standards for affecting safety or health arise from uncertainty about whether there has been sufficient participation by consumers, workers, and small business, and, whether adequate consideration has been given to certain noneconomic interests in developing a consensus when most of the participants are representatives of economic interests. Accordingly, voluntary standards should be considered on a case-by-case basis by agencies and utilized only after a cautious examination reveals that these standards adequately consider health or safety. Agency participation may very well result in the development of better health or safety standards at a minimal cost to the agency, and provide other benefits to the agency as well. Nevertheless, agencies should carefully evaluate all voluntary standards, including standards developed with agency participation, before adopting them as acceptable regulations of safety or health matters.

IV. Experience with Governmental Utilization of Voluntary Standards

Historically, governmental agencies have translated voluntary standards into mandatory ones through "incorporation by reference." State and local regulations and ordinances, such as construction, fire, plumbing, and electrical codes, are widely incorporated by reference. Federal regulations also frequently incorporate by reference voluntary standards affecting health or safety. These incorporations may be of an entire Code or of a specific section.¹⁵⁸ They may appear in the regula-

158. Compare 42 C.F.R. § 52b.12(e) (1976) (concerning grants for facilities relating to the National Cancer Program, which states that "[a]ll electrical installations and equipment shall be

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tions themselves or in pamphlets or handbooks prepared by the agency for distribution to interested members of the public.¹⁵⁹ Some of the more popular voluntary standards are incorporated by reference, in whole or in part, by a number of agencies. NFPA's National Electrical Code, for example, is referred to in at least six sets of regulations; a division of ASME's Boiler and Pressure Vessel Code in at least five.¹⁶⁰

Federal agencies differ from state and local governmental bodies in one important respect. Most state and local bodies lack the technical ability to write standards independently. As a result, they must adopt the voluntary standard. In contrast, most federal agencies have technical staffs with the capacity to develop "in-house" standards¹⁶¹ for at least some areas of their regulatory concern. Moreover, as described below, several agencies develop in-house standards because they administer statutes whose legislative histories express serious reservations about the adequacy of voluntary standards and direct the agencies to develop independent federal standards.

This part of the Article describes in some detail the experiences several agencies have had with the voluntary standards process. The purpose of this discussion is not to generate recommendations addressed to specific agencies but to flesh out the complex interrelationships that accompany interaction between agencies and voluntary standards-writing organizations or between new mandatory standards and existing voluntary ones.

in accordance with State and local Codes and applicable sections of National Electric Code, NFPA Bulletin No. 70, 1971") with 49 C.F.R. § 192.153(a) (1977) (which requires design pressures for certain natural gas pipeline components to "be established in accordance with paragraph UG-101 of Section VIII of the ASME Boiler and Pressure Vessel Code").

159. *See, e.g.*, DEPT OF HEALTH, EDUCATION AND WELFARE, MINIMUM REQUIREMENTS OF CONSTRUCTION & EQUIPMENT FOR HOSPITAL AND MEDICAL FACILITIES 4 (1974) (Pub. No. (HRA) 74-4000). HUD also publishes a three-volume set of "Minimum Property Standards" for determining acceptability of housing built under mortgage insurance and low-rent public housing programs. These standards are generally updated every three months. 24 C.F.R. §§ 200.929, 200.933 (1977).

160. *Compare* 29 C.F.R. § 1910.66(c)(22)(i) (1977); 33 C.F.R. § 183.435(a)(1) (1977); 42 C.F.R. § 57.112, app. A, para. (e) (1977); 46 C.F.R. § 63.05-85(b) (1977); 49 C.F.R. § 192.163(e) (1977); and 42 C.F.R. § 52b.12(b)(3)(1977)(all incorporating by reference the NFPA National Electrical Code) with 29 C.F.R. § 1910.103 (b)(1)(i)(1)(1977); 49 C.F.R. § 171.7(d)(1)(1977); 49 C.F.R. § 192.153(a)(1977); and 42 C.F.R. § 57.112, app. A, para. (b)(3)(1977)(all incorporating by reference the ASME Boiler and Pressure Vessel Code).

161. The largest developers of independent governmental standards are the procurement agencies, particularly the Department of Defense (DOD). DOD, however, has moved in recent years toward greater use of externally generated voluntary standards. *See* 41 Fed. Reg. 31842 (1976); DOD Instruction issued under the signature of Frank A. Shrontz, Assistant Secretary of Defense Installations and Logistics (Dec. 28, 1976).

A. Occupational Safety and Health Administration (OSHA)

The Occupational Safety and Health Administration of the Department of Labor provides the most graphic example of the indiscriminate use of voluntary standards. The Occupational Safety and Health Act of 1970¹⁶² authorizes the Secretary of Labor to establish standards to assure safe and healthy working conditions for American workers.¹⁶³ The Act is also designed to encourage the participation of states¹⁶⁴ in efforts to assure improved working conditions and to foster research, information, and education¹⁶⁵ in the field of occupational safety and health.¹⁶⁶ In addition to the broad standards-setting authority vested in the Department of Labor, the Act also creates a research organization in the Department of Health, Education, and Welfare, the National Institute for Occupational Safety and Health (NIOSH);¹⁶⁷ an independent adjudicative agency to review contested enforcement proceedings, the Occupational Safety and Health Review Commission;¹⁶⁸ and miscellaneous advisory committees.¹⁶⁹

Sections 6(a), 6(b), and 6(c) of the Act set forth three discrete procedures for establishing mandatory standards. Section 6(a) directs the Secretary to adopt "national consensus standards" as occupational safety or health standards as soon as is practical "unless he determines that the promulgation of such a standard would not result in improved safety or health for specifically designated employees."¹⁷⁰ Section 6(a) permits the Secretary to adopt such standards summarily in the two years following passage of the Act, without complying with either the rulemaking provisions of the Administrative Procedure Act or the other rulemaking procedures of the Safety and Health Act. The legislative history indicates that section 6(a) was included to facilitate development of occupational safety and health regulation by employing standards already familiar to industry; section 6(a) also reflected a legislative belief that voluntary standards might not be adequate for the protection of the American worker and should therefore be used

162. 29 U.S.C. §§ 651-678 (1970).

163. *Id.* § 655.

164. *Id.* §§ 667, 672 (establishing guidelines for state occupational health and safety plans and providing authority for federal grants to state agencies working in the occupational health and safety field).

165. *Id.* §§ 669, 673.

166. *See generally id.* § 651 (declaration of congressional findings and goals).

167. *Id.* § 671.

168. *Id.* § 661.

169. *Id.* § 656(b).

170. *Id.* § 655(a).

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“strictly as an interim proposition.”¹⁷¹ The Senate Committee commented that a recent Labor Department study showed that “a large proportion of the voluntary standards are seriously out-of-date. Many represent merely the lowest common denominator of acceptance by interested private groups.”¹⁷² Section 6(b) provides more elaborate procedures for establishing, modifying, or revoking standards after 1973, when the two-year period contemplated by section 6(a) expired. The section 6(b) process includes a discretionary committee; publication of a proposed rule; an opportunity to submit written data, to object to and to request a hearing; a public hearing; a final publication of the standard; and judicial review in a federal appellate court.¹⁷³ Section 6(c) provides a special summary procedure to establish an “emergency temporary standard” if the Secretary determines both that employees suffer “grave danger from exposure to substances or agents determined to be toxic or physically harmful or from new hazards” and that an emergency standard is necessary to protect employees in the circumstances.¹⁷⁴ Following the issuance of an emergency temporary standard, the agency must complete a section 6(b) proceeding within six months.

1. *The 1971 Standards Under Section 6(a).*—On May 21, 1971, barely five months after it began operations, OSHA promulgated over 250 pages of standards, including many voluntary standards approved by ANSI, NFPA, and other organizations, as well as some federal standards.¹⁷⁵ These regulations became mandatory on August 27,

171. *Occupational Safety and Health Act, 1970: Hearings on S. 2193 and S. 2788 Before the Subcomm. on Labor of the Senate Comm. on Labor and Public Welfare*, 91st Cong., 1st & 2d Sess. 403 (1969-1970) (comment of Senator Javits).

172. S. REP. NO. 91-1282, 91st Cong., 2d Sess., reprinted in [1970] U.S. CODE CONG. & AD. NEWS 5177, 5182.

173. These procedural requirements supply ample opportunities for attacking safety or health standards. See *AFL-CIO v. Brennan*, 6 OCCUP. SAFETY & HEALTH REP. (BNA) 1451 (3d Cir. 1978) (coke oven emission standards); *AFL-CIO v. Brennan*, 530 F.2d 109 (3d Cir. 1975) (mechanical power presses); *Society of the Plastics Indus. v. OSHA*, 509 F.2d 1301 (2d Cir.), cert. denied, 421 U.S. 992 (1975) (vinyl chloride standard); *Synthetic Organic Chem. Mfrs. Ass'n v. Brennan*, 506 F.2d 385 (3d Cir. 1974), cert. denied, 423 U.S. 830 (1975) (carcinogenic chemicals); *Synthetic Organic Chem. Mfrs. Ass'n v. Brennan*, 503 F.2d 1155 (3d Cir. 1974), cert. denied, 420 U.S. 973 (1975) (carcinogenic chemicals); *Industrial Union Dep't v. Hodgson*, 499 F.2d 467 (D.C. Cir. 1974) (asbestos standard); *Florida Peach Growers Ass'n v. United States Dep't of Labor*, 489 F.2d 120 (5th Cir. 1974) (pesticide standard); *Dry Color Mfrs. Ass'n v. United States Dep't of Labor*, 486 F.2d 98 (3d Cir. 1973) (carcinogenic chemicals). In *Usery v. Kennicott Copper Corp.*, 6 OCCUP. SAFETY & HEALTH REP. (BNA) 1197 (10th Cir. 1977), the court held that all § 6(a) standards in which “should” was changed to “shall” are unenforceable since the change from an optional to a mandatory form was such a substantial change that the regulation could no longer be considered a national consensus standard under § 6(a).

174. 29 U.S.C. § 655(c) (1970).

175. 36 Fed. Reg. 10466 (1971).

1971. Severe problems arose.¹⁷⁶ There were several contributing factors. With the advantage of hindsight, one can see that the package of regulations was hurriedly put together in an attempt to create the appearance of prompt and forceful action. A more careful winnowing would have avoided many problems. Also, the Labor Department's study was fundamentally correct: not all the voluntary standards used were current or subject to a continuing review process. A prohibition against ice in drinking water, for example, was based on the nineteenth century practice of obtaining and storing ice cut from rivers and lakes that might be polluted. This standard had been ignored for years by

176. By and large, OSHA converted the consensus standards into obligatory standards by changing the "shoulds" to "shalls" and by weeding out the parts of the standards which OSHA felt were not directly related to safety, such as manufacturing specifications. Let's briefly take a look at what resulted:

We have all heard some of the horror stories about the wildly irrelevant or dated standards being adopted; my favorite is the one which prohibited a worker from having ice in his soft drink.

Inconsistencies occurred, such as the requiring of blotters on abrasive wheels when there were no flanges to protect.

While manufacturing specifications were supposedly deleted, the process was inconsistent, so that sometimes there are incredibly explicit requirements not directly related to safety, whereas in other cases important safety requirements were left uncovered. Let me give you two examples of explicit requirements. The requirements as to ladders occupy twenty-one pages of two-columned fine print in the Code of Federal Regulations, and they include such important information as the Latin names of the types of wood from which acceptable ladders may be made; it is sufficiently complex and detailed that one almost loses sight of the fact that what we want is something that has reasonably strong side rails and evenly spaced rungs that are not slippery. Another example is the specification of the number of rivets which must be in a guard covering mechanical power transmission apparatus. While these overly detailed requirements are annoying and make the standards difficult to use, some of the deletions which were made are perhaps more regrettable. For example, OSHA cut out the parts of the abrasive wheel standard which dealt with the minimum shaft size and shaft speed—two of the most vital requirements. The reason given was that these requirements applied only to the manufacturer. And indeed they did, but OSHA did not fill the gap left by their deletion with the requisite performance criteria.

Another difficulty has been the lack of applicable scope sections. Back when the consensus standards were only precatory, a company could choose not to follow a particular standard if it felt the standard was inapplicable to its operations. Not so when they are obligatory, and that has caused some of the loudest grouching. Some examples: The abrasive wheel standard requires abrasive wheels to have work rests one-eighth of an inch from the wheel—regardless of whether the wheel is used to sharpen a chisel or deburr large castings. In the latter instance the work rest can get in the way while there is very little chance that the large workpiece could jam in the wheel. Similarly, it is unclear whether the woodworking section applies to the plywood industry. Or is a conveyor belt a machine, and hence regulated by the part dealing with machines, or is it solely a materials handling apparatus and hence controlled by another section. One story, which is perhaps apocryphal but which gets the point across, is that life vests are required when building a bridge, regardless of whether or not there is water under the bridge.

Finally, there are large gaps in the standards, so that many potentially dangerous machines are regulated solely by the general duty clauses. For example, there are no standards for steel mills, or printing presses, or for those conveyors.

Harter, *A View from the OSHA Task Force: Voluntary Standards Used in Regulation*, ASTM STANDARDIZATION NEWS, May 1977, at 8, 9-10.

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everyone; there was no committee active in revising standards on drinking water. Finally, OSHA's tendency to make an indiscriminating change of "should" to "shall" in converting voluntary standards to mandatory ones is fundamentally dangerous because the excessive detail universally regarded as illustrative or superfluous is suddenly transformed into the apparently obligatory.

The problems created by obsolete or unnecessarily detailed regulations were compounded by the initial misplaced enthusiasm of many OSHA inspectors for writing citations for violations of peripheral standards. In part this enthusiasm was engendered by OSHA's decision to measure the efficiency of its inspectors by the number of citations written.¹⁷⁷ Indeed, the combined impact of overzealous citation writing and the uneven quality of the standards, which often appeared totally unrelated to safety, led to a storm of protest that broke out after the initial enforcement efforts began. Congressmen received numerous complaints from constituents. Right wing groups, sensing an opportunity to attack "big government," characterized OSHA as an incipient dictator and depriver of individual liberty. OSHA quickly repealed some of the most egregious provisions,¹⁷⁸ and efforts have since been made to direct the agency's priorities toward the serious problems of health and safety and away from the trivial. These efforts appear to have received considerable support from "above" after the appointment of a new Assistant Secretary of Labor in charge of OSHA.¹⁷⁹ Nevertheless, the agency may still be in some political difficulty as a result of its disastrous start.¹⁸⁰

177. Interview with Eula Bingham, U.S. NEWS & WORLD REPORT, Jan. 16, 1978, at 65. In May 1977, OSHA announced a "common sense" approach toward implementation of the § 6(a) regulations. 6 OCCUP. SAFETY & HEALTH REP. (BNA) 1587 (1977). This approach was implemented in the form of guidelines for the handling of de minimis violations on December 1, 1977. [1977-1978 Transfer Binder] OCCUP. SAFETY & HEALTH REP. (BNA) 947.

178. See, e.g., 38 Fed. Reg. 9078 (1973). The agency also published a voluminous request in April 1976 for information on three significant safety and health areas. The notice consisted of a description of the current OSHA standards and comments and suggestions made in letters to OSHA. 41 Fed. Reg. 17640 (1976). The notice also referred to post-1971 revisions in the underlying consensus standards.

179. See, e.g., *Changing Emphasis: Safety Agency Will Tighten Regulations on Health Hazards, Drop Trivial Rules*, Wall St. J., May 19, 1977, at 40, col. 1.

180. A high level memorandum addressed to President Carter on May 27, 1977 is reported to have described OSHA as "the leading national symbol of overregulation." 7 OCCUP. SAFETY & HEALTH REP. (BNA) 203 (1977). Illustrating the political difficulty that OSHA faces is the following editorial in "Washington Outlook," *OSHA Tries for a Fresh Start*, BUSINESS WEEK, Apr. 3, 1978, at 109:

The beleaguered Occupational Safety & Health Administration, the federal regulator most bitterly criticized by business, is still trying to get its act together.

The agency is moving into high gear with an ambitious plan announced last October that will identify and regulate cancer-causing substances in workplaces. If it works, the scheme should offer a neat solution to two of OSHA's most persistent problems.

A major problem with section 6(a) standards is that, for reasons discussed in the next section, OSHA has been unable to revise those standards to take into account revisions adopted by the voluntary standards organizations. For example, by 1976 ANSI had approved at least one revision to each of the standards pertaining to machine guarding that had been adopted by OSHA under section 6(a), and in a couple of instances it had approved several revisions. Moreover, ANSI had approved twenty-one new machine tool safety standards in addition to those that were the basis of the OSHA requirements.¹⁸¹ Yet OSHA has not adopted any of the revisions or new standards. This failure to adopt revisions in voluntary standards creates a serious problem since revisions in the voluntary standards are usually adaptations to technological change or improved methods of safety. The agency is therefore in the anomalous position of appearing to enforce an older standard when an improved standard is available. The saving factor in the case of OSHA is that inspectors may charge violation of the general requirement that all machines be guarded to protect employees against hazards¹⁸² if they encounter unsafe conditions that do not conform to the revised voluntary standard. Significantly there is a general tendency on the part of OSHA inspectors to charge under this general requirement rather than under the much more detailed specific requirements of the mandatory standard.¹⁸³

Another problem exists with the section 6(a) standards: their coverage is sometimes erratic. There are no standards at all for significant

First, protecting workers from cancer is a serious enough task to bury OSHA's reputation for imposing niggling safety rules that are often irrelevant and always exasperating. Second, a reasonable definition of what a carcinogen is and how it should be regulated ought to cut down the litigation that accompanies each effort to impose health standards on chemicals used in industrial processes. Target companies routinely take full advantage of their constitutional recourse to the courts, so that OSHA is sued on almost everything.

OSHA's problems are as much political as they are technical. For example, the agency is having terrible trouble in making good on Administrator Eula Bingham's promise last spring to clean out the underbrush of "nit-picking" safety standards.

Opposition snowballed, largely from the labor movement. And this infuriates the congressmen who keep tabs on OSHA because they thought they had labor's approval. During House-Senate negotiations on OSHA's fiscal 1976 appropriation, Congress agreed to knock out a provision that exempted some small business from the agency's regulation if AFL-CIO lobbyists would assent to pruning back minor safety regulations.

At any rate, labor has picked up a lot of allies: A host of industrial suppliers that have spent money or developed markets based on the threatened regulations are fighting to keep them. The list runs from companies that write standards and provide testing services to outfits that supply color-coded warning signs.

181. Harter, *supra* note 176, at 10.

182. 29 C.F.R. § 1910.212 (1977). *See, e.g.*, 29 U.S.C. § 654(a)(1) (1970) (requiring an employer to furnish a place of employment "free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees").

183. PRESIDENTIAL TASK FORCE, OSHA SAFETY REGULATION 15 (1977).

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areas of employee safety; and some essential terminology is ambiguous, for example, whether a machine control is “within easy reach” or whether there is “ample” room. This problem, I suspect, arises partially because voluntary standards were often not written to be mandatory and thus cannot be easily converted into mandatory standards simply by changing “should” to “shall.”

OSHA's problems with the section 6(a) standards have not gone unnoticed. In May 1976, President Ford approved the creation of a Presidential Task Force to assist OSHA in the revision of its safety standards. The Task Force decided to concentrate on two safety areas: machine guarding and hand-held power tools. The results of the Task Force investigation were formally presented to OSHA on September 28, 1976; the Final Report was presented to the President on December 20, 1976. OSHA has not directly responded to the Task Force Report; it has, however, published a request for comments on many of the issues raised in the Report¹⁸⁴ and in 1978 it listed machine tool guarding as one area of regulation that is undergoing current review.¹⁸⁵

The Carter administration has given revision and simplification of OSHA standards high priority. OSHA had directed its staff to treat violations of so-called “nuisance standards,” which are standards that do not deal with clearly hazardous conditions, as de minimus until the standards have been formally eliminated.¹⁸⁶ A union representative, however, has been quoted as saying that the proposal to eliminate these regulations was done “too hastily” and “without careful consideration” for worker safety.¹⁸⁷ In addition, a new interagency task force to reevaluate the OSHA safety effort, including the possible replacement of standards by other devices such as economic incentives, was announced on August 5, 1977;¹⁸⁸ a report is expected in 1978.¹⁸⁹

The House Committee on Government Operations published a generally negative report on OSHA in October 1977. It was particularly critical of OSHA's treatment of voluntary standards under section 6(a),

184. See 42 Fed. Reg. 1742 (1977); 42 Fed. Reg. 1806 (1977) (request for information on technical issues).

185. 43 Fed. Reg. 22920 (1978).

186. OSHA Program Directive 200-68 (Dec. 2, 1977) *discussed in* [1977-1978 Transfer Binder] OCCUP. SAFETY & HEALTH REP. (BNA) 947-49.

187. [1977-1978 Transfer Binder] OCCUP. SAFETY & HEALTH REP. (BNA) 1639 (Mar. 30, 1978).

188. 42 Fed. Reg. 40171 (1977). This task force is known as the Interagency Task Force on Workplace Safety & Health. The Chairman is Richard I. Bergman. 7 OCCUP. SAFETY & HEALTH REP. (BNA) 708 (1977).

189. 7 OCCUP. SAFETY & HEALTH REP. (BNA) 755 (1977).

which it described as a "regulatory mess."¹⁹⁰

2. *Mandatory Standards Development under Section 6(b).*—Until recently OSHA's record of establishing mandatory standards under section 6(b) also was deficient. Years passed without either the promulgation of any 6(b) standard or the revision of any 6(a) standard (which involves a section 6(b) procedure). Even now only a few final safety standards have been promulgated: a revision of a machine tool standard in 1974, relating to the elimination of the "no hands in dies" requirement (discussed below); a commercial diving standard; and an amendment to the National Electric Code, a section 6(a) standard.¹⁹¹ In the last few years, however, OSHA has consciously shifted its priorities to the immensely more difficult, and probably more important, problems of health and industrial chemicals in the workplace.¹⁹² In several instances OSHA has issued temporary emergency standards governing carcinogenic substances under section 6(c).¹⁹³ By statute, these standards must subsequently become the subject of a section 6(b) hearing, and several final standards have been adopted.¹⁹⁴ By October 1977, OSHA had completed four section 6(b) rulemaking proceedings: asbestos, vinyl chloride, coke oven emissions, and a group of fourteen carcinogenic substances.¹⁹⁵ Since then, standards have been approved for benzene, dibromochloropropane, and arsenic,¹⁹⁶ and action on several other standards is pending. In October 1977, the agency proposed a major and ambitious general regulation to identify, classify, and regulate all toxic substances in the workplace that might expose workers to

190. HOUSE COMM. ON GOVERNMENT OPERATIONS, FAILURE TO MEET COMMITMENTS MADE IN OCCUPATIONAL SAFETY AND HEALTH ACT, H.R. REP. NO. 710, 95th Cong., 1st Sess. 9 (1977).

191. 29 C.F.R. §§ 1910.211-222 (1976) (revised machine tool standard); 42 Fed. Reg. 37650-37668 (1977) (commercial diving standard) (to be codified in 29 C.F.R. §§ 1910.401-441 and Appendix, 1915.59, 1916.59, 1917.59, 1918.99, 1926.605(e), 1928.21); 33 C.F.R. § 183.435 (1977) (amendment to National Electric Code).

192. An interagency agreement has since been signed by OSHA, EPA, CPSC, and FDA; subgroups have been created to consider specific problem areas with toxic chemicals, and a draft plan of attack has been developed. [1977-1978 Transfer Binder] OCCUP. SAFETY & HEALTH REP. (BNA) 1161.

193. See, e.g., 42 Fed. Reg. 22516 (1977) (emergency temporary standard for exposure to benzene); 42 Fed. Reg. 45536 (1977) (emergency temporary standard for exposure to dibromochloropropane).

194. 29 U.S.C. § 655(c)(3) (1970) requires completion of the § 6(b) proceeding within six months of the issuance of the emergency temporary standard.

195. 29 C.F.R. § 1910.1001 (1977) (asbestos); 29 C.F.R. § 1910.1017 (1977) (vinyl chloride); 29 C.F.R. § 1910.1029 (1977) (coke oven emissions); 29 C.F.R. §§ 1910.1002-1016 (1977) (other carcinogenic substances).

196. 43 Fed. Reg. 5918 (1978) (benzene) (to be codified in 29 C.F.R. §§ 1910.19, .1000, .1028); 43 Fed. Reg. 11514 (1978) (dibromochloropropane) (to be codified in 29 C.F.R. § 1910.1044); Fed. Reg. 19584 (1978) (arsenic) (to be codified in 29 C.F.R. §§ 1910.19(e), .1000, .1018).

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carcinogenic risks.¹⁹⁷ Although this entire regulatory effort is highly controversial, it is a praiseworthy attempt to improve workplace environment.

Despite the activity in the health area, OSHA's permanent standards development program has encountered significant problems in revising and updating section 6(a) standards and in developing new safety standards. The reasons for these problems are largely beyond the scope of this study; however, extensive statutorily mandated procedures, externally imposed requirements of environmental and economic impact statements, internal problems, an inability to fill high-level vacancies, and the past lack of support from high officials have all contributed to the problems of the agency.¹⁹⁸

In 1976 the Presidential Task Force on Machine Tool Guarding commented that "OSHA has no operable process nor adequate resources by which revised and newly developed standards can be adopted in a timely manner."¹⁹⁹ The Task Force report recommended that OSHA either develop the internal capability to formulate complex technical safety standards or "establish a closer working relationship with the standards-writing organizations so that it may have a significant voice in determining the nature of the safety standards which are developed and in directing the development of safety standards necessary for the OSHA regulatory system."²⁰⁰ This latter suggestion is strongly opposed by some individuals in organized labor who deplore continued reliance by OSHA on the "management-dominated" voluntary standards organizations after the two-year period mandated by section 6(a) has expired.

The delays in developing section 6(b) standards even when a basically satisfactory voluntary standard exists reveal additional problems within OSHA. For example, the National Electrical Code produced by NFPA is a respected set of standards that state and local governments and federal agencies have widely incorporated by reference. OSHA adopted an earlier version of the Code as a section 6(a) standard.²⁰¹ When the Code was subsequently modified²⁰² OSHA put the revision

197. 42 Fed. Reg. 54148 (1977).

198. These management problems are the subject of an OSHA-financed study by a consulting firm, Lester B. Knight & Associates, Inc., 7 OCCUP. SAFETY & HEALTH REP. (BNA) 307 (1977). They were also discussed in HOUSE COMM. ON GOVERNMENT OPERATIONS, *supra* note 190, at 17-19.

199. PRESIDENTIAL TASK FORCE, *supra* note 183, at 32.

200. *Id.*

201. 29 C.F.R. §§ 1910.308-309 (1977).

202. The Code is updated every three years, and the most recent revision was published in 1978.

through the section 6(b) process since the two-year grace period prescribed under section 6(a) had long since expired. As a result, an OSHA electrical engineer spent over twelve months diligently rewriting the Code to put it into the format of an OSHA-proposed standard without revising the substantive provisions. Clearly there is something wrong with a process that requires a code so widely incorporated by reference to be laboriously revised before it is published for comment. The necessity for revision arose, I was told, because some portions of the Code were not appropriate for OSHA regulations since they went beyond employee protection and also because the OSHA statute requires "a statement of the reasons for a regulatory action."²⁰³ If OSHA desires merely to promulgate portions of a revised voluntary standard without substantive change, a simple publication of the standard for comment would seem to be sufficient, and an extensive justification unnecessary. Because the voluntary standards process does not usually produce a document that has a legislative history or description of the reasons why certain choices prevailed over others, however, direct publication of the portions of the Code dealing with employee safety was rejected since it did not include necessary documentation. Nevertheless, OSHA is attempting to obtain revisions in parts of the NFPA Code that it considers inadequate so that when OSHA subsequently republishes the standard as a proposed mandatory rule the new requirements will appear to be supported by a broader group than just OSHA's technical staff.

Section 6(b)(8) states:

Whenever a rule promulgated by the Secretary differs substantially from an existing national consensus standard, the Secretary shall, at the same time, publish in the Federal Register a statement of the reasons why the rule as adopted will better effectuate the purposes of this chapter than the national consensus standard.²⁰⁴

This deceptively simple provision was added relatively late in the legislative process. The leading case construing this section is *AFL-CIO v. Brennan*,²⁰⁵ the "no hands in dies" case. This case involved a prefatory statement in a voluntary machine tool standard that the standard's central purpose was to eliminate "the necessity of having the operator place his hands or fingers within the point of operation, thus minimiz-

203. 29 U.S.C. § 655(e) (1970).

204. *Id.* § 655(b)(8).

205. 530 F.2d 109 (3d Cir. 1975).

ing his exposure to point of operations hazards.”²⁰⁶ OSHA made this provision mandatory in a section 6(a) standard, setting August 31, 1974, as the final day for making necessary equipment change. Petitions to repeal this requirement were promptly filed by the United States Chamber of Commerce and one other organization, arguing that it was redundant and that total elimination of the hazard would require unnecessarily great expense. After following the required procedures, including a public hearing, OSHA published a revised standard repealing the “no hands in dies” standard.²⁰⁷ As a result, the first judicial exploration of section 6(b)(8) paradoxically considered an OSHA proposed standard that relaxed a safety rule rather than one that imposed a more stringent rule.²⁰⁸ The court stated that Congress intended that “national consensus standards should constantly be upgraded to reflect advances in science and technology,”²⁰⁹ that section 6(b)(8) required the Secretary to specify the reasons for departing from the voluntary standard, that the facts underlying the reason be supported by substantial evidence in the record as a whole, and that section 6(b)(8) allowed the Secretary to consider economic consequences in establishing standards. The court, however, remanded the case to the Secretary since the Secretary had not persuasively shown how total repeal of the standard would further OSHA’s purpose.²¹⁰

A few of OSHA’s standards relating to toxic substances have also involved voluntary standards. Both the benzene and arsenic standards, for example, replaced section 6(a) standards that had been based on voluntary standards permitting much higher amounts of the toxic chemical than the revised mandatory standard. Section 6(b)(8) proved to be no problem in those instances, however, because the stricter standard in each case was based on newly discovered adverse effects of the chemical involved: leukemia in the case of benzene and carcinogenicity in the case of arsenic.²¹¹

3. *The OSHA-ANSI Agreement.*—The signing of an OSHA-

206. ANSI B11.1-1971 (Safety Requirements for Construction, Care, and Use of Mechanical Power Presses).

207. 39 Fed. Reg. 41841 (1974).

208. *AFL-CIO v. Brennan*, 530 F.2d 109, 114-15 (3d Cir. 1975) (the court commenting that § 6(b)(8) was a “two-edged sword” and that the restrictive construction contended for by the AFL-CIO might be to its disadvantage in a subsequent case).

209. *Id.* at 115.

210. Following this remand, the Secretary published a revised statement on September 17, 1976. 41 Fed. Reg. 40103 (1976). The adequacy of this statement was also challenged in court, but the revised statement was upheld without opinion in September 1977. 7 OCCUP. SAFETY & HEALTH REP. (BNA) 559 (1977).

211. *See* 42 Fed. Reg. 27452 (1977) (benzene); 43 Fed. Reg. 19584 (1978) (arsenic).

ANSI Memorandum of Understanding²¹² was announced on November 22, 1976 with suitable publicity. Its background includes the "no hands in dies" litigation described above and a large meeting of voluntary standards-writing organizations personnel and OSHA representatives in May 1976.

The memorandum noted the importance of voluntary standards in the development of occupational health and safety standards,²¹³ the authority of OSHA, and the "recognition" of ANSI as a "coordinating and approval agency for voluntary national standards"²¹⁴ with the ability to render technical assistance and support to OSHA. The actual agreements, however, were quite limited. ANSI agreed to provide technical support and assistance to OSHA and its advisory committees as requested; and OSHA agreed to provide ANSI with certain occupational safety and health research reports and, "to the extent consistent with its obligations under the Act," to make technical resources available to ANSI to assist it in fulfilling its mission. Perhaps the most significant aspect of the agreement was the creation of a joint working group to discuss common concerns. This group meets monthly in open, recorded meetings and has fostered communication and perhaps led to greater mutual understanding.²¹⁵ A Department of Labor press release²¹⁶ intimated that ANSI technical assistance would be sought primarily in revising section 6(a) standards. Shortly after the agreement

212. See 6 OCCUP. SAFETY & HEALTH REP. (BNA) 846 (1976) (Memorandum of Understanding between the Occupational Safety and Health Administration and the American National Standards Institute).

213. In this regard the Memorandum cites §§ 6(a) and 6(b)(8) of the Occupational Health and Safety Act, 29 U.S.C. §§ 655(a), (b)(8) (1970). *Id.*

214. *Id.*

215. See, e.g., de Tarnowsky, *The ANSI Role in Safety and Health Standards Promulgation*, PROFESSIONAL SAFETY, Aug. 1977, at 15:

One of the major problems the committee is wrestling with is the government's need for background data to support given provisions in standards and the regulations based on them. Most safety standards are based on empirical data drawn from the experts' past experience. If properly documented, this provides adequate rationale. But therein lies another difficulty: there are virtually no transcripts of American National Standards Committee meetings and thus no "legislative history" to provide researchers or government agencies with the reasons for various criteria in a given standard. Quite recently, OSHA proposed, at a meeting of the ANSI-OSHA Coordinating Committee, to initiate a series of public meetings to go over OSHA's Construction Standards, item by item, jointly with members of American National Standards Committee A10, Safety in Construction and Demolition Operations, and to discuss technical matters leading to an update of OSHA Part 1926 (construction) regulations. A reporter will be on hand at each meeting to make a full record of the discussions, thus developing a "legislative history" of the agreed-upon language. This proposal is being vigorously pursued by both sides. It is felt that in addition to helping OSHA meet its statutory requirements for rationale on all proposals, the A10 Committee can benefit from OSHA's field experience in trying to enforce its (and hence A10's) standards.

216. Department of Labor Press Release, *OSHA, National Standards Institute Sign Working Agreement* (Nov. 22, 1976).

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was announced, OSHA established personnel policies relating to OSHA employees serving on ANSI committees.²¹⁷

Even though the provisions of the agreement were modest and OSHA was careful to preserve its statutory mandate, the propriety of such an arrangement was immediately questioned by some labor union representatives. The Carter administration has also treated the agreement with reserve; the Assistant Secretary of Labor in charge of OSHA commented at a press conference that the memorandum was "a rather loose statement, not any kind of binding agreement," and that the document would be studied "word by word to see if it is an appropriate document that still should be out there."²¹⁸ Lower level technical employees of OSHA tend to support the agreement in principle. As long as OSHA is in fact using voluntary standards either in the revision of section 6(a) standards or in the enforcement of general safety requirements such cooperation appears desirable, particularly if revisions of voluntary standards originally incorporated as section 6(a) standards are to be moved through the section 6(b) process within a reasonable period of time. Further, OSHA technical personnel have urged private sector technical committees to adopt changes that would make OSHA's direct utilization of revised voluntary standards as general safety rules possible.

B. Consumer Product Safety Commission (CPSC)

CPSC, an independent regulatory agency created in 1973 by the Consumer Product Safety Act of 1972,²¹⁹ probably has the greatest potential of any existing federal regulatory agency for utilizing and participating in the development of voluntary standards. It is authorized to promulgate "consumer product safety standards" to "protect the public against unreasonable risks of injury associated with consumer products."²²⁰ The term "consumer product" is broadly defined in section 3(a)(1) to include most products intended for sale or use by the public.²²¹ CPSC is also authorized to ban hazardous products, collect data on consumer injuries, test consumer products, perform research, and engage in a variety of other activities to protect the consumer. It is further charged with enforcing several other consumer-related federal statutes: the Federal Hazardous Substances Act,²²² the Poison Preven-

217. See subpart VI(D)(1) *infra*.

218. Quoted in 7 OCCUP. SAFETY & HEALTH REP. (BNA) 140 (1977).

219. 15 U.S.C. § 2051 (1976).

220. *Id.* § 2051(b)(1).

221. *Id.* § 2052(a)(1).

222. *Id.* § 1261.

tion Packaging Act,²²³ the Flammable Fabrics Act,²²⁴ and a statute relating to door safety devices for refrigerators.²²⁵

Many existing voluntary standards apply to consumer products. The National Bureau of Standards has published a 180-page booklet, "Tabulation of Voluntary Standards and Certification Programs for Consumer Products,"²²⁶ that lists over 1000 product areas and over 2000 standards²²⁷ covering products found around the home, excluding foods, beverages, and drugs. Obviously there is a very significant potential overlap between the public and private sectors in this area. Nevertheless, CPSC, like OSHA, has exercised its general power to establish mandatory safety standards sparingly and only recently has formulated a general policy statement that specifically recognizes the existence and use of voluntary standards.

1. The Role of Voluntary Standards in the Decision to Develop Mandatory Standards.— The legislative history of the Act, particularly the Final Report of the National Commission on Product Safety of 1970,²²⁸ was harshly critical of voluntary standards.²²⁹ The Report labeled them "chronically inadequate, both in scope and permissible levels of risk."²³⁰ Further, the Report charged that "[s]afety itself has been a secondary consideration in the usual process of developing voluntary standards. The need for a consensus commonly waters down a proposed standard until it is little more than an affirmation of the status quo."²³¹ Despite this negative evaluation, the Report anticipated a continuing role for voluntary standards by recommending that CPSC supply voluntary standards organizations with technical information about product safety and develop means for CPSC employees to serve

223. *Id.* § 1471.

224. *Id.* § 1191.

225. *Id.* § 1211.

226. NATIONAL BUREAU OF STANDARDS, U.S. DEP'T OF COMMERCE, TABULATION OF VOLUNTARY STANDARDS AND CERTIFICATION PROGRAMS FOR CONSUMER PRODUCTS (1977) (NBS Technical Note No. 948).

227. Not all the 2000 standards relate to safety. A significant number of them are performance standards, test method standards, and others.

228. NATIONAL COMMISSION ON PRODUCT SAFETY, FINAL REPORT OF THE NATIONAL COMMISSION ON PRODUCT SAFETY (1970).

229. This Report stated that many standards do not address all foreseeable hazards, that insufficient consideration was often given to "human factors such as predictable risk taking, juvenile behavior, illiteracy, or inexperience," and that "levels of allowed exposure to electrical, thermal, and mechanical and other energy exchanges are frequently too high." *Id.* at 48. The Report also stated that while many manufacturers conscientiously support the development of safety standards, "a minority tends to observe only those safety standards that are backed by civil and criminal sanctions." *Id.*

230. *Id.*

231. *Id.* at 62.

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on voluntary standards committees;²³² however, neither the remaining legislative history nor the statute as enacted address the relationship between CPSC and voluntary standards organizations.

After CPSC commenced operations it soon became apparent that the statutory procedures for the development of mandatory standards, particularly the “offeror process” described below, were slow, complex, expensive, and generally inefficient.²³³ Indeed, CPSC did not adopt its first final standard, one covering a relatively insignificant consumer product (swimming pool slides), until January 1976.²³⁴ It adopted a second standard, covering architectural glazing materials, in January 1977,²³⁵ and a third, covering book matches, in May 1977.²³⁶ In a serious regulatory setback, however, two separate courts of appeals set aside significant portions of the book matches and swimming pool slide standards in March 1978 because they were not supported by “substantial evidence” as required by statute.²³⁷

Although CPSC collects extensive data on the hazards of numer-

232. *Id.* at 117.

233. See COMPTROLLER GENERAL OF THE UNITED STATES, THE CONSUMER PRODUCT SAFETY COMMISSION NEEDS TO ISSUE SAFETY STANDARDS FASTER, H.R. DOC. NO. 3, 95th Cong., 1st Sess. 6 (1977). The Comptroller General points out that it took an average of 834 days to develop each of the three mandatory standards promulgated by CPSC in contrast to the 330 days that Congress specified. *Id.*

Section 7 of the Consumer Product Safety Act, 15 U.S.C. § 2056 (1976), prohibits CPSC from developing mandatory product safety standards internally. Rather, CPSC must publicly invite persons from outside CPSC to offer to develop a standard for the agency. An “offeror” may be any interested member of the public, including industry or consumer groups. CPSC may contribute to the offeror’s cost of the development of the standard.

After an offeror has drafted a standard and submitted it to CPSC, the agency may revise the standard if it appears inadequate. After review and revision CPSC may promulgate the standard following the procedures set forth in 15 U.S.C. § 2058 (1976), or it can terminate the proceeding. This procedure requires publication of the proposed standard, an opportunity for public comment, an oral hearing, and a final notice of the promulgation of the rule.

CPSC may omit the offeror process if a person responding to an invitation for offers submits an existing standard (*e.g.*, a voluntary standard) covering the same product for which CPSC has proposed a mandatory standard. If the agency decides that the existing standard, if promulgated, would eliminate or reduce the unreasonable risk of injury associated with the product, it may proceed immediately with the procedure set forth in 15 U.S.C. § 2058, omitting the offeror process. It may also omit the offeror process if there is no response to CPSC’s original invitation.

234. 16 C.F.R. § 1207 (1977). The relative unimportance of this consumer product sparked criticism from two congressional subcommittees. See generally *Consumer Product Safety Commission: Hearings Before the Subcomm. on Oversight and Investigations and the Subcomm. on Consumer Protection and Finance of the House Comm. on Interstate and Foreign Commerce*, 95th Cong., 1st Sess. (1977) [hereinafter cited as *CPSC Hearings*]; *Implementation of the Consumer Product Safety Act: Hearings Before the Subcomm. for Consumers of the Senate Comm. on Commerce, Science, and Transportation*, 95th Cong., 1st Sess. (1977).

235. 16 C.F.R. § 1201 (1977).

236. *Id.* § 1202.

237. *Aqua Slide 'n Drive Corp. v. Consumer Prod. Safety Comm'n*, [1978] 2 CONS. PROD. SAFETY GUIDE (CCH) ¶ 75176 (5th Cir. Mar. 3, 1978) (swimming pool slide standard); *D. D. Bean & Sons Co. v. Consumer Prod. Safety Comm'n*, [1978] 2 CONS. PROD. SAFETY GUIDE (CCH) ¶ 75181 (1st Cir. Mar. 31, 1978) (book matches standard).

ous consumer products, it has gradually become apparent that if these hazards are to be addressed within a reasonable period of time some use must be made of the existing voluntary standards-writing process. The direct use of these standards as mandatory standards, however, appears to be precluded by the wording of section 7 of the Consumer Product Safety Act, which apparently permits the use of a voluntary standard as a consumer product safety standard only if most of the section 7 procedure²³⁸ appears to preclude the direct use of these standards as mandatory standards.

Apparently, some agency employees originally viewed the possible relationship between CPSC and the voluntary standards organizations only as a means of obtaining interim protection for consumers until the agency could establish mandatory standards. Due to serious problems, especially delay, in the mandatory standards development program, however, utilization of voluntary standards on a more or less permanent basis may improve the overall effectiveness of the agency in carrying out its broad statutory mandate. The use of these standards, however, is controversial: extensive reliance on the voluntary standards process appears inconsistent with both the critical language about that system in the 1970 Report of the National Commission on Product Safety and the basic justification for the existence of the CPSC itself. The result is that the agency has proceeded cautiously in its utilization of voluntary standards and in its development of a policy statement with respect to the use of such standards. As matters have evolved, the agency has utilized voluntary standards in three ways.

(a) *Cooperation and assistance.*—The agency's most common practice is to encourage and assist the development of a voluntary standard that CPSC believes adequately addresses a problem of product safety; thereafter the CPSC monitors the extent of compliance with the voluntary standard and takes no further regulatory action if compli-

238. Section 7(c) provides that:

If the Commission determines that (1) there exists a standard which has been issued or adopted by any Federal agency or by any other qualified agency, organization, or institution, and (2) such standard if promulgated under this Act, would eliminate or reduce the unreasonable risk of injury associated with the product, then it may, in lieu of accepting an offer pursuant to subsection (d) of this section, publish such standard as a proposed consumer product safety rule.

Consumer Product Safety Act, 15 U.S.C. § 2056(c) (1976). This section permits CPSC to utilize a voluntary standard in lieu of the offeror procedure, but does not permit CPSC to modify it, and also does not eliminate the need for notice of findings and a public hearing before a final rule can be adopted. *Id.*

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ance is satisfactory.²³⁹ This cooperative role of the CPSC is the principal subject of the 1977 Policy Statement described below.

The number of voluntary standards developed with CPSC participation greatly exceeds the number of mandatory standards it has developed. An internal staff document states that as of April 1978 CPSC has participated in or monitored the development of forty-nine different voluntary standards, including aspects of television sets, bicycles, snowmobiles, butane lighters, ladders, ranges and ovens, hedge trimmers, and other products²⁴⁰—products, it should be noted, more widely used and probably having greater potential hazard for the consumer than the products for which mandatory standards have been completed. In early 1978 CPSC agreed to cooperate with the Chain Saw Manufacturing Association in the development of a voluntary standard for chain saws rather than institute a proceeding to develop a mandatory standard. That agreement has led to innovative cooperative efforts between the agency and industry.²⁴¹

Informal cooperation may be more advantageous to the affected industry than the mandatory standard process. Primarily, producers feel that they can have a greater voice in the development of the voluntary standard, even with CPSC involvement, than they could in a section 7 proceeding in which they might not be the offeror developing a standard. Also, a voluntary standard with CPSC's informal approval will probably be produced faster than a mandatory standard, and such a standard is likely to command a high degree of voluntary acceptance, perhaps even total acceptance. If a good faith voluntary effort is pending, CPSC may extend unofficial assurances that it will not institute a section 7 proceeding while the voluntary effort is underway. For example, late in 1976 CPSC denied a petition for commencement of a formal proceeding to establish a mandatory standard for ladders because the existing voluntary standards were in the process of being revised, the industry and voluntary standards organizations were very responsive to the concerns of CPSC, and an adequate voluntary standard seemed

239. See, e.g., [1978] 2 CONS. PROD. SAFETY GUIDE (CCH) ¶ 43925 (hair dryers); *id.* ¶ 43947 (extension cords).

240. See generally Memorandum from D. R. Mackay, Director, Voluntary Standards, to Michael A. Brown, Executive Director, Consumer Product Safety Commission (Apr. 3, 1978). In April 1977 the Chairman of CPSC testified that the Commission had participated in the development of thirty-two voluntary standards. *Implementation of the Consumer Product Safety Act: Hearings Before the Subcomm. for Consumers of the Senate Comm. on Commerce, Science, and Transportation*, 95th Cong., 1st Sess. 108, 111 (1977) (statement of S. John Byington, Chairman of the Consumer Product Safety Commission). The pattern of use appears to be increasing rapidly.

241. See, e.g., [1978] 2 CONS. PROD. SAFETY GUIDE (CCH) ¶¶ 44024, 44032.

likely to be completed in 1977,²⁴² a hope that was not fulfilled.

The informal assistance CPSC has given to standards-writing organizations does not adhere to a single pattern. On occasion it has made product hazard data available, in response to which a voluntary organization announced it would revise its standard to eliminate the identified hazard.²⁴³ In some instances the CPSC staff has sought to obtain desired changes in a standard by negotiating with or participating on a voluntary standards committee.²⁴⁴ In still others, CPSC has assigned a technical staff person to meet with the standards group, to serve as liaison,²⁴⁵ and often to participate as an advisory committee member. As a matter of policy such persons do not act as voting members of the committee.

A significant number of consumers have been added to voluntary standards-writing committees at CPSC's request. These people may not have technical training and certainly do not have a background of standards development or technical experience with the product in question. I have not examined the input of these consumer representatives in detail, but I have heard secondhand that their input has not been as great as had been hoped. Because they usually lack technical background, they are unable to challenge industry representatives at critical points, and attempts to educate them have engendered complaints that the consumer representatives were being led by the biases of those providing the technical education. One person also voiced a

242. 41 Fed. Reg. 52100 (1976). There have been at least four such denials. See *CPSC Hearings, supra* note 234; 42 Fed. Reg. 47860 (1977) (petition for a mandatory standard for snowmobiles denied on July 28, 1977). See also notes 271-73 *infra* & accompanying text (description of the development of bathroom and shower stall standards).

Another example involves gas-fired space heaters. 42 Fed. Reg. 46072 (1977). CPSC stated that staff review "indicated that most concerns of the Commission on vented gas heaters are dealt with" in the voluntary standards for vented wall heaters and wall furnaces (ANSI Z21.11.1, Z21.44 and Z21.49). *Id.* at 46073. CPSC concluded:

[A] mandatory standard on vented gas-fired space heaters does not appear to be needed at this time. However, the Commission has directed the staff to closely monitor the current development phases of the voluntary standard and report back to it after 12 months on the progress toward completion and subsequent implementation by industry of the voluntary standards. The Commission is particularly interested in and encourages the developers of the voluntary standards to work toward progressively lower surface temperatures for vented gas-fired space heaters. The Commission will decide if further action is needed after staff reports on its 12 month monitoring effort of the voluntary standard and conformance to it by the affected industry.

Id.

243. See, e.g., [1975-1977 Transfer Binder] CONS. PROD. SAFETY GUIDE (CCH) ¶ 43506 (announcement by the Toy Manufacturers Association relating to hazards in baby rattles).

244. See, e.g., *id.* ¶ 43491 (describing a meeting between NFPA and CPSC officials about possible changes in the National Electric Code.).

245. See, e.g., *id.* ¶ 43401 (reporting a request for such assistance by the Southern Furniture Manufacturers Association for a task force examining the safety of bunk beds).

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suspicion—for which, he hastened to add, he had no proof—that committee members representing manufacturers and other commercial interests may have discreetly met in advance of the full committee meeting to devise a common strategy; if true, that would have effectively excluded both CPSC and consumer representatives.

In the chain saw proceeding the Commission and the trade association signed a formal agreement to develop a standard; this development is to be overseen by a committee consisting of one industry representative, one small businessman, one technically trained consumer representative, one nontechnical consumer representative, a physician, and one nonvoting CPSC representative. The standard will actually be developed by three committees consisting of two industry representatives, two CPSC employees, and two consumers.²⁴⁶

The efforts by voluntary standards groups to formulate standards acceptable to the CPSC may be expensive. The *Wall Street Journal*²⁴⁷ recently reported that the ongoing revision of the safety standards for ladders by an ANSI committee has entailed fifty meetings over the last two years and significant investment in studies of ladder use and safety.

(b) *Denial of petitions to develop mandatory standards because of existence of adequate voluntary standards.*— In a large number of instances CPSC has denied petitions for mandatory standards on the ground that voluntary standards existed that appeared adequate and that were generally adhered to by the industry.²⁴⁸ A representative example is a petition to establish mandatory standards for the exterior temperatures of ovens. CPSC denied the petition on the grounds that “these temperature limits [set forth in UL 858 and ANSI Z21.1(b)] provide adequate protection against burns” and apparently all manufacturers of ovens “are presently manufacturing ovens in accordance with these provisions.”²⁴⁹

(c) *The use of voluntary standards as interim measures.*— On January 6, 1977, the CPSC issued its mandatory safety standard for architectural glazing materials.²⁵⁰ This standard was developed by an

246. This information was contributed by William Kitzes of the Office of Program Management, CPSC, during an informal telephone conversation with the author in July 1978. See also 43 Fed. Reg. 26103-04 (1978).

247. *Wall St. J.*, Aug. 11, 1977, at 1, col. 1.

248. See, e.g., 41 Fed. Reg. 52100 (1976). These instances do not include those described earlier, see note 242 *supra* (citing an instance in which CPSC denied a petition because a voluntary standard was in the process of being developed).

249. 41 Fed. Reg. 52101 (1976).

250. 16 C.F.R. § 1201 (1977).

autonomous industry group²⁵¹ and was partially based on a voluntary standard, ANSI Z97.1-71. The standard became effective July 6, 1977, except for certain types of wired glass for which the effective date was January 6, 1980. In March 1977, in response to a petition to stay the standard's effective date, CPSC decided to retain the July 6, 1977 effective date, but granted industry a "grace period" during which products that complied with ANSI Z97.1-72 might be used in architectural products subject to the mandatory standard.²⁵² In June 1977 CPSC received a second petition to stay the effective date from the Laminators Safety Glass Association (LSGA), which stated that laminated glass used in doors and glazed panels might not meet the standard and that LSGA was continuing impact testing of its products. Recognizing that if the LSGA allegations were true the standard "could have a significant adverse economic effect on the laminated glass industry and on consumers' ability to obtain replacement glazing," CPSC granted a temporary stay for laminated glass when "such glazing complies with American National Standards Institute Standard, 'Performance Specifications and Methods of Test for Safety Glazing Material used in Buildings,' ANSI Z97.1-75."²⁵³ The stay was for 150 days and was intended to permit the completion of testing. In this instance CPSC was fortunate to have available a current voluntary standard of high quality that provided some interim product safety.

Because of the potential involvement with voluntary standards activities and the desire to avoid conflicts of interest, CPSC decided to formulate a policy statement on the use of these standards. In 1974 CPSC proposed a policy statement on participation of its employees on standards-writing committees. This statement, finally adopted in 1975,²⁵⁴ defined the role of voluntary standards to include the reduction of unreasonable risk of injury associated with consumer products, the reduction of the need for mandatory standards, and the provision of a basis for mandatory standards.²⁵⁵ The utilization of voluntary standards by CPSC is more complex than these rather summary statements indicate, however, and attempts to develop a more comprehensive statement continued. Drafts of a fuller statement circulated within CPSC and extensive staff comments on this statement were developed

251. The notice of the proposed standard described this group as a "group of industry, labor and general interest groups initially formed in 1968 for the purpose of drafting and lobbying for passage of a Model Safety Glazing bill in the various states." 41 Fed. Reg. 6178 (1976).

252. 42 Fed. Reg. 24067-68 (1977).

253. *Id.* at 42195.

254. 16 C.F.R. § 1031.1 (1978).

255. *Id.* § 1031.2(a).

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resulting in the issuance of statement of policy on November 10, 1977.²⁵⁶ It noted the criticism in the 1970 Report of the National Commission on Product Safety, but commented that "it is the Commission's perception that voluntary standards organizations have made progress since 1970 in the development of voluntary standards."²⁵⁷ Voluntary standards are generally viewed by CPSC "as complementary to and not a substitute for mandatory standards," and "a proper combination of voluntary and mandatory standards can have a higher 'payoff' in increased product safety than either mandatory or voluntary activities alone will have."²⁵⁸ Further, the statement suggested that the cost of encouraging the development of effective voluntary standards is relatively small when compared to the resources necessary to develop mandatory standards.

The CPSC statement listed three levels of agency involvement in the development of voluntary standards, including (1) *liaison*, involving provision of information, responses to requests for information, and perhaps attendance of Commission staff at one or two meetings of the outside organization; (2) *monitoring*, involving maintenance of awareness of the voluntary standards development process through oral or written inquiries, receipt and review of minutes of meetings and copies of draft standards, and attendance at meetings to observe and comment during the standards development process; and (3) *participation*, involving an active role in the development of a standard. The statement specifically recognized that in appropriate circumstances CPSC might "contribute to the deliberations of the committee by expending resources to provide technical assistance including research, engineering support, and information and education programs."²⁵⁹ The full Commission must approve activities that fall within the area of "participation"; the Executive Director may approve activities that involve only "monitoring" or "liaison." The policy statement spelled out ten ways that the CPSC could support voluntary standards development.²⁶⁰

256. 42 Fed. Reg. 58726 (1977).

257. *Id.*

258. *Id.*

259. *Id.*

260. *Id.* at 58727. The listed methods are as follows:

- (1) Providing epidemiological information and explanations of hazards for consumer products.
- (2) Encouraging the initiation of the development of voluntary standards for specific consumer products.
- (3) Identifying specific risks of injury to be addressed in voluntary standards.
- (4) Performing or subsidizing technical assistance, including research and engineering support, in the development of a voluntary standards activity in which the Commission is participating.

Two additional methods for CPSC recognition and endorsement of specific voluntary standards appeared in an earlier draft but were dropped from the final draft.²⁶¹ The statement also generally noted the criteria for evaluating requests for participation in the development of voluntary standards: procedures must be open; committees must be balanced, with consumers and small business represented by individuals with technical expertise in the areas under consideration; periodic review, including review for anticompetitive effects, must be provided; the proposed standard must be performance-oriented and provide for product identification to simplify collection of data on injury and hazard; and a certification procedure must be established to assure and evaluate industry conformance with the standard.

Finally, the policy statement outlined the possible effect of voluntary standards on CPSC activity, including the following: (1) no action should be initiated if there is an existing standard that adequately addresses issues of safety to which the industry involved conforms; (2) action should be deferred on a mandatory standard if an adequate voluntary standard is already in the process of development and will be completed expeditiously; however, if CPSC has commenced a section 7 proceeding it normally will not delay that proceeding to accommodate the development of a voluntary standard;²⁶² (3) action should be deferred for up to three years if an existing standard adequately reduces risk of injury and was prepared in accordance with the criteria for agency participation; and (4) portions of voluntary standards should be used in mandatory standards, public comment on the adequacy of such voluntary standards should be requested, and offerors should be encouraged to use such standards if they are considered adequate. The

(5) Providing assistance on methods of disseminating information and education about the voluntary standard or its use.

(6) Performing a staff evaluation of a voluntary standard to determine its adequacy and efficacy in reducing the risks of injury that have been identified by the Commission as being associated with the use of the product.

(7) Encouraging state and local governments to reference or incorporate the provisions of a voluntary standard in regulations or ordinances.

8 [sic] Monitoring the conformance of products subject to a voluntary safety standard.

(9) Listing voluntary standards that address specific hazards associated with the use of consumer products.

(10) Taking other actions that the Commission believes appropriate in a particular situation.

Id.

261. See Memorandum from D. R. Mackay, Director, Voluntary Standards, Office of Program Management, CPSC, to the Consumer Products Safety Commission (undated) (attachment entitled "Proposed CPSC Voluntary Standards Policy" 8-9).

262. 42 Fed. Reg. 58727 (1977). The statement points out that this provision is necessary to discourage voluntary groups from delaying work on a voluntary standard until CPSC initiates action on a mandatory standard.

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CPSC staff implemented this policy statement in November 1977 by listing nineteen products that were to be included in the voluntary standards program,²⁶³ dividing them into six broad categories: fire and burns, electric shock, sports and recreation, children's products, household products, and powered equipment. Many of the products listed had been the subject of earlier on-going cooperative efforts between CPSC and voluntary standards organizations, including ladders, playground equipment, bunk beds, bathtub and shower stalls, and glass soft drink bottles.²⁶⁴ CPSC requested comments on the policy statement from interested persons.²⁶⁵ Most of the comments received were favorable; the most common criticism concerned the principle that, once begun, a section 7 proceeding would not be delayed if a voluntary standards effort on the same subject were commenced.²⁶⁶

The voluntary standards policy statement suggests a trend within CPSC to rely increasingly on voluntary standards rather than on mandatory standards; and it has announced only one new section 7 proceeding so far in 1978.²⁶⁷ This proceeding was later suspended after Congress decided that the delays in the CPSC procedure were too great and enacted a statute adopting a GSA standard as an interim safety standard.²⁶⁸ In contrast, during the second quarter of 1978 three new liaison, one new participation, and five new monitoring projects were approved under the voluntary standards policy.²⁶⁹ One of the products

263. [1978] 2 CONS. PROD. SAFETY GUIDE (CCH) ¶ 43866.

264. *Id.* ¶ 43935.

265. 42 Fed. Reg. 58728 (1977).

266. [1978] 2 CONS. PROD. SAFETY GUIDE (CCH) ¶¶ 43943, 43973.

267. *See* 43 Fed. Reg. 10427 (1978). The number of § 7 proceedings is not a gauge of overall CPSC activities since CPSC has a variety of other regulatory mechanisms available to it.

268. Congress recently added a new § 35 to the Consumer Product Safety Act. S. 2401, 95th Cong., 2d Sess. (1978). This section directs CPSC to promulgate an "interim safety standard" for cellulose insulation consisting of General Services Administration (GSA) specification "HH-I-515C (as that specification read on December 1, 1977)" with possible nonsubstantive changes. Only the determination whether changes are "substantive" may be judicially reviewed. That specification in turn references an ASTM standard. The legislation also contains novel provisions requiring CPSC to adopt modifications of that specification that the GSA approves and requires the GSA to notify the commission of such modifications. However, CPSC need not adopt the modifications if it finds after consulting with the Secretary of Energy that: the amendment is unnecessary to protect consumers from unreasonable risk of injury; implementation would create an undue burden on the industry; or, additional time is required to study the safety or economic consequences of implementation. The passage of this legislation is itself a remarkable commentary on the delays in CPSC development of mandatory standards.

269. Memorandum from D. R. Mackay, Director, Voluntary Standards, Office of Program Management, CPSC, to the Consumer Product Safety Commission (Apr. 20, 1978). This memorandum also describes a new cooperative arrangement with UL:

During this quarter we have made arrangements with Underwriters Laboratories to maintain an awareness of UL Standards development activities pertaining to a number of projects that we are monitoring including ranges and ovens, energy conservation devices, smoke detectors, aluminum wire, television sets, extension cords, and hair dryers.

listed for agency participation is a safety standard for bathtubs and shower stalls, which was in the balloting stage at the end of 1977. I looked into the earlier phases of the development of this standard because it was created by an ASTM committee and probably represents the most ambitious attempt, prior to the chain saw proceeding, at cooperation between CPSC and a major voluntary standards organization. Illustrating the perceived importance of this effort is the fact that when the developed voluntary standards were formally presented to CPSC by ASTM in September 1976, ASTM issued a press release in which it highlighted the "unique sixteen-month cooperative effort between government, industry, the engineering community and the public."²⁷⁰ Since then, however, ASTM's views on the success of this effort have soured considerably. A brief description of the history of this standard illustrates the difficulties of governmental cooperation with the private sector.

ASTM's efforts in the consumer product area date back to 1973, when it organized the F15 Committee, which was to cooperate with the newly-formed CPSC.²⁷¹ Subcommittee F15.03 was formally organized in December 1973, but did not become active for about sixteen months, because of antitrust complications.²⁷² In 1973 CPSC awarded a \$147,000 contract to Abt Associates, Inc. to study ways to reduce bathtub and shower stall accidents. In March 1975 Abt held a conference with the bathtub and shower stall industry to discuss its preliminary findings. At about the same time ASTM decided to reactivate the F15.03 Subcommittee, which held its first meeting in April 1975. ASTM's first step was to request informal assurance from CPSC that if ASTM pursued this area vigorously CPSC would not institute a proceeding to develop a mandatory standard while the voluntary effort was underway. This assurance was given.

ASTM next attempted to broaden the membership of the F15.02 Subcommittee by including consumers and producers of bathtub acces-

UL has agreed to send to us copies of notices of UL Industry Advisory Conferences, reports of such conferences and copies of proposed standards or revisions to existing standards for these products. This agreement with UL will enable us to improve our effectiveness in dealing with the electrical products in the voluntary standards program.

The attachment to this memorandum describes the status of the voluntary standards program, and the manner of CPSC involvement, as of April 1978.

270. ASTM STANDARDIZATION NEWS, Dec. 1976, at 31. Other ambitious cooperative attempts include those involving ladders and chain saws.

271. In addition to bathtubs and shower stalls, F15 subcommittees have dealt with matches, lighters, high chairs, cribs, and other products.

272. A consent decree signed by plumbing manufacturers many years earlier had raised anti-trust concerns; however, a clearing letter from the Department of Justice, dated October 16, 1974, eliminated the problem.

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sories. The F15.03 Subcommittee was large, consisting of about 100 members, including two CPSC employees, representatives of HUD and the National Bureau of Standards, and about fifteen consumers. During ASTM's development of four standards—slip coefficients, grab bars, anti-scalding, and thermal shock—two consumer sounding boards were consulted, the Bureau of Standards conducted a study of the slipperiness of sixty bathtubs, and task forces and the subcommittee met often. The final result was a report, written by a person under contract with ASTM, that described the background of the standards, the Abt report, the subcommittee responses to the Abt report, the standards themselves, the rationale for the standards, a proposed information and education program for consumers, and a cost/benefit study. In short, the report contained much more information than accompanies traditional voluntary standards.

The F15.03 Subcommittee overwhelmingly approved the proposed standards and responses to the Abt report, with only a smattering of negative votes, which were handled in the usual way. Before balloting the full F15 Committee (approximately 500 people) and the entire ASTM membership (approximately 25,000 people), ASTM sought the views of CPSC on the adequacy of the safety aspects of the proposed standards, hoping that CPSC approval would ensure a high level of voluntary conformity with the standard. Although the standards were presented to CPSC in September 1976, CPSC never officially responded. On the basis of unofficial and informal CPSC comments, ASTM balloted the F15 Committee late in 1977 and the full membership in early 1978.

By April 1977 ASTM was irked by the long delay and fearful that it meant that CPSC was revising the four standards. The Managing Director of ASTM sharply criticized CPSC at Senate oversight hearings on April 19, 1977, noting that ASTM feared that CPSC was in the process of duplicating the work of the ASTM subcommittee.²⁷³ In response to this criticism, CPSC prepared a chronology of the internal review of the bathtub and shower stall standards after September 24, 1976. According to CPSC, the delay was not attributable to any attempt to revise the ASTM proposed standards; rather, CPSC was trying to evaluate them with a staff that, except for the two persons who had participated on the ASTM subcommittee, had no familiarity with the

273. See *Implementation of the Consumer Product Safety Act: Hearings Before the Subcomm. for Consumers of the Senate Comm. on Commerce, Science, and Transportation*, 95th Cong., 1st Sess. 26 (1977) (statement of William T. Cavanaugh).

complex issues of bathtub and shower stall safety.²⁷⁴ In addition, because CPSC had not adopted its policy statement when it received the standard, uncertainty about how CPSC should treat the standard was a major problem facing CPSC with respect to bathtubs and shower stalls. There was no process or procedure by which CPSC could implement or "recognize" a voluntary standard short of a full-scale section 7 process.

2. *The Voluntary Standards Organization as an "Offeror."*—When proposing to develop a mandatory standard, CPSC is required by section 7 of the Consumer Product Safety Act to extend invitations to persons to submit either an existing standard or an offer to develop a proposed consumer product safety standard.²⁷⁵ CPSC may "agree to contribute to the offeror's cost"²⁷⁶ in developing such a proposed standard. If the standard submitted or developed by the offeror is satisfactory, CPSC publishes it as a proposed standard for comment and thereafter holds an informal hearing. The concept of requiring an agency to invite offers to develop proposed mandatory standards is one of the more innovative and controversial provisions of the Consumer Product Safety Act. Its overall effect, however, has been to impede significantly the production of mandatory standards²⁷⁷ and to encourage the alternative use of voluntary standards. Nonetheless, the offeror process is potentially of tremendous benefit to the private standards-writing organizations because they are the principal, and often the sole, writers of standards in many cases. The CPSC regulations implementing section 7 state that the goal of section 7 is to solicit "the involvement of all interested persons, the general public, and especially ultimate consumers."²⁷⁸ The regulations invite "ultimate consumers" to become involved "by submitting offers to develop standards and by participating in the development of standards by other offerors."²⁷⁹

Two of the first attempts to develop mandatory standards under section 7 initially followed a common pattern. A trade association or similar group petitioned CPSC to adopt a mandatory standard and tendered a voluntary standard as the proposed safety standard. CPSC granted the petition to commence a proceeding for development of a

274. See Draft of letter from Harry I. Cohen, Program Manager, Office of Program Management, Consumer Product Safety Commission, to William Cavanaugh, Managing Director, American Society for Testing and Materials (Aug. 30, 1977).

275. 15 U.S.C. § 2056(b) (1976).

276. *Id.* § 2056(d)(2).

277. [1978] 2 CONS. PROD. SAFETY GUIDE (CCH) ¶ 43870 (statement of Consumer Product Safety Commissioner David R. Pittle). See also note 268 *supra* & accompanying text.

278. 16 C.F.R. § 1105.1(d) (1977).

279. *Id.*

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mandatory standard and solicited other offerors, refusing to use the voluntary standard as the proposed safety standard. Several groups, including the original petitioner and one or more consumer organizations, submitted offers to develop a mandatory standard; CPSC, acting under the general principles described above, announced that it had selected a consumer organization, and it began to negotiate regarding the extent of CPSC financial contributions. At this point the two scenarios diverge: in *Power Lawnmowers*, Consumers Union (CU) was selected as the offeror and proceeded to develop a standard that has since had a long and painful history;²⁸⁰ but in *Architectural Glazing* CPSC and the National Consumer League were unable to reach agreement on cost reimbursements so that ultimately CPSC chose an industry group as offeror. Architectural glazing standards have since been promulgated.²⁸¹

In two other instances CPSC selected large voluntary standards organizations as offerors: the ASTM F15 Committee prepared a proposed mandatory standard for book matches,²⁸² and UL prepared a

280. The Outdoor Power Equipment Institute (OPEI), a trade association, participated actively in the formulation of the standard, which went through four drafts before a proposed standard was issued in 1975. CPSC commissioned a further study of the proposed standard by an independent organization, the Research Triangle Institute, and finally published a proposed standard on May 5, 1977. 42 Fed. Reg. 23052 (1977). This proposal differed so significantly from the CU standard that CU filed a formal comment on the revised proposal, receiving partial reimbursement by the CPSC for preparing this comment. OPEI made the following comment on the CPSC standard:

Time has seen the development of four CU proposed draft standards. Each draft successively reflected to a greater degree CU's growing sensitivity to . . . basic principles. . . .

We are now faced with the Commission's own attempt to produce a rational and adequate standard. This proposed draft *should* have been the culmination of all that had gone before, incorporating the necessary and essential elements of the entire development process. . . .

It is hardly encouraging, then, to encounter a proposed standard that not only fails to consider the product of considerable OPEI labor, but that ratifies the least desirable aspects of the offeror's proposal and adopts, without any support or guidance, new and untried requirements of its own.

Outdoor Power Equipment Institute, Position Paper on Consumer Product Safety Commission Proposed Mandatory Safety Standard for Power Lawn Mowers 2-3 (Staff Draft #4 Mar. 3, 1977) (emphasis in original). OPEI has commissioned Stanford Research Institute to prepare estimates of the increases in cost of the CU and CPSC standards that were adopted. I have talked to the participants in the affair, all of whom are unhappy over the long delays and the proposed standards. CU is also unhappy because CPSC only reimbursed a portion of its costs. CPSC refused to permit full reimbursement even though CU had no economic stake in the standard. Representatives of CU informally stated that they doubted CU would serve as an offeror again.

281. 16 C.F.R. § 1201 (1977).

282. 41 Fed. Reg. 14112 (1976). ASTM also made an unsuccessful offer to produce a standard for architectural glazing materials. *Id.* at 6178. A consumer organization, National Consumers League, was first selected, but financing could not be agreed upon; the standard was ultimately prepared by an ad hoc industry group.

proposed mandatory standard for television receivers.²⁸³ In neither case did CPSC publish the proposed standard as the offeror drafted it. CPSC published a proposed standard for book matches for comment sixteen months after it received the ASTM standard; it adopted most of the ASTM proposed standard but added novel and complex provisions relating to child-proof covers.²⁸⁴ It received a large number of adverse comments, and the final standard²⁸⁵ deleted both the child-proof cover requirement and ASTM's proposed requirement that matches extinguish themselves after a specified period of time.²⁸⁶ As a result the final standard for book matches differs only in relatively minor respects from an ASTM voluntary standard that was in existence in 1974. The bitterness of some ASTM staff members about this incident rivals the feelings of many CU employees about lawnmowers because ASTM developed this standard primarily with its own resources (at an estimated cost of 100,000 dollars) and the traditional volunteer efforts of its own members.²⁸⁷

In March 1978 the First Circuit set aside substantial portions of the book matches standard because CPSC failed to document in the record empirical evidence that certain named hazards actually existed and to carry its burden of showing that certain performance standards were "reasonably necessary" to eliminate other hazards that had been adequately documented.²⁸⁸ Although the general requirements of the standard were upheld, the performance standards were set aside.²⁸⁹

UL's experience with television receivers was also unsatisfactory. In that proceeding UL formed a committee with substantial consumer representation after considerable difficulty.²⁹⁰ It developed a draft

283. Cf. [1975-1977 Transfer Binder] CONS. PROD. SAFETY GUIDE (CCH) ¶ 43348 (action on preliminary standard delayed by CPSC to provide for expert views).

284. 41 Fed. Reg. 14113-14 (1976).

285. 42 Fed. Reg. 22667 (1977) (to be codified in 16 C.F.R. § 1202).

286. During the ASTM development phase of the standard, the self-extinguishing proposal was highly controversial. The industry suggested that it was impractical in the light of manufacturing processes; after careful consideration, the committee, more than half of whom were consumers, did not agree. *Id.* at 22668.

287. Some ASTM staff members feel they never received proper credit for their efforts in preparing the proposed book matches standard. The same sentiment was expressed more politely by William T. Cavanaugh, Managing Director of ASTM, in his testimony during the *Consumer Product Safety Commission Oversight: Hearings on S. 644 and S. 1000 Before the Subcomm. for Consumers of the Senate Comm. on Commerce*, 94th Cong., 1st Sess. 121 (1975).

288. *D. D. Bean & Sons Co. v. Consumer Product Safety Comm'n*, [1978] 2 CONS. PROD. SAFETY GUIDE (CCH) ¶ 75181 (1st Cir. Mar. 31, 1978).

289. The performance requirements were intended to guard against split splints, delayed ignition, and afterglow or reappearance of flame. The court found "a dearth of evidence substantiating any degree of risk from these particular conditions." *Id.*

290. UL's goal was to form a committee comprised of at least one-third consumers. Technically knowledgeable consumer volunteers, however, were rare, especially since there was no coin-

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standard and submitted it to CPSC in June 1976; an invitation for comments on the draft standard was published in November,²⁹¹ but a long delay followed. Early in 1977 CPSC decided that the draft standard was not acceptable because while it had anticipated “a standard consisting of relatively few performance tests and specifying acceptable levels of performance for the entire television receiver and its major assemblies,” the UL draft standard consisted “of a large number of specifications for individual components and a number of design criteria.”²⁹² A public briefing was held in October 1977, and on November 2, 1977, CPSC announced that it was discontinuing the proceeding with respect to shock, implosion, and mechanical hazards that might be associated with television receivers, and extending until April 30, 1979 the time to complete a mandatory standard relating to television fire hazards.²⁹³ CPSC directed its staff to prepare a technical feasibility study of a performance standard covering fire hazards and to estimate the costs of compliance with such a standard. Thus, the development of a mandatory standard covering television receivers seems several years distant.

At Senate oversight hearings held during 1977, Commissioners stated that the unfortunate record of mandatory standards development could be primarily attributed to the failure of CPSC to monitor closely the direction the offerors were taking and to guide them in the direction CPSC desired.²⁹⁴ Apparently recognizing this shortcoming, CPSC invited an offer to develop mandatory standards for Christmas tree lights, and included in the invitation provisions for more careful monitoring of the work being done by offerors very specific suggestions of areas that should be addressed, and a list of portions of voluntary standards that appeared to provide satisfactory protection to consumers.²⁹⁵ This effort was considerably more successful; a draft

pensation paid beyond expenses for attending the many meetings. Moreover, after the committee was formed, consumer members withdrew for reasons ranging “from pregnancy and previous social plans to business conflicts and vacations.” Hoffman & Farr, *Television Receivers: The UL Experience*, ASTM STANDARDIZATION NEWS, May 1977, at 20, 21.

291. 41 Fed. Reg. 51055 (1976).

292. [1975-1977 Transfer Binder] CONS. PROD. SAFETY GUIDE (CCH) ¶ 43348. All provisions proposed by UL now appear in UL’s voluntary standard No. 1410 for Television Receivers and Video Products.

293. 42 Fed. Reg. 57335-36 (1977).

294. *Implementation of the Consumer Product Safety Act: Hearings Before the Subcomm. for Consumers of the Senate Comm. on Commerce, Science, and Transportation*, 95th Cong., 1st Sess. 125 (1977). The Comptroller General cited inadequate Commission guidance as a main cause of delay and inefficiency. COMPTROLLER GENERAL OF THE UNITED STATES, THE CONSUMER PRODUCT SAFETY COMMISSION NEEDS TO ISSUE SAFETY STANDARDS FASTER, H.R. DOC. NO. 78-3, 95th Cong., 2d Sess. (1977).

295. 42 Fed. Reg. 17154 (1977).

standard much closer to CPSC's views was developed, and on May 3, 1978, the agency published a proposed standard. The offeror's draft was nevertheless revised.²⁹⁶ The format of the request for offers for Christmas tree lights was closely followed in the request, since suspended, for offers to develop a standard for cellulose insulation.²⁹⁷

As offerors in the above described situations, both ASTM and UL used the consensus principle in developing draft standards. In each instance a significant number of consumers were appointed to the committees: more than a majority of the ASTM committee and more than a third of the UL committee were consumers. Although some were technically knowledgeable, most were not. In the committee on book matches the consumer members caucused separately to discuss technical questions and to reach agreement on a common position. The more forceful and technically knowledgeable consumers may have a dominant voice in such a subgroup. These consumer caucuses were not private and were sometimes attended by representatives of producers and other interests.

In selecting offerors CPSC has tended to prefer consumer-related organizations like Consumer's Union or the National Consumers League to industry-related organizations or voluntary standards-writing organizations. One cannot really quarrel with this approach since it was presumably a perception that the voluntary standards process had given inadequate consideration to safety that led to the decision to develop a mandatory standard in the first place. Also, it is arguable that a consensus approach is not a desirable way to create a mandatory safety standard in any event, because producers might have a de facto veto over provisions in the proposed standard. The limited experience that CPSC has had with consensus offerors, however, does not bear out this concern; for example, in developing the book matches standard the ASTM committee approved a standard that contained provisions that were opposed by many manufacturers and were ultimately deleted by CPSC at the manufacturers' request. The principal advantage an organization like ASTM has in developing standards is the reservoir of technical knowledge and skill in its membership. These advantages are reflected in the relative dispatch with which these organizations have produced standards, and it would be undesirable to exclude such organizations from the offeror process on the basis of a theoretical or imagined concern that has not materialized.

296. *See id.* at 19137.

297. *Id.* at 10427.

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C. The Nuclear Regulatory Commission (NRC)

Acting pursuant to broad provisions in the Atomic Energy Act of 1954,²⁹⁸ NRC has developed safety regulations for the nuclear power generation industry designed to “provide reasonable assurance . . . that the health and safety of the public will not be endangered.”²⁹⁹ In this regulatory effort, NRC extensively uses standards developed by voluntary standards organizations. NRC has developed a uniform and formal method of cooperating with these organizations, a method that appears on the whole to work smoothly and effectively.³⁰⁰ Indeed, the relationship between NRC and private standards organizations is a desirable model for other agencies to emulate. A number of organizations write nuclear standards, including ANSI, ASME, the Institute of Electrical and Electronics Engineers, and the American Nuclear Society. In 1976 ANSI created the Nuclear Standards Management Board to coordinate the standards-writing efforts of these agencies.³⁰¹ Representatives of NRC, the Department of Energy, and the National Bureau of Standards serve on this Board. In the past, NRC’s predecessor, the Atomic Energy Commission, provided ANSI with significant financial support because of the cost and extent of ANSI participation in this area.

NRC commonly references voluntary standards in its series of “regulatory guides,” though in a few instances the standards are referenced in the regulations themselves. Most NRC safety and plant siting standards are couched in terms of ultimate goals and emphasize maximum safety. For example, NRC regulations provide that “[s]uitable instrumentation shall be provided so that the seismic response of nuclear power plant features important to safety can be determined promptly to permit comparison of such response with that used as the design basis.”³⁰² The regulatory guides are public statements by NRC staff of acceptable, but not mandatory, methods of complying with such requirements.³⁰³ About half of the NRC regulatory guides incor-

298. 42 U.S.C. § 2011 (1970 & Supp. V 1975).

299. 10 C.F.R. § 50.40(a) (1978).

300. Agency employees, staff members of the voluntary standards organizations, and technical persons employed by the industry who are active in the standards-writing process confirmed this conclusion. While the relationships were described as not always smooth, particularly when participants were not well-prepared, all persons interviewed stressed the cooperative attitudes that generally prevailed and generally praised the quality of the resulting product.

301. The predecessor of this Board was called the Nuclear Technical Advisory Board.

302. 10 C.F.R. § 100, app. A, VI(a)(3) (1978).

303. For example, a regulatory guide relating to seismic instrumentation for nuclear power plants provides:

[e]arthquake instrumentation specified in ANSI N18.5 . . . is acceptable to the regula-

porate or refer to voluntary standards as acceptable means of compliance.³⁰⁴

NRC also maintains working relationships with the technical committees active in the nuclear industry. It is committed to direct cooperation with the working groups, "including a full exchange of information regarding scheduling."³⁰⁵ Cooperation entails assignment of a technical employee to the committees to serve as liaison and to monitor the progress of the committees. While these employees participate actively on the committees, they do not have authority to commit the NRC to any position.

When a pertinent voluntary standard is developed it is reviewed by the NRC staff, including the individual who participated on the technical committee. The final decision to issue a regulatory guide, however, is made by persons who did not participate in the committee effort. Regulatory guides are not published in the *Federal Register*, but a notice of their availability is published with an invitation to file written comment regarding them,³⁰⁶ and NRC maintains a mailing list of those who wish to receive copies of future regulatory guides.

NRC has another policy that has had a favorable long-term effect on its relationships with standards-writing organizations. Within ninety days of issuing any ANSI nuclear standard, NRC either initiates its implementation—by referencing or endorsing it in whole or in part in a regulatory guide or proposing a revision of a regulation—or ad-

tory staff for satisfying the seismic instrumentation requirements . . . subject to the following . . .

(a) Instead of the locations specified in section 4.1.2 of the Standard, one triaxial peak accelerograph should be provided at one location of each of the following
Regulatory Guide 1.12, § C (Apr. 1976). It appeared to me that about half the NRC regulatory guides incorporate or refer to voluntary standards as an acceptable means of compliance.

304. Incorporation of voluntary standards by reference in many regulatory guides makes examination of two documents necessary to ascertain exactly what the guide permits. Complicating matters, NRC does not place copies of the referenced standard in its public reading room, so one must purchase the standard from ANSI or another organization simply to examine the complete standard. Although this preserves the private organization's publications sales, it is most inconvenient for the reader. NRC may be concerned that copying the referenced standard verbatim in the regulatory guides would infringe the voluntary standard's copyright; but at the very least, copies of the referenced material should be placed in the agency's public document rooms. "The NRC is investigating methods of making the information available in the PDR [public documents rooms] with due consideration to copyright laws." Letter from Robert B. Minogue, Director, Office of Standards Development, NRC, to the author (Dec. 2, 1977).

305. Minutes, ANSI Nuclear Technical Advisory Board Executive Committee (Sept. 5, 1973). The statement bears the notation "Endorsed by Lester Rogers, Director of Regulatory Standards, USAEC."

306. There is no requirement of notice of proposed rulemaking nor a formal comment period on the theory that the guides do not have the status of binding regulations. Many of the guides, however, are reviewed after their issuance, and comments received within the first two months after issuance are particularly helpful in this review. Letter from Robert B. Minogue, Director, Office of Standards Development, NRC, to the author (May 1, 1978).

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vises ANSI of its reasons for being unable to do so. In some instances the active participation of NRC employees on technical committees will avoid the development of suggestions or proposals that are unacceptable to NRC. Nevertheless, the prompt consideration and response of NRC to standards undoubtedly improves the morale of the technical committees and assures their continuous cooperation and effort.

The Director of the Office of Standards Development of NRC estimates that there are about 150 employees in the Office, about seventy of whom cooperate with the technical committees in preparing standards. During the course of my interview with him, he emphasized that it was impossible for his staff to produce all the detailed standards needed for complex nuclear plants "from scratch." He felt that the cooperative efforts of the voluntary standards committees and his staff have created higher quality technical standards at a considerably lower cost than NRC could have produced on its own.

D. The Food and Drug Administration (FDA)

The FDA administers the Medical Device Amendments of 1976,³⁰⁷ a statute passed "to provide for the safety and effectiveness of medical devices intended for human use."³⁰⁸ The FDA classifies all medical devices into three categories: Class I, devices subject to limited regulation; Class II, devices for which performance standards may be developed to assure safety and effectiveness; and Class III, devices that require premarket approval to assure safety and effectiveness. Classification is made on the basis of recommendations by panels of experts after a public notice and comment procedure. Initial classification is presumptively Class III, but a manufacturer or importer may petition for a lower classification.³⁰⁹ The Act requires development of mandatory performance standards for medical devices through an offeror process similar to that of the Consumer Product Safety Act.³¹⁰ The agency is directed to consult with federal agencies "and other nationally or internationally recognized standard-setting entities."³¹¹

The statute has been in effect for about two years and the FDA has not issued any notices requesting offers for standards for specific

307. Pub. L. No. 94-295, 90 Stat. 539 (1976) (codified in scattered sections of 15, 21, 42 U.S.C.).

308. *Id.* at Preamble.

309. *Id.* § 513. Rules relating to classification procedures were adopted on July 18, 1978. 43 Fed. Reg. 32988 (1978).

310. Medical Device Amendments of 1976, Pub. L. No. 94-295, § 514, 90 Stat. 539 (1976) (codified in scattered sections of 15, 21, 42 U.S.C.).

311. *Id.* § 514(a)(5)(B).

products. The FDA has publicly stated that it intends to continue to encourage the development of voluntary standards for medical devices, a cooperative effort that goes back more than five years.³¹² This attitude suggests that voluntary standards can serve as "informal standards prior to classification as well as during the development of formal standards for devices that are not candidates for immediate attention, and they may be the basis for subsequent formal FDA standards."³¹³ The Acting Director of the Division of General Medical Device Standards of the FDA indicated that the Division probably would take no further action if it thought that an acceptable voluntary standard existed and that there was satisfactory voluntary compliance. The agency would concentrate its regulatory efforts elsewhere.³¹⁴

The FDA is currently working on a policy statement for the regulation of Class II standards that contemplates a "mix" of mandatory standards, voluntary standards as guidelines, and labeling requirements to enforce the Medical Device Amendments. As described at a conference held by the Association for the Advancement of Medical Instrumentation in the spring of 1978, the policy would involve some form of FDA approval of desirable voluntary standards, either through recognition in the *Federal Register* or through silent encouragement of their use. This proposal, if implemented, has elements similar in some respects to the regulatory guides used by NRC.

FDA is also working on procedural regulations to implement section 514, the offeror provision of the Amendments. In the event the offeror process is invoked, a voluntary standards organization would be a desirable candidate primarily because of the technical and scientific nature of the products involved.³¹⁵ Consumer's Union, for example, is

312. This cooperative effort is described in a notice appearing in the *Federal Register* on August 12, 1976. 41 Fed. Reg. 34099 (1976). FDA has reviewed voluntary standards in fifteen areas. It has awarded contracts to develop standards for specific products such as electrocardiographs, actively cooperated in the revision of orthopedic implant standards, requested voluntary standards-writing organizations to develop standards for specific products such as hearing aids, and participated actively in technical committees dealing with a variety of such products. In a number of instances the FDA has approved a voluntary standard as a guideline and designated it with an FDA reference number as well as the ASTM or ANSI number. *Id.* ANSI has created a Medical Device Standards Management Board in which FDA participates actively. The principal committee active in this area is the ASTM F4 Committee.

313. 41 Fed. Reg. 34099-100 (1976).

314. Telephone interview with Robert J. Cangelosi, Acting Director, Division of General Medical Device Standards, Bureau of Medical Services.

315. Proposed procedures were published for comment on July 17, 1978. 43 Fed. Reg. 32264 (1978) (to be codified in 29 C.F.R. § 861.24). The introduction to these proposed procedures states:

Because voluntary standards help to assure the safety and effectiveness of marketed devices, FDA will continue to promote their use. Voluntary or privately recognized performance standards may serve as informal standards before FDA classifies the devices

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unlikely to generate a standard for dental amalgam alloy. There are, however, laboratories or organizations with a public interest orientation that have the ability to develop standards in technical areas.

FDA has adopted regulations authorizing agency employees to participate in voluntary standards organizations with agency approval.³¹⁶ A participant may be either a voting or a nonvoting member, but in either event participation disqualifies the employee from acting as a “deciding official,” that is, as a person who signs a document ruling upon that standard.³¹⁷

E. Department of Housing and Urban Development (HUD)—Mobile Home Standards

Title VI of the Housing and Community Development Act of 1974,³¹⁸ known as the National Mobile Home Construction and Safety Standards Act of 1974, authorizes the Secretary of HUD to establish “by order appropriate Federal mobile home construction and safety standards.”³¹⁹ Such a standard is defined as a “reasonable standard for the construction, design, and performance of a mobile home which meets the needs of the public including the need for quality, durability, and safety.”³²⁰ It is reasonably clear that Congress contemplated that in promulgating these standards HUD would consider, but not necessarily accept, voluntary standards;³²¹ initial federal standards were to be established no later than one year after the date of enactment, Au-

and during the development of formal standards under proposed part 861. Voluntary standards will be especially important for devices that are not candidates for immediate standards development under proposed part 861. Moreover, under proposed § 861.20 (21 C.F.R. 861.20) voluntary standards may be the basis of subsequent formal FDA standards.

For an existing voluntary standard to be eligible for adoption, FDA must determine that it is “based upon scientific data and information and has been subjected to adequate scientific consideration.” 43 Fed. Reg. 32268 (1978) (to be codified in 29 C.F.R. § 861.24).

316. 21 C.F.R. § 10.95 (1977).

317. *Id.* § 10.95(d)(1)(iii).

318. 42 U.S.C. § 5401 (Supp. V 1975). This Act was amended by § 902 of the Community Development Act of 1977, Pub. L. No. 95-128, 91 Stat. 1149 (1977), to provide an exemption for “modular” homes if the builder certifies, among other things, that the structure was designed as a site-built structure, that it was not designed to be moved once it was erected, and that it was “designed and manufactured to comply with a . . . recognized model building code . . . or with a minimum property standards adopted” by the Secretary of HUD. HUD has proposed regulations under which certified compliance with any of several specified codes, including some maintained by NFPA, is deemed compliance with the statute. 43 Fed. Reg. 27494 (1978).

319. 42 U.S.C. § 5403(a) (Supp. V 1975).

320. *Id.* § 5402(f).

321. The Secretary was directed, in establishing standards, to

- (1) consider relevant available mobile home construction and safety data, including the results of the research development, testing, and evaluation activities conducted pursuant to this chapter, and those activities conducted by private organizations and other governmental agencies to determine how to best protect the public;

gust 22, 1974.³²²

The statute requires compliance with the notice-and-comment procedures of the Administrative Procedure Act³²³ and also provides certain prenotice consultation procedures.³²⁴ Consultation with the Consumer Product Safety Commission is mandatory;³²⁵ consultation is also required "to the extent feasible" with a special National Mobile Home Advisory Council, consisting of twenty-four people: eight members "selected from among consumer organizations, community organizations, and recognized consumer leaders; eight members from the mobile home industry and related groups including at least one representative of small business; and eight members selected from government agencies including Federal, State, and local governments."³²⁶

When this legislation was enacted a voluntary NFPA standard for mobile homes was in existence,³²⁷ but the agency procedures described above were not integrated with the voluntary standards process. HUD developed mandatory standards based largely but not entirely on the voluntary standard; NFPA later estimated that more than ninety percent of the mandatory standard was taken verbatim from the voluntary standard.³²⁸ The mandatory standard itself states that it is based to a substantial degree on the consensus standard.³²⁹

HUD began to carry out its mandate by making a massive analysis of the condition of 4105 mobile homes that had been part of the disaster relief effort in Wilkes-Barre, Pennsylvania following Hurricane Agnes in 1972. These mobile homes provided an ideal sampling for test purposes since careful records had been kept regarding repairs and complaints. HUD contracted with the National Bureau of Standards

- (2) consult with such State or interstate agencies (including legislative committees) as he deems appropriate;
- (3) consider whether any such proposed standard is reasonable for the particular type of mobile home or for the geographic region for which it is prescribed;
- (4) consider the probable effect of such standard on the cost of the mobile home to the public; and
- (5) consider the extent to which any such standard will contribute to carrying out the purposes of this chapter.

42 U.S.C. § 5403(f) (Supp. V 1975). The Department expressly concluded that this charge contemplated an independent evaluation of the substantive standards. 40 Fed. Reg. 26930 (1975).

322. 42 U.S.C. § 5403(g) (Supp. V 1975).

323. 5 U.S.C. § 553 (1976).

324. 42 U.S.C. §§ 5403(b), 5404(a)-(b) (Supp. V 1975).

325. *Id.* § 5403(a).

326. *Id.* §§ 5404(a)-(b).

327. ANSI, American National Standards for Safety and Health 8 (1976) (Std. No. A119.1-1975).

328. *Hearings, supra* note 8, at 334 (statement of Charles S. Morgan, President, National Fire Protection Association).

329. 40 Fed. Reg. 40262 (1975).

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(NBS)³³⁰ to dissect and test 257 of these mobile homes. Failures and deficiencies uncovered in this sample by NBS tests were correlated section-by-section with the voluntary standard. In instances in which the study indicated that the NFPA standard was imprecise or overly lenient HUD revised the voluntary standard in light of the NBS data. Ultimately, each deviation from the voluntary standard was documented in the proposed standards when they were published for comment.³³¹

The National Mobile Home Advisory Council participated in the drafting of the proposed standard at a two-day meeting in May 1975. CPSC was also consulted as required by the statute; this consultation was informal and of a technical nature. Data and information generated by CPSC were considered, such as the undesirability of permitting the use of aluminum electrical wiring.

After the proposed standards were published, the Advisory Council divided itself into a Fire Safety Task Force and a Structural Task Force to consider specific questions in each of these areas. Each task force conducted a public hearing at which government officials, representatives of industry, and other interested groups presented technical and economic data. Each task force filed a majority and minority report with recommendations to the full Advisory Council; in both instances the Advisory Council accepted the majority recommendations.³³²

More than 1000 comments were received concerning the proposed standard, some extremely detailed and running to more than fifty pages. Most of them, however, were generated by the NFPA and its membership and urged the incorporation by reference of the voluntary standard.³³³ The Advisory Council considered this request and, after extensive internal discussion, unanimously supported HUD's original course of action. In promulgating the final standard, HUD explained that it did not adopt the voluntary standard because to do so would amount to a de facto delegation of agency authority to a private organization, and would imply that future amendments to the NFPA stan-

330. NBS was probably selected largely for technical reasons; it seemed uniquely qualified to perform systematic analysis of fire safety by a multidisciplinary team. The other advantages of NBS included prior cooperative efforts with HUD and the physical location of the NBS laboratories.

331. 40 Fed. Reg. 26930-36 (1975). The changes included making optional provisions in the NFPA standard mandatory, revisions of substance (*e.g.*, decreasing the minimum total glazed areas of doors from ten percent to eight percent for energy conservation purposes), stylistic changes in language, and a restructuring of the provisions in the standard.

332. *Id.* at 40261.

333. *Id.* Approximately seventy-five letters specifically opposed the adoption of the voluntary standard. *Id.*

dard would be given special consideration by HUD.³³⁴

The order establishing the mandatory standard invited further comment; corrections were published,³³⁵ and after further consideration by the Advisory Council the standards were republished in their entirety with further amendments.³³⁶ HUD stated that "the Council did not arrive at a consensus" on the changes and described HUD's understanding of the views of "a majority of the Council members."³³⁷ NFPA harshly criticized HUD's decision to revise the voluntary standard. In testimony on S. 825, the NFPA President stated "that it is both unreasonable and unfair to standards writing bodies, as well as wasteful of tax resources, to permit Government agencies to develop standards duplicating those already listed, on the grounds that the standards are 'unacceptable.'"³³⁸ As a practical matter publication of a federal standard that includes a voluntary standard may have unhappy consequences for an organization heavily dependent on the sale of publications for revenue, but NFPA's objections were based on substantive grounds rather than this pragmatic concern. For example, NFPA argued that HUD lacked an adequate basis for its decision to modify the voluntary standard.³³⁹ The trade-off between cost and safety, however, does not yield a single "right" answer. Moreover, reliance on the NBS study and the Advisory Council's recommendations appear to provide a reasonable basis for HUD's decision. In other words, HUD's data base for its proposed revisions did not produce an "armchair" standard but one based on physical data and comments from a variety of interests. NFPA could also argue that HUD would be unable to keep the mandatory standard abreast of technological change. As previously noted, one major advantage of active voluntary standards committees is that their members are current with the state of the art. An agency faces great practical difficulty in ensuring that standards are revised as technology changes or new technology develops. Solution of this problem requires cooperation between the affected industry and the agency. This has not yet occurred in the mobile homes area. The final and most serious criticism leveled by NFPA is that revision of a voluntary standard by a government agency "destroys" the technical committee

334. *Id.*

335. *Id.* at 40261, 42007, 52706.

336. *Id.* at 58752.

337. *Id.*

338. *Hearings, supra* note 8, at 333 (statement of Charles S. Morgan, President, National Fire Protection Association).

339. *Id.* at 334.

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by eliminating the reason for its existence;³⁴⁰ consequently, a considerable amount of knowledge and expertise represented by the committee is lost. This need not be an inevitable result, however. For instance, a technical committee might well act in a useful advisory capacity to an agency, a role that has in fact been assumed by private standards-writing organizations dealing with the NRC. Nevertheless, NFPA's fears were well-founded in the mobile homes area.

HUD's original notice of proposed rulemaking recognized the need to preserve NFPA's expertise.³⁴¹ Yet the NFPA Committee on Mobile Homes has not developed a new role; it has not met since HUD adopted the mandatory standard, and there is talk within NFPA that the committee may be abolished.

NFPA's view on the matter reflects a certain amount of inflexibility. NFPA feared that serving essentially as a HUD advisory committee might upset the "delicate" balance of its committees because the groups directly affected by HUD mobile home regulations would go directly to HUD and not volunteer to work on such a committee. It also believed that if HUD wanted the benefit of an advisory committee it should finance and support it, rather than having it donated by NFPA members. In any event, this incident illustrates that a major standards-setting organization may become disinterested in maintaining the existence of a committee with a greatly reduced sphere of activity once an agency modifies voluntary standards.

F. United States Coast Guard (USCG)—Boat Safety

The Federal Boat Safety Act of 1971³⁴² authorizes the USCG to establish "minimum safety standards for boats and associated equipment."³⁴³ The standards must be reasonable and must be stated, "insofar as practicable, in terms of performance."³⁴⁴ In establishing standards the USCG is directed, among other things, to "consider relevant available boat safety standards,"³⁴⁵ and to consult with a Boating Safety Advisory Council composed of not more than twenty-one persons selected equally from groups of state officials responsible for state boating safety programs, boat and associated equipment manufacturers, and boating organizations and members of the general public.³⁴⁶

340. *Id.* at 331.

341. 40 Fed. Reg. 26931 (1975).

342. 46 U.S.C. § 1451 (1970 & Supp. IV 1974).

343. *Id.* § 1454(a)(1).

344. *Id.*

345. *Id.* § 1455(2).

346. *Id.* §§ 1455(4), 1482(9).

The USCG has promulgated several safety standards pursuant to this Act relating to boat capacity, safe powering, and flotation.³⁴⁷ In promulgating these standards the USCG relied heavily on applicable standards developed by the American Boat and Yacht Council, Inc. These standards were not incorporated by reference but were included in the regulations themselves and, in a few cases, revised or amended to meet specific problems.³⁴⁸ I was told that the USCG evaluated each of the individual private standards to ensure that they met the statutory requirements of reasonableness and "minimum safety." In at least one instance, the industry standard was later revised when an unexpected problem arose.³⁴⁹ The standards-writing organization did not object to the revision, perhaps because there was industry representation on the Boating Safety Advisory Council. In this case the USCG regulation apparently did not adversely affect the voluntary standards committee.

Boat safety standards is a small program, currently involving only four professionals. USCG administers about a dozen other programs that involve voluntary standards.³⁵⁰ In most of these programs voluntary standards are incorporated by reference rather than being incorporated verbatim in the regulations themselves as is the practice in the boat safety standards program. USCG and DOT have issued general memoranda relating to employee participation on nongovernmental committees,³⁵¹ and USCG maintains a listing of all committee memberships held by agency personnel.³⁵² The memoranda recognize two classes: "official" (that is, a regular voting member) and "observer."

347. 33 C.F.R. § 183.1 (1977).

348. In contrast, the Coast Guard incorporated by reference several voluntary standards relating to safe ventilation of boats. 43 Fed. Reg. 32606, 32608 (1978).

349. The revision was proposed in 40 Fed. Reg. 10652 (1975). The standard applied to the computation of the maximum weight capacity of inboard boats. The formula set forth in the industry standard, the USCG noted, "when . . . applied to what might be termed high performance boats, in which the ratio or proportion of machinery weight to maximum displacement is relatively large, . . . yields maximum weight capacities that are unreasonably low. The SK or Ski boat (a high performance inboard) is a good example . . ." *Id.* at 10653. The modification by the USCG in effect permitted higher maximum weight capacity than the original industry standard for these high performance boats.

350. These programs include pollution control facilities, 33 C.F.R. § 151 (1977); tank vessels, 46 C.F.R. § 30 (1977); load lines, *id.* § 42; marine engineering, *id.* § 50; passenger vessels, *id.* § 70; cargo and miscellaneous vessels, *id.* § 90; electrical engineering, *id.* § 110; dangerous cargoes *id.* § 146; specification, *id.* § 160; nautical schools, *id.* § 166; small passenger vessels, *id.* § 160; and oceanographic vessels, *id.* § 188.

351. DOT Order 1120.3A (Mar. 1, 1976) (implemented by USCG Headquarters Instruction 5420.1D (Aug. 4, 1977)).

352. USCG Headquarters Notice 5420 (Jan. 16, 1978). This document lists over 585 committees and organizations and over 735 participating Coast Guard personnel. This list, however, includes governmental interagency committees, governmental advisory committees, committees involved in international standardization activities, and committees of miscellaneous organizations such as the American Bar Association, as well as voluntary standards committees.

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The list of committee memberships reveals, however, that virtually all memberships on voluntary-standards committees are as regular voting members. The employees administering the boat safety standards briefly described here all actively serve on such committees as voting members and participate in subsequent regulatory decisions by USCG.

G. Materials Transportation Bureau (MTB)—Pipeline Safety

The Natural Gas Pipeline Safety Act of 1968³⁵³ authorizes the Secretary of the Department of Transportation (DOT) to establish “minimum Federal Safety standards for the transportation of gas and pipeline facilities” that are “practicable and designed to meet the need for pipeline safety”;³⁵⁴ further, the Secretary is to consider the following factors in establishing mandatory standards:

- (1) Relevant available pipeline safety data;
- (2) Whether such standards are appropriate for the particular type of pipeline transportation;
- (3) The reasonableness of any proposed standard; and
- (4) The extent to which such standards will contribute to public safety.³⁵⁵

Authority under this Act is currently delegated to the Materials Transportation Bureau (MTB) within DOT and all references below are to MTB.³⁵⁶

1. Natural Gas.—A pipeline explosion in Natchitoches, Louisiana on March 4, 1965, which killed seventeen persons, was a major spur to development of federal regulation of natural gas pipelines.³⁵⁷ At the time of the Louisiana explosion an ASME voluntary standard,

353. 49 U.S.C. §§ 1671-84 (1970).

354. *Id.* § 1672(b).

355. *Id.*

356. The name and, to some extent, the authority of the natural gas standards-writing division within DOT has changed several times since the enactment of the NGPSA. The Office of Pipeline Safety (OPS) was created on September 10, 1968, one month after the Act went into effect. The Secretary of Transportation delegated his authority under the NGPSA to OPS on November 6, 1968. 33 Fed. Reg. 16468 (1968). The first OPS director was appointed in 1972. In 1975 a DOT reorganization abolished OPS and established the Office of Pipeline Safety Operations (OPSO) within the newly created Materials Transportation Bureau (MTB). 40 Fed. Reg. 43901, 43909 (1975). Under this organizational scheme MTB retained the authority to issue final rules, but all other rulemaking power was delegated to the Director of OPSO.

A subsequent reorganization in April 1978 has placed MTB under the newly created Research and Special Programs Directorate, abolished OPSO, created the Office of Pipeline Safety Regulation (OPSR) to develop pipeline safety standards, and shifted enforcement authority to an Office of Operations and Complaints within MTB. As of this writing DOT has not published this reorganization. Because OPSR was created too recently to have issued any proposed regulations, the standards-writing arm of the DOT will continue to be referred to as MTB in the discussion that follows.

357. D. HEMENWAY, *supra* note 6, at 103.

B31.8 (Code for Pressure Piping), had been incorporated by reference or used as the basis for regulation by forty-six states.³⁵⁸ Testimony at hearings on pipeline safety,³⁵⁹ however, revealed that most states had virtually no inspection or enforcement personnel and that the ASME standard appeared deficient in several respects. The membership of the technical committee that prepared the standard also became an issue at the hearings. It appeared that gas industry representatives constituted the overwhelming majority of the membership (fifty-six to ten) and dominated its activities through the chairman and two vice chairmen.³⁶⁰ The voluntary standard also was criticized because at the time of its development committee meetings were not open to the public and ASME refused to make minutes available.³⁶¹ The result of these revelations was the Natural Gas Pipeline Safety Act of 1968.³⁶²

The Act required MTB to adopt as interim federal standards for pipeline safety state pipeline safety standards when they existed, and "such standards as are common to a majority of states having safety standards" in states that had not promulgated any.³⁶³ As a result,

358. *Id.* at 104.

359. *Natural Gas Pipeline Safety: Hearings on S. 1166 and H.R. 6551 Before the Subcomm. on Communications and Power of the House Comm. on Interstate and Foreign Commerce*, 90th Cong., 1st & 2d Sess. (1967-1968) [hereinafter cited as *Hearings on H.R. 6551*]; *Natural Gas Pipeline Safety Regulations: Hearings on S. 1166 Before the Senate Comm. on Commerce*, 90th Cong., 1st Sess. (1967) [hereinafter cited as *Hearings on S. 1166*]. These hearings are described in D. HEMENWAY, *supra* note 6, at 103-07.

At the hearings, testimony and congressional questioning on the causes of pipeline failure focused almost exclusively on the adequacy of the standards themselves, rather than on compliance with those standards. The issue of enforcement did surface, however, during the discussion of the competency of the existing regulators, state regulatory commissions, to police standards. The sufficiency of the voluntary industry code was particularly scrutinized during the hearings. The heads of the FPC and the DOT who appeared on the first day of each set of hearings devoted so much attention to the code that a past chairman of the B31.8 code committee protested that their testimony had created the impression "a) that the Engineering Profession was under attack, and b) that the B31.8 Code, and not the Gas Industry, was under trial." Letter from Frank S. G. Williams, American Society of Mechanical Engineers, to Sen. Warren G. Magnuson (June 20, 1967), *reprinted in Hearings on S. 1166, supra*, at 373. The testimony of other proponents of the legislation, as well as the questioning by the committee members, also concentrated on the adequacy of the code and, to a lesser degree, of the state standards.

There was little indication that the voluntary code was being violated, or that violations of the code were responsible for actual pipeline failures. For example, when Sen. Hartke asked Chairman White of the FPC if the Commission was aware of any violations of the code, the Chairman said that the Commission was not. *Id.* at 44. Nevertheless, Congress did discuss the potential enforcement difficulties raised by a decision to remove responsibility for the authority over pipeline safety from the states to the federal government. The House Committee directed considerable attention to who would enforce, and who would pay for enforcing, the standards established by DOT. *See generally Hearings on H.R. 6551 supra*. The same concern was expressed during the House debate. *See* 114 CONG. REC. 19724 (1968) (remarks of Rep. Kuykendall).

360. D. HEMENWAY, *supra* note 6, at 105.

361. *Id.*

362. 49 U.S.C. § 1671 (1970).

363. *Id.* § 1672(2).

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B31.8 became the interim standard in almost every state.³⁶⁴ The Act also provided that mandatory standards should be adopted within twenty-four months to replace the interim standards,³⁶⁵ after notice and comment plus “an opportunity to present oral testimony and argument.”³⁶⁶ Further, the Act created an advisory committee, the Technical Pipeline Safety Standards Committee, to review proposed standards and prepare a report “on the technical feasibility, reasonableness, and practicability of each such proposal.”³⁶⁷ The committee was to consist of fifteen persons: five from governmental agencies (two of whom were to be from state commissions); four from the natural gas industry; and six from the general public.³⁶⁸

When MTB issued the interim regulations it requested comment on the advisability of adopting B31.8 as the permanent minimum federal standard. After receiving comments it decided that the federal standard should be largely based on the voluntary standard.³⁶⁹ The first notice described the ways in which some state standards exceeded the B31.8 Code. Subsequent notices developed the specific language of proposed regulations.³⁷⁰ The resulting regulation³⁷¹ was substantively quite similar to the B31.8 Code though significantly rewritten. To some extent performance standards were substituted for design standards, and some provisions were made more precise, a desirable change since the violation of the mandatory standards might lead to imposition of criminal penalties. These regulations incorporated by reference a number of voluntary standards.³⁷² The Technical Pipeline Safety

364. 49 C.F.R. §§ 190.4-5 (1976). See also text accompanying note 358 *supra*.

365. 49 U.S.C. § 1672(b) (1970).

366. *Id.* § 1672(d).

367. *Id.* § 1673(b).

368. *Id.* § 1673(2).

369. The MTB notice stated:

Since all States that have adopted their own standards have based them on the B31.8 Code, the proposed Federal standards will also be very similar in substance to that document although many changes in form, style, and language will be made. Since the B31.8 Code is readily available and well understood in the gas pipeline industry, this similarity will permit extensive use of the Code as a reference document in discussing these proposals.

34 Fed. Reg. 18556 (1969).

370. The regulations were issued in nine segments dealing with specific areas such as welding, corrosion control, and the like. These proposed regulations appear in 34 Fed. Reg. 18556 (1969); 35 Fed. Reg. 1112, 3237, 4413, 5012, 5482, 5713, 9293 (1970).

371. 49 C.F.R. § 192 (1976).

372. *Id.* § 192.7. The incorporated standards are listed in *id.* app. A § 192.

In its early rulemaking the MTB tended merely to incorporate these privately developed standards by reference. However, MTB has more recently pursued a policy of formulating its own less detailed performance standards, using the privately developed specifications as a reference and guide. For example, MTB wrote its own corrosion control standards, based on the National Association of Corrosion Engineers (NACE) RP-01-69, “Recommended Practice—Control of Ex-

Standards Committee approved this set of regulations by letter ballot. A single member dissented on the ground that the regulations established were "not measurably more effective than the standards written and suggested by industry Industry standards do not require more safety than is optimum for profits."³⁷³

The original B31.8 Committee that prepared the voluntary standard was an American National Standard Committee of which ASME acted as sponsor and secretariat. This committee was disbanded after the federal natural gas pipeline safety regulations went into effect, because it had no further function; however, ASME subsequently decided to form its own committee to deal with matters of natural gas pipeline safety. This committee, known as the Gas Piping Standards Committee, continues to be quite active. Its principal function is the creation and maintenance of a guide explaining the federal safety standards and how to comply with them, a service that was described to me as quite successful. The committee also serves as a liaison among DOT, ASME, and industrial firms interested in gas pipelines, highlighting problems of regulatory concern, recommending standards revisions, commenting on proposed DOT revisions, and so forth. ASME made no attempt to qualify this committee as an American National Standards Committee, because its members are chosen for their knowledge and background rather than as representatives of specific interests. Nevertheless, a variety of interests are represented on this committee.

Despite the adoption of the federal standards, the B31.8 Code remained an important reference point at the international level and in connection with intrastate gas pipelines not subject to the federal standards. By 1975 this interest seemed sufficient to justify reconstitution of the B31.8 Committee to revise and update the Code.

2. *Liquid Natural Gas (LNG) Facilities.*—When the natural gas pipeline safety standards were developed, LNG technology was in its infancy. Techniques of liquefying natural gas at low temperatures were first developed as a means of allowing excess natural gas stored at off-peak periods to be fed back into the pipeline during peak demand periods. During the energy crisis of 1973 and the shortage of interstate natural gas during the winter of 1976-1977 increased attention was paid to the importation of significant amounts of LNG, primarily from Al-

ternal Corrosion on Underground or Submerged Metallic Piping Systems," instead of incorporating NACE RP-01-69 by reference. 35 Fed. Reg. 7127 (1970); 36 Fed. Reg. 12297 (1971) (codified at 49 C.F.R. § 192.455(e) (1976)). MTB subsequently indicated its intention to formulate more of its own standards and to eliminate or reduce the number of referenced private standards.

373. 35 Fed. Reg. 13248, 13257 (1970).

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geria and Libya. LNG technology is significantly different from the technology of natural gas, and the possibly calamitous results of an LNG accident have received a great deal of attention in the press. While there have been several well-publicized accidents involving LNG, none have approached the disasters envisioned in the more speculative scenarios. In this respect LNG resembles nuclear energy: since the risk of a disastrous event cannot be totally eliminated, the issue becomes what level of safety can reasonably be required. The total abandonment of nuclear and LNG technology generally has been rejected as a possible alternative.

No federal statute specifically addresses the LNG problem. The language of the Natural Gas Pipeline Safety Act of 1968 is sufficiently broad to encompass this product,³⁷⁴ however, and MTB has in fact assumed responsibility for developing safety standards for LNG. The first standards for LNG facilities were voluntary standards prepared by NFPA's 59A Committee in 1967. Significant revisions were made in a new edition in 1971, and less significant changes were made in 1972 and 1975 based on increasing research into LNG hazards.³⁷⁵ On January 6, 1972, MTB announced a proposal to incorporate the 1971 NFPA Standard 59A by reference as a mandatory standard "[a]s an interim measure, until additional regulations can be developed."³⁷⁶ This regulation was approved on October 13, 1972, and MTB noted that specific proposals for modification of the NFPA standard would be considered in connection with the development of permanent federal regulations.³⁷⁷ MTB incorporated by reference the 1972 version of Standard 59A in 1976.³⁷⁸ In 1976, MTB informally advised NFPA that it was developing a set of proposed mandatory safety standards for LNG that would be similar to NFPA 59A in some respects, but different in many others.³⁷⁹ NFPA vigorously objected to this plan with a formal statement in October 1976.³⁸⁰ The proposed regulation was published in April 1977,³⁸¹ and the period for comment was extended to December 31, 1977. MTB estimates that a notice of proposed rulemaking on sit-

374. 49 U.S.C. § 1671(2) (1970).

375. National Fire Protection Ass'n, "Background Statement and Recommendations of the National Fire Protection Association Concerning REGULATIONS ON PRODUCTION, STORAGE AND HANDLING OF LIQUEFIED NATURAL GAS (LNG), Proposed by U.S. Department of Transportation (Office of Pipeline Safety Operations)" I (Oct. 1976) [hereinafter cited as "Background Statement"].

376. 37 Fed. Reg. 145 (1972).

377. *Id.* at 21638-39.

378. 41 Fed. Reg. 13591 (1976).

379. "Background Statement," *supra* note 375, at 1.

380. *Id.*

381. 42 Fed. Reg. 20776 (1977).

ing and design will be issued in December 1978, and a notice of proposed rulemaking on construction, operation, and maintenance in March 1979; estimated dates of final rules are August 1979, and December 1979, respectively.³⁸²

Examination of the positions taken by the agency and the voluntary standards organization in this on-going controversy reveals the role each contemplates for itself in the establishment of safety or health standards. MTB first suggested that the NFPA Committee adopt a supportive role, functioning like an advisory committee and furnishing MTB with technical assistance.³⁸³ NFPA rejected this suggestion on the ground that its members probably would not volunteer to work within the consensus process of NFPA as proposed by MTB, preferring to present their views directly to MTB. Instead, NFPA recommended that MTB work within the voluntary standards process by submitting changes it felt were necessary to NFPA Committee 59A and appointing a representative to serve on the committee, preferably with full voting status.³⁸⁴

In its notice of proposed rulemaking, MTB firmly rejected submitting its proposed revisions of Standard 59A to the NFPA Committee. It "perceive[d] the role of government as that of prescribing the level of safety industry is legally obligated to provide. The role of a non-government organization is to devise and recommend means of meeting the governmental prescribed safety level."³⁸⁵ NFPA was not impressed by this proposed relationship. "NFPA is of the opinion that a nongovernment organization can only express an unofficial opinion as to specific means to comply with government regulations. It questions whether or not the membership of an NFPA Technical Committee could continue to serve to produce a document having such limited status."³⁸⁶

On July 11, 1977, the agency responded by letter, commenting that the disbanding of the NFPA 59A Committee would be "unfortunate"

382. *Id.* at 42235. These delays in the development of an LNG standard have been criticized by the Senate Commerce Committee. S. REP. NO. 832, 94th Cong., 2d Sess. 4, *reprinted in* [1976] U.S. CODE CONG. & AD. NEWS 4673, 4676.

383. *See* Letter from James R. Currie, Jr., Director, Materials Transportation Bureau, to Secretary of NFPA Committee (July 19, 1976), *reprinted in* "Background Statement," *supra* note 375, at 4.

384. "Background Statement," *supra* note 375, at 7. The NFPA statement states earlier that DOT turned down a similar invitation in 1969 because it felt such service was "improper." *Id.* at 5.

385. 42 Fed. Reg. 20776 (1977).

386. *Comments and Views of the National Fire Protection Association Before the Materials Transportation Bureau, Office of Pipeline Safety Operations, U.S. Dep't of Transportation* (1977) (Notice 77-4; Docket No. OPSO-46) [hereinafter cited as *NFPA Comments*].

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and encouraging NFPA to “continue its active role in LNG safety.” The letter added: “Although the emphasis may shift from a code prepared by NFPA to one prepared by Government, we cannot do the job alone, and urge your full and continued cooperation in developing reasonable and practicable standards for the LNG industry.”³⁸⁷ Earlier in 1977 NFPA had renewed its invitation to MTB to participate in the 59A Committee, and had also requested that an NFPA employee who had been selected to be a member of the Technical Pipeline Safety Standards Committee (TPSSC) to represent the general public be designated an NFPA representative instead. In the July 11th letter MTB rejected both requests.³⁸⁸

NFPA’s other major attack on MTB’s proposal to write its own LNG standards was directed at the technical competence of the MTB staff. The proposed standard, NFPA asserted, was “the work of three members of the [MTB] staff whose expertise is not documented Beyond this staff input, the only other source identified is a report by an industrial consulting firm (Arthur D. Little, Inc.) which is indicated as being the basis of this regulatory action.”³⁸⁹ NFPA sharply contrasted the acknowledged expertise of its members:

[In the NFPA Committee] there are over 50 individuals (including [Arthur D. Little] staff) directly involved All have demonstrable expertise as a result of their training and experience in the safety of LNG facilities. Most have also such expertise in the safety of flammable liquid and gas facilities having similar hazards. All are able to draw upon the expertise of large staffs of experts in their respective fields.

. . . .
The input to the [MTB] proposal is a far cry from the input to NFPA 59A. From this standpoint alone, the credibility of the MTB proposal is questionable.³⁹⁰

To bolster its position MTB published a further elaboration of the materials on which the proposal was based on August 22, 1977. The notice explained that the proposed standards were “in general” based upon the NFPA standard and other listed materials, but may have been “modified based upon personal expertise, experience, and engineering judgment.”³⁹¹

In the spring of 1978 the House Subcommittee on Energy and

387. Letter from Alan A. Butchman, Acting Director, Materials Transportation Bureau of DOT, to George K. Horvath, Director, Government Relations, NFPA (July 11, 1977).

388. *Id.*

389. *NFPA Comments*, *supra* note 386, at 2.

390. *Id.* at 2-3.

391. 42 Fed. Reg. 42235 (1977).

Power held hearings on issues of pipeline safety, LNG technology, and similar matters.³⁹² An NFPA representative recommended that Congress amend pending legislation under consideration to require MTB to participate in the technical committee of NFPA. In another development in February 1978, MTB and the Coast Guard, both constituent agencies of the Department of Transportation, entered into an agreement defining their respective jurisdictions over LNG facilities.³⁹³ On April 10, 1978, the Coast Guard published an advance notice of proposed rulemaking regarding safety rules for harbor facilities that incorporated a large number of NFPA Codes, including 59A, by reference.³⁹⁴ On August 4, 1978, the Coast Guard published another set of proposed safety regulations for LNG facilities in harbors, again recommending incorporation by reference of NFPA 59A but also requesting extensive public participation and input in the development of the regulations.³⁹⁵

The dispute between NFPA and MTB is aggravated by their entirely different perceptions of their respective roles. Officials of MTB are "charged by statute" to propose safety rules; in their opinion it would be an "abdication" of their function, and a possible violation of law, to "delegate" their function to the private sector. On the other hand, NFPA sees mandatory rules as the product of a small and narrow group of regulators who are divorced from the "real world," influenced by factors and arguments that have not been articulated and subjected to reasoned discussion, and insensitive to the economic consequences of some of their proposals. Indeed, a final portion of the MTB notice of proposed rulemaking clearly recognized the unknown economic impact of some of the proposed LNG standards.³⁹⁶

The proposed LNG standards were developed without convening or consulting the TPSSC on the ground that only an *advance* notice of proposed rulemaking was involved. In response to a Presidential directive to review the need for each advisory committee, MTB announced in 1977 that it wanted to abolish TPSSC,³⁹⁷ an action that would require legislation. Until the committee is abolished by statute, "all proposed standards and amendments to such standards" must be submitted to TPSSC; TPSSC must prepare a report on the proposals, and MTB must publish a reason for rejecting a TPSSC recommenda-

392. [1977-1978] 2 CONG. INDEX (CCH) 26518.

393. 43 Fed. Reg. 34362 (1978).

394. *Id.* at 15108.

395. *Id.* at 34362, 34366.

396. *See* 42 Fed. Reg. 20776, 20779 (1977).

397. *Id.* at 61907.

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tion.³⁹⁸ Members of TPSSC suspect that MTB plans to make only minimal use of this advisory committee in the decisional process. If MTB is to develop mandatory standards without the direct participation or involvement of the voluntary standards committee, it is doubly important that MTB be open to sources of information and feedback; the use of an advisory committee (whether or not it is in addition to the mandatory use of TPSSC) would appear appropriate. Necessary legislation to abolish TPSSC has been proposed by the administration.

In its standards development process for pipeline safety, MTB first eschewed the assistance of a voluntary standards-writing committee and refused to participate in any way in such a committee's activities.³⁹⁹ Committee proposals that MTB appoint a member, or at least a technical observer, were rejected in 1968 on the ground that such action was "improper"⁴⁰⁰ and again in 1977 on the grounds that no "real benefit" would accrue and that the action might be misconstrued.⁴⁰¹ In May 1978 the agency agreed to appoint an observer to attend the committee's meeting, and conversations about the relative roles of MTB and NFPA are continuing.⁴⁰² MTB's original attitude was extreme. Agencies should obtain the best possible technical input on proposed standards, and the experience of other agencies reveals that technical committees can often provide meaningful assistance at a slight cost.

398. 49 U.S.C. § 1673(b) (1970).

399. MTB maintained some informal contacts, such as attending meetings as guests and being included on mailing lists.

Similarly, the private standardization organizations have no formal relationship with MTB. Like any interested party, a standards-writing organization may suggest changes in the federal standards by petitioning for rulemaking or by submitting comments. A number of private organizations do use the petitioning and the notice-and-comment procedures to request changes in the federal regulations. A revision of the welding standards several years ago illustrates this interaction between the MTB and the private entities. The American Petroleum Institute submitted a petition requesting that the MTB incorporate by reference three sections of the 12th edition of API standard 1104, "Welding Pipe Lines and Related Facilities," the 11th edition of which was already referenced by Part 192 of 49 C.F.R. In April 1974, MTB published a notice proposing such an incorporation by reference and inviting comments. 39 Fed. Reg. 14220 (1974). In response to comments MTB published a corrected notice proposing that the 13th rather than the 12th edition be used, because the 12th edition was already out of print. 39 Fed. Reg. 27589 (1974). The second notice questioned the advisability of adopting one of the three sections proposed. In 1975 MTB issued a final rule adopting all of the proposed provisions of the 13th edition except for the one that it had questioned; MTB noted that 7 out of 18 commenters had objected to the unadopted provision. Later in 1975 MTB reversed itself in response to a petition from the Alyeska Pipeline Service Company and incorporated the omitted provision. 40 Fed. Reg. 27222 (1975). Telephone interviews with Mr. Lowell Elder, Chairman, ASME Gas Pipeline Standards Committee (May 31, 1978) and Mr. Lucian M. Furrow, Regulations Division Chief, Office of Pipeline Safety Operations (May 31, 1978).

400. "Background Statement," *supra* note 375, at 5, n.*.

401. See text accompanying note 388 *supra*.

402. Interview with George K. Horvath, Director, Government Relations, NFPA (Aug. 9, 1978).

NFPA's concern that there will be no meaningful role for its technical 59A Committee has some merit, particularly given the present attitude of the agency. However, the experience of the various committees active in the nuclear area reveals that mandatory federal standards do not necessarily deprive technical committees of a meaningful role in the standards development process.

V. Evaluation of Voluntary Standards by Federal Agencies: Toward a Unitary Standards Policy

Proposals for the development of a unitary federal policy toward voluntary standards can be traced back through the LaQue report to the early years of the history of standardization, even to the creation of ANSI's predecessor. During this early period the federal government was not widely engaged in the establishment of safety or health standards, and its early efforts did not directly address the relationship between mandatory and voluntary standards. Recently, however, three different sources have proposed that the federal government develop a unitary policy toward voluntary standards. As this is written, two of these proposals are under active consideration. This section briefly describes these proposals and their relation to recommendations proposed later in this Article.

Before any policy can be established, the overall quality of the voluntary standards system and of the standards it creates must be examined critically. The unfavorable attitude of many governmental agencies and some members of Congress toward these standards is gradually disappearing. During the late 1960's and early 1970's voluntary standards that regulated safety or health were viewed very critically. Perhaps the harshest criticism appears in a 1974 House Committee Report:

Voluntary standards, both national and international, are agreed upon by a process of consensus. Viewed another way, this process may produce the most common denominator, the one least offensive to the various interests involved, and for that reason, the one that may represent the least progressive or advanced sector of the technology at hand. . . . [M]any government standards are being drafted not as a ratification of existing technology, but to set new goals for technologies that are deemed insufficiently advanced. These two trends, consensus standards and goal standards, are divergent in purpose and method of formulation.⁴⁰³

Several similar evaluations, most of them dating from the 1960's, also

403. *Voluntary Industrial Standards in the United States: Report to the Subcomm. on Science,*

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exist; the criticism of the Report of the National Commission on Product Safety in 1970 that voluntary standards are “chronically inadequate, both in scope and permissible levels of risk,” has been previously noted.⁴⁰⁴ The legislative history of the National Traffic and Motor Vehicle Act of 1966⁴⁰⁵ similarly comments that voluntary standards promulgated by the Society of Automotive Engineers reflect a “chronic subordination of safe design to promotional styling.”⁴⁰⁶

More recent comments by government agencies, however, tend to be favorable. The CPSC released a policy statement in November 1977 stating that it perceived “that voluntary standards organizations have made progress since 1970 in the development of voluntary standards,” and recognizing “the contribution which voluntary standards have made to increase consumer product safety.”⁴⁰⁷ Other agencies have indicated agreement with this assessment by increasing their efforts to cooperate with the voluntary standards organizations,⁴⁰⁸ and by commenting favorably on proposed federal standards policies that contemplate greater reliance on voluntary standards.

A. Legislative Proposals

Not all recent proposals for a federal standards policy are based on favorable evaluations of the present system. Senator James Abourezk has introduced legislation to provide significant federal control over the voluntary standards groups. The provisions of his bill were obviously influenced by the “horror stories” described earlier, which were the subject of hearings before the Senate Committee on Antitrust and Monopoly in March 1975.⁴⁰⁹ Based on these hearings, and relying primarily on three specific incidents, Senator Abourezk introduced the latest version of his regulatory proposal, S. 825, in March 1977.⁴¹⁰ Called the “Voluntary Standards and Accreditation Act,” S. 825 “would bring some accountability to the process of setting stand-

Research and Development of the House Comm. on Science and Astronautics, 93rd Cong., 2d Sess., 88-89 (1974).

404. See text accompanying notes 228-30 *supra*.

405. 15 U.S.C. § 1381 (1976).

406. S. REP. NO. 1301, 89th Cong., 2d Sess., reprinted in [1966] U.S. CODE CONG. & AD. NEWS 2710.

407. 42 Fed. Reg. 58726 (1977).

408. See, e.g., [1977] OCCUP. SAFETY & HEALTH REP. (BNA) 846; 41 Fed. Reg. 34099 (1976) (outlining FDA cooperation with ANSI); letter from John R. Quarles, Jr., Deputy Administrator, U.S. Environmental Protection Agency, to Donald Peyton, Managing Director, ANSI (Oct. 18, 1976).

409. See generally *Voluntary Industrial Standards: Hearings Before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary*, 94th Cong., 1st Sess. (1975).

410. S. 825, 95th Cong., 1st Sess., 123 CONG. REC. 3156, 3170 (1977).

ards."⁴¹¹ Proceeding on the assumption that the present mechanisms "are not working" and that there is "vast power in the hands of a few giant private bureaucracies" in the standards area, S. 825 seeks to "create a partnership between Government, industry, and other affected interests."⁴¹² This proposed legislation was strongly opposed by ANSI, but received mixed reviews⁴¹³ in other parts of the private standards-setting sector. The legislation would virtually federalize ANSI: the Federal Trade Commission (FTC) would be authorized to establish procedures for voluntary standards organizations, and a new agency, the National Standards Management Board, would be created to manage and coordinate the voluntary standards program, including the accreditation of standards development organizations and the listing and approving of "National Standards." The FTC would have power to consider appeals from decisions of standards-setting organizations and, when appropriate, to order revisions of standards. The bill also addresses international standardization activity and the accreditation of testing laboratories.

Several government agencies testified in 1976 and 1977 at hearings on this proposed legislation. In 1976, a representative of the Department of Commerce testified that while there were many things in the bill she agreed with, a need for the additional regulatory apparatus had not been established because "[b]asically, we believe that the system is working well . . . [even though] there have been certain abuses."⁴¹⁴ The Federal Trade Commission generally supported the legislation, as did the National Institute for Occupational Safety and Health (NIOSH), a small federal organization involved in occupational and health safety research, development of recommended standards, and other activities to assure safe and healthful working conditions.⁴¹⁵ The NIOSH representative testified that voluntary standards "appear to be written by persons who primarily represent the business interest of their

411. 123 CONG. REC. 12907 (1977) (remarks of Sen. Abourezk).

412. *Id.*

413. ASTM opposed an earlier version of S. 825, S. 3555, in 1976, although not in terms as strong as had ANSI; NFPA, on the other hand, supported S. 825 if there were "some modifications which we think are pretty important." *Hearings, supra* note 8, at 329 (statement of Mr. Morgan, representative of NFPA).

414. *Voluntary Standards and Certification Act of 1976: Hearings on S. 3555 Before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary*, 94th Cong., 2d Sess. 104 (1976) (statement of Dr. Betsy Ancker-Johnson, Assistant Secretary for Science and Technology, U.S. Department of Commerce).

415. Technically part of the Center for Disease Control of the Public Health Service, NIOSH is in HEW. NIOSH was created by the same legislation that created OSHA. 29 U.S.C. § 671 (1970).

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own company or industry.”⁴¹⁶ Present ANSI standards for personal protective equipment (safety helmets, gloves, etc.) were described as “often unclear and [requiring] a great deal of interpretation.”⁴¹⁷ This criticism, which is supported by detailed discussion of specific safety equipment standards, is entitled to some weight. Even though hearings were held on S. 825 in 1977, no bill has been reported by the subcommittee, and immediate action appears unlikely. Rather, attention has shifted to the OMB Circulars discussed below.

B. The 1976 Proposed OMB Circular

A proposed OMB Circular was published for comment in December 1976⁴¹⁸ that suggested a general federal policy of incorporation by reference of voluntary standards. Unlike S. 825, the 1976 version of the OMB Circular was uncritical of voluntary standards. It stated that an “effective system of voluntary consensus standards activities” has been developed by the private sector in which “a wide range of interests meld their expertise and compromise their differences; with the result that [the standards produced] are solidly based and widely accepted.”⁴¹⁹ The policy statement’s stated objective was “to insure maximum practicable use of commercial standards by the Federal Government.”⁴²⁰ The statement required agencies to use commercial standards in place of in-house standards when possible and to identify the applicable commercial standard when used.⁴²¹

Many comments were received on the 1976 proposal. Most of them were favorable and came primarily from private sources. Two agencies having extensive experience with voluntary standards, however, made negative comments regarding regulatory use of voluntary

416. *Hearings, supra* note 8, at 356 (statement of John F. Finklea, Director, NIOSH).

417. *Id.* at 341 (statement of John B. Moran, Special Assistant for Safety, Testing, and Certification, NIOSH).

418. 41 Fed. Reg. 53723 (1976). This Circular was the product of the Interagency Committee on Standards Policy, consisting of representatives of twenty-two agencies and departments, chaired by the head of the Department of Commerce Office of Product Standards. The creation of this committee was recommended by the LaQue Report of 1965. The background of this Circular reveals one rather embarrassing incident. The Chairman of the Interagency Committee at this time was Frank Clarke, a Department of Interior official who was also a member of the board of directors of ANSI. A version of the proposed circular was made available to ANSI and five or six other organizations before it was released generally; ANSI successfully recommended that changes be made. This “leak” was subsequently considered at some length by a House subcommittee, which viewed the Circular very skeptically. *Energy Conservation—Home Heating Systems: Hearings Before the Subcomm. on Energy and Power of the House Comm. on Interstate and Foreign Commerce, 95th Cong., 1st Sess. 164-96 (1977).*

419. 41 Fed. Reg. 53723 (1976).

420. *Id.* at 53724.

421. *See id.*

standards. NIOSH stated that it "had much experience in dealing with non-Federal standards-setting bodies. That experience leads us to believe that we cannot rely on those bodies to provide occupational safety and health recommendations comparable to those which NIOSH would develop."⁴²² The Environmental Protection Agency (EPA) also criticized the 1976 proposed OMB Circular, noting that although the proposed policy "may be of significant value when dealing with procurement specifications and standards, it is difficult for us to find equal merit for adopting this policy for regulatory standards, particularly when among the organizations solicited by the standards-setting organization to determine consensus, are those organizations which are to be regulated by the same standard."⁴²³

Other agencies were more favorably inclined toward the 1976 proposed OMB circular though they may have been concerned with procurement rather than regulatory uses. For example, the Federal Aviation Administration stated:

We wholeheartedly support the policy of using commercial standards and buying commercial products whenever feasible. It must be pointed out, however, that in determining feasibility, we take into account such factors as the criticality of the function the product is to perform. For example, a TV tube produced to commercial standards will not have fine enough resolution to be used safely in air traffic control.⁴²⁴

The Federal Highway Administration also commented:

The Federal Highway Administration (FHWA) strongly endorses the objectives of the proposed Circular It has long been our policy to make maximum use of commercial standards in the highway programs which are under our purview. We also maintain close relationships with a number of commercial standards-setting bodies and actively participate with them in the development of standards in our area of concern.⁴²⁵

Finally, the Federal Energy Administration stated:

Before we commence a Federal standard-writing endeavor, we should determine whether existing non-Federal standards are available that will meet our needs, in whole or part, or that can

422. Letter from John M. Finklea, M.D., Director of NIOSH, to the Office of Management and Budget (Mar. 1, 1977).

423. Letter from Richard Redinius, Assistant Administrator for Planning and Management, EPA, to Hugh E. Witt, Administrator, Office of Federal Procurement Policy, OMB (undated).

424. Memorandum from William M. Flener, Associate Administrator for Air Traffic and Airway Facilities, Federal Aviation Administration, to Herbert H. Kaiser, Jr., DOT Representative, Interagency Committee on Standards Policy (Feb. 14, 1977).

425. Memorandum from H. A. Lindberg, Associate Administrator for Engineering and Traffic Operations, Federal Highway Administration, to Herbert H. Kaiser, Jr., DOT Representative, Interagency Committee on Standards Policy (Feb. 15, 1977).

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be made available in a timely manner by the voluntary process. Particularly in complex areas such as building standards, we may find that much time and expense can be saved by, for example, making use of existing standardized test procedures. . . .

. . . .

It should be recognized that Federal standards realistically will cover only a limited portion of the total spectrum of the energy field. Covering the entire spectrum would duplicate much of the work now being done satisfactorily by the voluntary consensus standards community.⁴²⁶

Consumer groups joined NIOSH and EPA in opposing the indiscriminate use of voluntary standards for regulatory purposes.⁴²⁷ The majority of comments, however, were favorable and basically consistent with the conclusion that such standards should be used cautiously by agencies.

C. The 1977 Revised OMB Circular

On December 22, 1977, OMB released a significantly revised Circular and again requested comment from agencies.⁴²⁸ Like the earlier draft, the revision suggested that it is the policy of the federal government to rely on voluntary standards "whenever feasible and consistent with law and regulation pursuant to law";⁴²⁹ however, a sharp distinction was drawn between procurement and regulatory roles. Voluntary standards "*will be assigned preference* in procurement actions . . . unless use of such voluntary consensus standards would result in impaired functional performance, unnecessary overall cost to the Government or the Nation, anticompetitive effects, or other significant disadvantages."⁴³⁰ On the other hand, in regulatory applications, voluntary standards "*will be utilized . . . after a careful evaluation of such standards assures their adoption and use to be in full accordance with the agencies' statutory missions and responsibilities*, and other applicable laws

426. "FEA Review of Its Role in Standard-Setting," attached to letter from John F. O'Leary, Administrator, Federal Energy Administration, to Dr. James D. Currie, Acting Administrator, Office of Federal Procurement Policy, OMB (Apr. 14, 1977).

427. See, e.g., Center for Study of Responsible Law, "Comments on the Proposed OMB Circular That Would Establish a New Federal Policy for Interaction with Private Standards-Setting Organizations," attached to letter from Peter L. Maier, Center for Study of Responsible Law, to Hugh E. Witt, Administrator, Office of Federal Procurement Policy, OMB (Dec. 16, 1976); National Consumers League, "Comments on Proposed OMB Circular on Federal Interaction with Commercial Standards-Setting Bodies," attached to letter from Sandra Willett, Executive Director, National Consumers League, to Administrator, OMB (Jan. 31, 1977).

428. 43 Fed. Reg. 48 (1978).

429. *Id.* at 49.

430. *Id.* at 49-50 (emphasis supplied).

and regulations.”⁴³¹ This basic distinction (and test for the use of voluntary standards for regulatory purposes) is compatible with the conclusions independently reached in the earlier portions of this Article. The OMB Circular also stated that while agencies should utilize voluntary standards in lieu of developing in-house standards when the voluntary standards will serve the agencies’ purposes, agencies should not “be inhibited” from developing in-house standards “in the event that voluntary standards-developing organizations cannot or do not develop a standard needed by, and acceptable to, these agencies or do not do so in a timely fashion.”⁴³²

The 1977 revision contained additional features that were clearly drawn from S. 825.⁴³³ The most important additions were the establishment of “due process and other basic criteria” that voluntary standards organizations must meet as a precondition to federal participation in their activities, and the establishment of the Department of Commerce as an authority to police these requirements. The Department was directed to develop and maintain a current list of organizations satisfying the specified criteria.⁴³⁴ While this list would be based primarily upon representations by organizations that they comply with the criteria, the Department was given authority to take “appropriate steps to determine whether such organizations are in fact conducting their activities in accordance with the aforesaid due process and other basic criteria.”⁴³⁵ Furthermore, the Department was directed to establish procedures by which “interested persons” could challenge the listing of an organization and procedures by which the Secretary could determine, “after appropriate notice,” whether an organization should be listed or deleted.⁴³⁶ The due process and other basic criteria include not only the traditional procedural requirements of fairness, openness, and balance, but also require standards organizations to give preference to the use of performance criteria rather than design, materials, or construction criteria, to accept a mediation and conciliation service provided by the Department of Commerce (apparently to help resolve “horror story” problems), and to include a statement, in all literature they publish that participation by government officials in that organization does not constitute governmental endorsement.⁴³⁷

431. *Id.* at 50 (emphasis supplied).

432. *Id.*

433. S. 825, 95th Cong., 1st Sess., 123 CONG. REC. 3156, 3170 (1977).

434. 43 Fed. Reg. 51 (1978).

435. *Id.*

436. *Id.*

437. *Id.* at 50.

The remainder of the revised OMB Circular is basically permissive. Participation by the federal government may extend to government employees' voting in standards-development committees if authorized by the head of their agency or department,⁴³⁸ direct financial assistance, administrative support (*e.g.*, travel cost), technical support (*e.g.*, testing), and joint planning to ensure a coordinated effort.⁴³⁹ Any federal support, however, must clearly further an agency's mission and responsibilities, and the amount of such support "shall be no greater than that of all non-Federal participants."⁴⁴⁰ Further, federal participants are directed to avoid dominating or exerting undue influence on standards-writing committees or becoming embroiled in the internal management of such bodies.⁴⁴¹ Other provisions direct the agencies to develop procedures and rules relating to participation in the voluntary standards process consistent with the policies espoused in the OMB Circular⁴⁴² and direct the Department of Commerce to develop and maintain current information about federal participation in that process and a cross-referenced listing of all voluntary standards.⁴⁴³ I presume that this listing will be maintained by the National Bureau of Standards.

The OMB Circular was developed by the procurement side of OMB, specifically the Office of Federal Procurement Policy. Interestingly, the Circular does not refer to any statutory authority or executive order to support its power to develop such a directive for agencies involved in regulatory activities. I was told that OMB is in fact relying on very general provisions in the Budget and Accounting Act of 1921⁴⁴⁴ and the Budget and Accounting Procedures Act of 1950⁴⁴⁵ for this authority. Under these circumstances there is at least some question about OMB's authority to develop such an elaborate procedure, particularly to the extent that it applies to regulatory activity and to the independent agencies.

The revised OMB Circular, however, unlike the original, was highly controversial and drew a significant number of negative comments from several sources, including ANSI. Following a conference, ANSI, in March 1978, published OMB's written responses to detailed

438. *Id.*

439. *Id.*

440. *Id.*

441. *Id.*

442. *Id.* at 51.

443. *Id.*

444. 31 U.S.C. § 18 (1970).

445. *Id.* § 18(a).

questions about the scope and intent of various provisions of the revised Circular.⁴⁴⁶ The period for comment on the Circular was extended to April 1978,⁴⁴⁷ and as this is written no final action has been taken. It appears probable that the OMB Circular will be the subject of further significant revisions before it is finally released.

D. A Proposed National Standards Policy

On February 8, 1978, the Department of Commerce published, with a request for comment, a document entitled "A Recommended National Standards Policy for the United States."⁴⁴⁸ This document was prepared by the National Standards Policy Advisory Committee (NSPAC), established under the auspices of ANSI, but financially and substantively independent of it.⁴⁴⁹ Money "was raised in small amounts from over fifty organizations and is retained in a special account . . . controlled by the Committee."⁴⁵⁰ The "balanced" membership was drawn largely from nongovernmental sources.⁴⁵¹

The general portions of the policy statement followed familiar themes and may be briefly summarized. It stressed the need for openness and balance on committees and the need to encourage consumer and small business participation. It recommended government participation at all levels to "encourage responsible private sector activities," and delay in the federal development of new standards when suitable national standards exist or are being developed. The policy statement urged a preference for performance rather than design standards and, in a unique suggestion, recommended that two standards-coordinating centers should be developed (or identified), one within the government and the other in the private sector. The statement described roles for such centers and proposed appeals mechanisms for both.⁴⁵² The three lengthy dissenting opinions accompanying the policy statement, primarily reflecting a consumer orientation, illustrate the complexity of some

446. ANSI, "Questions and Answers to Clarify the Intent of the Provisions of the OMB Circular on Federal Interaction with Voluntary Consensus Standards-Developing Bodies," attached to letter from William T. Cavanaugh, Managing Director, ASTM, to author (Mar. 22, 1978).

447. 43 Fed. Reg. 7383 (1978).

448. *Id.* at 6298.

449. *Id.*

450. *Id.*

451. Participants drawn from the federal government included Dr. Ernest Ambler, Director, National Bureau of Standards (a nonvoting member); Dr. Howard I. Forman, Deputy Assistant Secretary of Commerce for Products Standards, U.S. Dept. of Commerce; and Philip Smith, who is identified as "Designated Liaison, Office of Science and Technology Policy, White House." *Id.* at 6303-04.

452. *Id.* at 6300.

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of the issues addressed.⁴⁵³ Like the revised OMB Circular, the proposed policy treats the use of standards for procurement purposes separately from their use for regulatory purposes.⁴⁵⁴

453. *Id.* at 6301-03. The dissenters were David A. Swankin (Swankin & Turner), Ruth B. Jones (Consumer), and Monte Florman and George Papritz (Consumer's Union). It should be noted that not all consumer representatives dissented; for example, Dennis Cherot (Director, Office of Consumer Action for Newark, N.J.), Richard Goodemote (Sears, Roebuck & Co., assuming that Sears should be so classified), and Alfreda J. Riley (Greater Opportunities Industrial Center, Consumer Education Office) did not dissent.

454. Regarding the use of standards for regulatory purposes, the NSPAC policy statement describes roles for both the public and the private sector:

Recognizing that the public and private sectors each has an important contribution to make, it is in the national interest to have a constructive cooperative relationship between them in the areas of health, safety, and environment.

1. *Public Sector Role.* Government departments and agencies should take all necessary and reasonable steps to:

- a. Identify and publish their priority standards needs.
- b. Encourage, cooperate with, and actively participate in relevant national standards activities that are consistent with this policy.
- c. List all relevant national standards that have been prepared in accordance with this policy.

d. Ensure that the following steps will be taken prior to, and as a prerequisite of, any determination that a mandatory standard may be required.

- i. Technically evaluate all relevant listed standards.
- ii. Assess the marketplace for voluntary conformity with such standards.
- iii. Evaluate the suitability of such standards for use as the basis for a mandatory standard (where necessary, encourage the originating standards-writing organization to revise the standard, with government cooperation, to suitable form).
- iv. Specifically consider, and make formal findings with respect to the technical, marketplace and suitability reviews before deciding whether a mandatory standard will be required.

2. *Private Sector Role.* The private sector should take all necessary and reasonable steps to:

a. Identify and use all available data in determining its view of priority standards needs, as well as cooperate with governments to aid government in setting priority standards needs.

b. Initiate and actively pursue national standards activities in a manner consistent with this policy in areas of its high priority.

c. Cooperate with and support national standards activities that are consistent with this policy and that are designed to meet government-identified priority standards needs.

Id. at 6300. This portion of the policy statement was the subject of some controversy, as indicated by the following comment on the "listing" provision by one of the dissenting members:

I believe this section is accurate only if the word "listing" is understood to contain no indication of adequacy. During the development of this policy statement, some wanted to require the government to treat voluntary consensus standards as "guidelines" for mandatory standards. This would have been totally unacceptable. When government agencies promulgate safety and health standards, they do so under mandate from Congress. Each enabling act is somewhat different, but all set by law the criteria that must underpin the standards they promulgate.

To the extent that it is efficient, timesaving, and just good sense for government regulatory agencies to take into account existing voluntary standards, the concept of "listing" (and thereafter evaluating "listed" standards) is a viable one. However, it must be clearly understood by all that the concept of "listing" can imply nothing at all concerning substantive adequacy for governmental purposes. Any effort to give listed standards a priority must be rejected. Each must stand on its own substantive merits, on a case-by-case basis.

Id. at 6301 (dissent of David A. Swankin).

E. Relationship of a Unitary Standards Policy to this Article

The recent proposals for a single federal policy towards voluntary standards recognize that special problems are involved when voluntary standards are used by federal agencies engaged in the development of mandatory safety or health regulations. The basic conclusion of both the OMB Circular and the proposed National Standards Policy that voluntary standards should play an expanded role in such regulation is consistent with the basic conclusion reached in this Article. The OMB Circular and National Standards Policy, however, give only general guidance to agencies on how actually to utilize such standards. The following part of this Article, therefore, develops detailed and specific recommendations for the evaluation and utilization of voluntary standards, and suggests procedural changes to permit their practical integration into agency rulemaking procedures. These recommendations are almost entirely complementary to the proposed standards policies and the adoption of either of those policies will not significantly affect the usefulness or relevance of the recommendations proposed by this Article. Indeed, in one respect, the adoption of such a policy may simplify the task regulatory agencies face when considering the use of a voluntary standard: under either proposal a list of standards-setting organizations that follow fair and open procedures will be developed, thereby simplifying the problem some agencies may face in evaluating specific voluntary standards from less well-known sources.

VI. Development of the Recommendations⁴⁵⁵*A. Value Judgments*

The recommendations that follow are based on certain value judgments about the quality of the modern voluntary standards system. These judgments are partially impressionistic, partially based on conversations with many persons knowledgeable about the system's operations, partially based on personal observation, and partially based on data of varying degrees of hardness.

At its best, the voluntary standards system possesses strengths that

455. A major function of the Administrative Council of the United States is to develop recommendations addressed to federal agencies to assist them in developing mandatory safety or health regulations. A recommendation that suggests cautious use of voluntary standards by these agencies and encourages a development of a regularized process for interaction between voluntary standards organizations and governmental agencies seems fully justified by the foregoing analysis. The discussion below sets forth my own views and value judgments. The Committee on Licenses and Authorizations of the Conference has approved a recommendation on this subject that largely accepts these views and value judgments, but differs from them in some respects.

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federal agencies may not have and should utilize where feasible: broad, current technical knowledge and diverse points of view on many technical committees as well as elaborate procedural devices for the accommodation of wide-ranging viewpoints. Many voluntary standards are more than “lowest common denominators” and merit serious consideration by agencies as appropriate standards for adoption. These standards have the advantage of being in existence and readily available, and the effective utilization of them offers tremendous savings to the government.⁴⁵⁶ It is expensive to reinvent the wheel.

Not all voluntary standards are of the highest attainable quality, however. The voluntary standards system has some inherent weaknesses; it grew out of a virtually private, industry-controlled system, and its procedures have gradually evolved over a long period of time. As a result, older standards may have been approved by committees that did not meet current concepts of balanced membership and that followed less than ideal procedures. Further, because of the inevitable problem of obtaining effective participation by traditionally unrepresented or underrepresented interests, the system often tends to overrepresent commercial interests that form the backbone of the voluntary standards program. At best, the program tends to produce standards that are “industry acceptable” and reflect the current state of the art.

Further, voluntary standards are developed by a process of “consensus,” which actually involves approval by a large percentage of the participants, rather than by unanimous agreement. In some circumstances this process may lead to a standard that is acceptable for commercial purposes but less than ideal for regulatory purposes. Further, these voting requirements may lead to a standard’s being approved despite the objections of the representatives of consumer or related interests.

Based on these considerations, agencies with regulatory authority should consider the use of voluntary standards whenever they are available, but they should be utilized cautiously and on a case-by-case basis.

B. Evaluation of a Voluntary Standard by an Agency for Possible Use as a Regulatory Standard

Evaluating the quality and value of an existing voluntary standard for possible use as a mandatory safety or health standard obviously involves a technical consideration of the standard and a policy judg-

456. See subpart III(A) *supra*.

ment regarding the suitability of the standard given the statutory mandate and regulatory goals of the agency. A discussion of the underlying agency considerations may help illuminate this basic policy decision.

Preliminarily, when an agency considers using an existing voluntary standard as a mandatory standard it should recognize that ANSI's certification that the standard is an American National Standard or that it has been approved by a well-known organization that regularly produces voluntary consensus standards (as defined in the Introduction) does not necessarily mean that the standard is a valuable or useful one or that it has truly national acceptance. Further consideration of the standard is necessary. Experience has demonstrated that the quality of standards varies widely, and there are literally thousands of voluntary standards, some of which are dated or obsolete. OSHA's unfortunate experience with ice in drinking water graphically illustrates this point.⁴⁵⁷ In making a further evaluation, agencies should consider on a case-by-case basis the various factors set forth below.

1. *The Apparent Suitability of the Standard.*—One or more agency employees with a technical or legal background should examine the text of the standard carefully and make a preliminary evaluation of its potential usefulness as a mandatory standard. The date the standard was approved or most recently revised, for example, will often shed light on the quality and value of a voluntary standard, particularly to a person generally familiar with the product involved, its history, and the safety or health ramifications of the product. Some standards may be rejected because they were written at a time when the risk with which the agency is concerned was not recognized or was not measurable. For example, minimum levels of an impurity or undesirable compound may have been established when the full magnitude of the risk of exposure was unknown, or when the technology of production, purification, or ability to measure small quantities did not permit the use of a lower minimum level in the standard.⁴⁵⁸ If more efficient technology or more sophisticated methods of measurement now exist but are not reflected in the voluntary standard, that standard should not be considered a rational compromise of current competing considerations. The age of a standard cuts two ways: it may reflect a fundamentally sound standard for which no changes are required or it may be an indication of technological obsolescence. If an active technical

457. See text accompanying note 176 *supra*.

458. See, e.g., the discussion of the stricter standards imposed due to newly discovered adverse effects of benzene and arsenic in text accompanying note 211 *supra*.

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committee has jurisdiction over the standard and has recently seriously reviewed the standard, the standard's age becomes less important. The agency should nevertheless ascertain the scope of the latest review of the standard and whether such review is continuing.

Another area of examination is the "track record" of the voluntary standard in terms of safety or health. Many agencies collect statistics on accidents, injuries, or illnesses caused by specific products. Data reflecting extensive problems with a product that is covered by a voluntary standard call into question the usefulness of the voluntary standard as a health or safety standard. Other possible explanations, however, should be explored: there may be widespread noncompliance with the voluntary standard, or the accident, injury, or illness data may largely predate the promulgation or significant revision of the voluntary standard.

A careful examination of the voluntary standard under consideration may also reveal that language at critical points is vague or imprecise; voluntary standards are usually drafted by laymen, who may not feel it necessary to specify concepts they consider familiar. The standards-writing organizations are attempting to improve both the clarity and precision of standards, but often older standards use imprecise terms such as "smooth to the touch" or "finger tight."⁴⁵⁹ Imprecision in the use of language should lead the agency to revise a standard, but is not grounds for rejecting the voluntary standard outright. The presence of criminal sanctions for violation of mandatory standards suggests a need for greater specificity in the mandatory standard than in the voluntary standard. Such language and drafting differences, however, do not necessarily have negative implications for the underlying decisions with respect to trade-offs between cost, safety, or health that are reflected in the voluntary standards.

Some agencies may also conclude that certain standards are unnecessarily detailed. In a voluntary standard, unnecessarily detailed provisions can be ignored; however, in a federal standard, the same language becomes mandatory. Some of the voluntary standards adopted by OSHA under section 6(a) suffered in this regard.⁴⁶⁰ Furthermore, adopting detailed specification-type standards for products may have undesirable anticompetitive effects and may freeze technological developments.

459. *Implementation of the Consumer Product Safety Act: Hearings Before the Subcomm. for Consumers of the Senate Comm. on Commerce, Science, and Transportation*, 95th Cong., 1st Sess. 127 (1977) (statement of David S. Pittle, Vice Chairman, Consumer Product Safety Commission).

460. See text accompanying note 177 *supra*.

2. *The Agency's Statutory Mandate.*— The nature of the agency's statutory responsibility is perhaps the most important single factor in the agency's decision regarding what use should be made of an existing voluntary standard. For example, if an agency is charged with establishing a "reasonable" and "minimum" safety standard,⁴⁶¹ an existing voluntary standard may meet that requirement. On the other hand, the legislative history of some statutes makes it clear that Congress considered existing voluntary standards inadequate and more or less explicitly instructed the agency to develop standards that more stringently protect safety and health. This is true, for example, of the Natural Gas Pipeline Safety Act,⁴⁶² the Consumer Product Safety Act,⁴⁶³ the National Traffic and Motor Vehicle Safety Act,⁴⁶⁴ and the Occupational Safety and Health Act.⁴⁶⁵ The legislative history of the National Traffic and Motor Vehicle Safety Act, for example, critically describes existing voluntary standards developed by the Society of Automotive Engineers as "the product of a committee consensus, subject to a single manufacturer's veto, while affording no consumer or user representation."⁴⁶⁶ The result was a "chronic subordination of safe design to promotional styling, and . . . an overriding stress on power, acceleration, speed and 'ride' to the relative neglect of safe performance or collision protection."⁴⁶⁷ In short, the "promotion of motor vehicle safety through voluntary standards has largely failed."⁴⁶⁸ Given such strong congressional sentiments, it is not surprising that the National Highway Traffic Safety Administration (NHTSA) has felt it necessary to develop standards "from scratch," to adopt voluntary standards in part while imposing significantly more onerous requirements, or to incorporate voluntary standards by reference as an interim measure and thereafter try to impose more stringent requirements.⁴⁶⁹ In addition, courts have held that one of NHTSA's goals under the National Traffic and Motor Vehicle Safety Act is to compel improvements in existing technology to

461. See text accompanying note 344 *supra* (referring to the Boat Safety Act of 1971).

462. 49 U.S.C. § 1671 (1970).

463. 15 U.S.C. § 2051 (1976).

464. *Id.* § 1381.

465. 29 U.S.C. § 651 (1970).

466. S. REP. NO. 1301, 89th Cong., 2d Sess. 3, *reprinted in* [1966] U.S. CODE CONG. & AD. NEWS 2709, 2711.

467. *Id.* at 2, *reprinted in* [1966] U.S. CODE CONG. & AD. NEWS 2709, 2710.

468. *Id.* at 4, *reprinted in* [1966] U.S. CODE CONG. & AD. NEWS 2709, 2712.

469. *Cf. Wagner Elec. Corp. v. Volpe*, 466 F.2d 1013 (3d Cir. 1972) (NHTSA incorporated by reference certain Society of Automotive Engineers (SAE) standards governing performance criteria of turn signal and hazard warning signal flashers, but eliminated a permissible failure rate allowed by SAE and compelled absolute compliance instead). NHTSA also extensively incorporates by reference voluntary standards in establishing test methods, test evaluations, instrument calibrations, and similar matters. See, e.g., 49 C.F.R. § 575.104(f)(ii)-(v) (1977).

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increase safety.⁴⁷⁰ This goal precludes the use of existing voluntary standards, which almost by definition reflect current practice and the current state of the art.

Congress may consider an existing voluntary standard to be unsatisfactory either because the standard itself is weak and does not strike the proper balance between cost and health or safety or because the standard, while basically adequate, is generally not complied with or compliance is unascertainable. Although both reasons justify a legislative decision to give an agency power to establish and enforce mandatory rules, they have widely different implications for the role voluntary standards should play in the development of mandatory standards. Both reasons are cited in some legislative histories: in considering the Natural Gas Pipeline Safety Act, for example, the House Committee emphasized both the absence of inspection and enforcement under the B31.8 Code, incorporated by reference in most states, and the inadequacy of the B31.8 Code itself.⁴⁷¹ When mandatory standards were developed by MTB under this statute, the standards were more heavily weighted toward safety than were the voluntary standards in several specific respects, but significant portions of the B31.8 Code were incorporated.⁴⁷²

A number of statutes provide for a mandatory advisory committee with a specified, predetermined balance.⁴⁷³ An agency may infer from such statutory requirements that Congress intended for it to develop standards independently, or at least to develop standards that have a stronger emphasis on safety or health than existing voluntary standards.

In a surprising number of statutes, however, Congress has granted authority to develop mandatory safety or health standards without apparent recognition (or perhaps with only oblique recognition) of the existence of voluntary standards relating to the same products or problems. Agencies administering such statutes naturally feel freer to adopt voluntary standards than agencies administering statutes that contemplate regulations changing the technological status quo.

470. See *Chrysler Corp. v. Department of Transp.*, 472 F.2d 659, 671-73 (6th Cir. 1972).

471. H.R. REP. NO. 1390, 90th Cong., 1st Sess., reprinted in [1968] U.S. CODE CONG. & AD. NEWS 3223, 3231-32.

472. See text accompanying note 371 *supra*.

473. See, e.g., 42 U.S.C. § 5404 (Supp. IV 1974) (National Mobile Home Advisory Council); 46 U.S.C. § 1482 (Supp. IV 1974) (National Boating Safety Advisory Council); 49 U.S.C. § 1673 (1970) (Technical Pipeline Safety Standards Committee).

3. *The Procedures Followed by the Organization Preparing the Standard.*—Presently, the only organization certifying the adequacy of procedures followed by standards-writing organizations is ANSI, a nongovernmental organization. The OMB Circular proposes that the Department of Commerce assume this role;⁴⁷⁴ the proposed National Standards Policy suggests the creation of a “government standards coordinating center” within the Executive Branch without specifying its precise location.⁴⁷⁵ If the federal government is to become involved in voluntary standards activities to the extent contemplated in those proposals and these recommendations, some sort of governmental oversight would seem appropriate. In the meantime, however, ANSI approval of the organization or committee involved is the closest existing substitute and probably provides adequate interim oversight in most cases. It should be noted that there may be organizations that qualify as developers of voluntary standards but that are not members of ANSI and thus not subject to any procedure certification.⁴⁷⁶

The diversity of interests or points of view consulted on a specific standard may vary significantly within the confines of the consensus process itself, depending in part on the nature of the standard, its age, and other factors. A standard that has been recently developed or revised through open and fair procedures by a committee that represents numerous points of view, virtually all of which concurred in the proposed standard, should be seriously considered by the agency to represent an acceptable balance of safety, health, and economic cost. Such a standard closely approximates the theoretical type of consensus described earlier.⁴⁷⁷

The modern voluntary standard system does provide most segments of society, including small businesses, consumers, and organized and unorganized labor, with an opportunity to participate. There are, however, serious theoretical and practical problems of representation for such groups. They are not bonded together as single interests by economic forces in the same way most other interests in the consensus process are. A “consumer representative” for example, often represents his own personal biases, which may or may not be shared by consumers generally.⁴⁷⁸ There is also often a great disparity between a right to participate and actual, meaningful participation. Some groups lack the resources and technically qualified representatives essential to effective

474. 43 Fed. Reg. 48 (1978).

475. *Id.* at 6298, 6300.

476. *See* text accompanying note 28 *supra*.

477. *See* text accompanying notes 143-44 *supra*.

478. *See* R. DIXON, *supra* note 42, at 35-38.

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participation in standards-writing groups. The major standards-writing agencies recognize this problem, and have gone to considerable lengths to improve the balance of interests on committees.⁴⁷⁹ The CPSC, particularly, has made increased consumer representation a prerequisite for agency participation on private standards committees. Such efforts have been successful to varying degrees in specific committees. Nonetheless, many standards affecting consumer products—particularly technical ones applicable to components—are prepared by technical committees that still have little or no consumer representation. It should be a matter of direct concern to agencies considering the use of a voluntary standard to obtain information about the balance of the committee or group that developed the standard, the extent to which various interests were actively represented on the committee or group, and the extent to which these interests concurred in the standard developed. In most cases, this information should be readily available from the promulgating organization; a failure to produce or develop this information should raise doubts about the quality of the standard. The importance of this information, however, can be overstated; in the final analysis, the adequacy of the standard in addressing identified risks rather than its source should be the dominant consideration. A special problem in the canvass method of ascertaining the existence of a consensus is the difficulty of obtaining the views of groups that are traditionally underrepresented in the voluntary standards process.⁴⁸⁰ Standards approved by this method should be treated with great caution.

The procedures recommended in this Article are somewhat idealized. It is perhaps questionable whether any technical committee or standards-developing organization can meet them in every detail. A failure to meet these procedural requirements entirely should not disqualify the standard from further consideration but may raise doubts about its quality. For example, an agency may decide to utilize a standard even though the number of consumers on the technical committee that developed the standard was smaller than the number the agency considers desirable. That fact, however, is relevant in evaluating the quality of the standard.

4. *Absence of a "Legislative History."*—The usefulness to an agency of a voluntary standard is often limited because voluntary

479. See discussion of various means to increase consumer participation, at subpart III(B)(3) *supra*.

480. See text accompanying notes 44-48 *supra* (brief description of the canvass method).

standards are typically published without a description of the issues that were considered in the formulation of the standard or an explanation of why certain judgments prevailed over others. Such descriptions of the bases of decision are referred to here as the "legislative history" of a standard, to distinguish them from the formal records of publication, balloting, decisions on negatives, and the like, that are created to ensure that required procedures are followed. Agencies may feel uneasy about accepting value judgments made by others without any explanation of why they were made or what factors were taken into consideration. This is particularly likely to be true in situations in which no agency representative observed the development process. A standard should not be automatically rejected, however, simply because it lacks such a legislative history. Further investigation by the agency may give it considerable insight into the background of the standard and permit it to understand why certain choices were made. An agency employee who was a member or observer of the technical committee may be able to provide the necessary background; some correspondence or records concerning the bases of decision may be available from the files of the standards-developing organization; or employees of the agency may confer with the chairman and other members of the committee to ask them why certain choices were made. Voluntary standards would generally be more useful to governmental agencies if the standards-writing organizations could provide more information about the background and development of the standard. ASTM developed a kind of legislative history in its background exposition of the factors involved in the creation of safety standards for bathtubs and shower stalls.⁴⁸¹ The development of such background information should be encouraged by all agencies.

5. *Possible Competitive Problems.*— While the application of the antitrust laws to the standardization system is beyond the scope of this Article, agencies should be concerned that they do not inadvertently accept a voluntary standard that will have a significant anticompetitive impact when made mandatory.⁴⁸² The OMB Circular warns that standardization activities, "if improperly conducted, could suppress free and fair competition, impede innovation and technical progress" and have other adverse effects.⁴⁸³ The often expressed preference for

481. See text accompanying notes 271-74 *supra*.

482. See Anderson & Whitten, *Government Regulations Afflict U.S.*, Washington Post, Oct. 22, 1977, § B, at 7, col. 4.

483. 43 Fed. Reg. 48, 49 (1978).

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performance over design standards⁴⁸⁴ is partially based on the likely anticompetitive effect of design specifications.⁴⁸⁵

The potential anticompetitive effects of standardization activities are usually not apparent until the possibility is brought to the agency's attention by an outsider. Often, I suspect, the anticompetitive implications are obscured by technological or scientific issues, which must be mastered before the full competitive impact can be evaluated. Thus, the actual isolation of adverse competitive implications in concrete situations may be difficult.

The foregoing suggested analysis of voluntary standards for their possible use by governmental agencies is part of what is usually called a "prerulemaking process." I would expect this evaluation to be made internally by agencies without public participation or specially designated procedures. This conclusion is superficially inconsistent with Executive Order 12044,⁴⁸⁶ which urges greater public participation in the "early" stages of the rulemaking process. The evaluation of an existing voluntary standard, however, usually involves such narrow and technical evaluations that public participation would have little value. Direct public communication with members of a technical committee to ascertain the value judgments underlying a voluntary standard, however, may be appropriate.

C. *Uses of Voluntary Standards*

An agency may use or decline to use an existing voluntary standard in a variety of ways. Based on the partial survey of agencies in this Article, I believe that an agency has at least the following alternatives when considering the use of a voluntary standard.

- (1) The agency may decide not to develop a mandatory standard at all and rely on the existing voluntary standard.
- (2) The agency may incorporate the existing voluntary standard by reference, thereby endorsing the standard in its entirety.
- (3) The agency may in its regulations copy the existing voluntary standard *verbatim*.
- (4) The agency may develop a mandatory standard, using its

484. See, e.g., *id.* at 48, 50; *Hearings, supra* note 8, at 554; Boat Safety Act, 46 U.S.C. § 1454(a)(1) (Supp. IV 1974).

485. See 43 Fed. Reg. 19216, 19219 (1978) (CPSC discussion of comments on statement of policy on Commission Involvement in Voluntary Standards Activities). In discussing proposed amendments to the federal standards for Transportation of Natural and Other Gas and Hazardous Liquids by Pipeline (49 C.F.R. §§ 192, 195), the Office of Pipeline Safety noted that performance requirements are easier to administer. 40 Fed. Reg. 27245 (1975).

486. 43 Fed. Reg. 12661 (1978).

own language but adopting the substantive aspects of the existing voluntary standard without significant change.

(5) The agency may develop a mandatory standard in its own language, adopting portions of the substantive provisions of the existing voluntary standard and adding or modifying other substantive portions.

(6) The agency may reject the existing voluntary standard, develop its own source or basis of information, and create its own mandatory standard from scratch, either internally or with the assistance of the voluntary standards-writing committees, an advisory committee, or other organizations. In this instance, the agency could utilize the existing voluntary standard as a temporary or interim regulatory measure until the mandatory standard is developed.

(7) The agency may indicate, either formally or informally, that while compliance with the existing voluntary standard is not mandatory, no regulatory action will be taken if there is compliance with this standard. This alternative will be described as the "regulatory guide" approach, employing the name adopted by the Nuclear Regulatory Commission for staff-created documents that follow this approach.

(8) The agency may encourage and cooperate with the voluntary standards-writing organization in making changes in the voluntary standard that the agency considers are appropriate. Thereafter, the agency may adopt one of the foregoing alternatives, probably (1), (2), (3), (4), or (5). Possible methods of encouragement and cooperation, which are themselves encouraged in this Article, are discussed more fully below.

1. Reliance on the Voluntary Standard.— An agency may decide not to adopt a mandatory standard if it concludes that industry generally complies with a voluntary standard that adequately protects the public health and safety. Under these circumstances the agency may decide that its regulatory energy should be directed at other areas—problem areas—rather than at an area covered by an existing voluntary standard. The CPSC has followed this practice in a number of instances⁴⁸⁷ and recognized the principle of reliance on voluntary standards in its 1977 policy statement on utilization of such standards.⁴⁸⁸ It should be noted that any citizen has a statutory right to petition the CPSC to establish a mandatory standard for any specific

487. See, e.g., note 248 *supra*.

488. See text accompanying note 258 *supra*.

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consumer product;⁴⁸⁹ the policy of rejecting petitions when an adequate voluntary standard exists allows the agency to allocate its limited resources to problem areas. Unquestionably, the CPSC's regulatory efforts were channeled in this direction by the complex procedures surrounding its development of mandatory standards and by its belief that it should direct its efforts to areas in which no standards exist or in which existing standards are deemed inadequate. Other agencies, however, have also adopted a similar policy on an ad hoc basis.

When an agency decides that an existing standard is adequate and is being complied with by industry, it should publish an announcement of that fact in the *Federal Register* in order to advise the affected industry that the standard is considered reasonably adequate and that no further regulatory action will be taken as long as a high level of adherence to the standard is maintained. Thereafter, it should devote some minimal resources to monitoring the degree of compliance and ensuing technical developments that may suggest health or safety problems in the future.

It has been suggested that an agency might also decide to defer regulatory action when a voluntary standard is relatively new in order to develop data on the effectiveness of the standard in addressing safety or health concerns. While my research did not disclose any clear examples of this pattern, if regulatory action is deferred on this ground, the agency probably should monitor closely thereafter the effectiveness of the voluntary standard.

2. *Incorporation by Reference.*—Historically, incorporation by reference has been the most common method of using voluntary safety or health standards, particularly at state and local levels. A decision to incorporate a safety or health standard by reference requires an agency to conclude that the substantive standard is an appropriate one, and that the language of the standard is sufficiently precise to allow enforcement by the agency in criminal or other legal proceedings, but that the existing level of compliance with the voluntary standard is not optimal or cannot be readily ascertained. For example, incorporation of an acceptable voluntary standard by reference may be necessary if the standard is applicable to a large number of small firms or plants whose compliance with it is difficult to determine.

3. *Incorporation verbatim.*—In some instances an agency may consider either incorporating an acceptable standard by reference

489. 15 U.S.C. § 2059 (1976).

or copying it verbatim in the regulations themselves. There is precedent for either choice in current agency practice.⁴⁹⁰ From the agency's standpoint the decision involves consideration of several factors: copyright problems, the attitude of the voluntary standards-developing organization, the convenience to users of having the entire regulation in a single publication, the sheer size or bulk of the *Federal Register* and the *Code of Federal Regulations* (which may cause possible publication budget problems), the need to provide an efficient way to advise those covered of legal requirements, and perhaps other factors as well. It is, of course, true that incorporation by reference requires interested persons to consult two documents and in some cases to purchase a copy of the referenced standard. On the other hand, this additional hardship is probably slight or nonexistent in most cases, and in many instances those covered may already be quite familiar with the voluntary standard. From the standpoint of a voluntary standards organization that is largely dependent on sales of standards for its income, any suggestion that the practice of publishing voluntary standards in the *Federal Register* should be encouraged is likely to be strongly opposed, and it is probably anathema to suggest further that such regulations should be broadly circulated by the agency, either at cost or at standard government publication rates.

On balance, I feel that incorporation by reference should be the primary method of using acceptable voluntary standards. At the very least, however, each agency should advise those covered of the name and address from which the referenced standard can be obtained, and, when possible, of its cost.⁴⁹¹ In addition, agencies should place copies of the referenced standard in their public reading rooms or other places where the public may come to determine what the applicable regulatory requirements are.

The question whether an agency can simply use a copyrighted voluntary standard under the copyright law doctrine of "fair use" appears to be an open one.⁴⁹² The leading case involving fair use by the federal

490. In its boating safety regulations, the United States Coast Guard repeated verbatim the voluntary standards. See text accompanying note 348 *supra*. Elsewhere, for example in its proposed waterfront safety regulations, it proposes to incorporate by reference over seventy standards and codes. 43 Fed. Reg. 15108-09 (1978).

491. The regulations issued by the Office of Federal Register require that "[t]itles, dates, editions, numbers, authors, and publishers shall be stated whenever they would contribute to clear identification." 1 C.F.R. § 51.7(b) (1978). Prices are not mentioned because presumably they change over time and agencies may not know of the change. ANSI and the voluntary standards organizations do refer to prices in their notices. See note 92 *supra*. In connection with its proposed regulations relating to LNG, the Coast Guard purchased copies of NFPA standard 59A from NFPA and offered to provide a free copy to anyone requesting it. 43 Fed. Reg. 34362-63 (1978).

492. The question is unlikely to have arisen before 1960 because not until that year did Con-

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government is *Williams & Wilkins Co. v. United States*,⁴⁹³ which upheld the photographic reproduction policies of the National Institute of Health and the National Library of Medicine. The four-to-four division of the United States Supreme Court, however, obviously weakens the force of this precedent. The case sheds little light on the precise issue and, in any event, the Copyright Act was completely revised in 1976.⁴⁹⁴

It is my view⁴⁹⁵ that at least some use by governmental agencies of copyrighted voluntary standards should be considered a fair use. It is true that any development of a mandatory standard has a chilling, if not devastating, effect upon the economic value of the referenced or replaced voluntary standard. That, however, is not the result of any *copying* but of the actual adoption of the mandatory standard supplanting the voluntary standard; the effect would be the same whether or not any copying took place. Nevertheless, that the question is a difficult one should be an inducement to follow the practice of incorporation by reference when the voluntary standards organization objects to the use of its copyrighted material.

Under the regulations adopted by the Office of the Federal Register, it is not possible to incorporate by reference all future changes in a

gress waive sovereign immunity in suits for copyright infringement. 28 U.S.C. § 1498 (1970), *as amended* by Pub. L. No. 86-726, 74 Stat. 855.

493. 487 F.2d 1345 (Ct. Cl. 1973), *aff'd* by an *equally divided Court*, 420 U.S. 376 (1975).

494. A new provision, § 107, defines "fair use":

§ 107. Limitations on Exclusive Rights: Fair Use

Notwithstanding the provisions of section 106, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include—

- (1) the purpose and character of the use, including whether such use is of a commercial nature or is for non-profit educational purposes;
- (2) the nature of the copyrighted work;
- (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- (4) the effect of the use upon the potential market for or value of the copyrighted work.

17 U.S.C. app. § 107 (1976). The specific wording of this section is described in the legislative history as "the result of a process of accretion." H.R. REP. NO. 1476, 94th Cong., 2d Sess., *reprinted in* [1976] U.S. CODE CONG. & AD. NEWS 5659, 5679. About the only other relevant comment in the legislative history that I was able to find is a statement that "[t]he Committee has considered the question of publication, in Congressional hearings and documents, of copyrighted material. Where the length of the work or excerpt published and the number of copies authorized are reasonable under the circumstances, and the work itself is directly relevant to a matter of legitimate legislative concern, the Committee believes that the publication would constitute fair use." *Id.* at 5687.

495. I am supported in this conclusion by a copyright specialist, Professor James M. Treece, Charles I. Francis Professor of Law, University of Texas at Austin School of Law.

voluntary standard.⁴⁹⁶ The mere suggestion of such a possibility raises obvious questions about delegation of regulatory power to private organizations and about the propriety of an agency accepting unknown future changes before they are even proposed.⁴⁹⁷ Therefore, agencies should revise their incorporations by reference periodically—a process that may involve overlapping procedures at the private and public levels. These problems are discussed further below.

4. *Restatement of the Voluntary Standard.*—The justification usually given by an agency for accepting the substantive provisions of an existing voluntary standard but revising and restating the language is that the voluntary standard lacks the precision and specificity required of a standard the violation of which may lead to criminal penalties. The perceived need for specificity is based in part on fairness to those who are subject to criminal or civil sanctions and in part on enforcement considerations, including the need to circumscribe the discretion of inspectors or other relatively low-level governmental personnel. A second justification is the need to eliminate some provisions of the voluntary standard that are beyond the power of the agency to adopt, *e.g.*, because they do not relate to safety or health.

In determining whether a standard is sufficiently precise, an agency should consider whether the standard has been incorporated by reference by other governmental authorities (usually state and local), and whether those authorities have been successful in attempting to enforce the standard. The investment of scarce agency resources in the revision of well-tested standards for essentially nonsubstantive reasons is arguably not justified.

A major problem with the revision and restatement of a voluntary standard by an agency is the attendant cost and delay. Some voluntary standards (*e.g.*, the NFPA National Electric Codes) are complex documents, and an agency may find that their revision strains the limited resources of the agency. Indeed, it is not inconceivable that the pace of development of voluntary standards might exceed the pace of development of mandatory standards; the agency could then never successfully restate the most current standards, but would fall further and further behind its private counterparts.

Restating a voluntary standard also results in some procedural re-

496. 1 C.F.R. § 51.8(c) (1978).

497. *See, e.g.*, *State v. Fowler*, 94 Fla. 752, 114 So. 435 (1927); *State v. Intoxicating Liquors*, 121 Me. 438, 117 A. 588 (1922); *Opinion of the Justices*, 239 Mass. 606, 133 N.E. 453 (1921).

quirements under section 553 of the Administrative Procedure Act⁴⁹⁸ that may be significantly reduced if the voluntary standard can itself be revised and then incorporated by reference. As a matter of common sense, a mandatory standard that restates the familiar provisions of a voluntary standard in unfamiliar language is likely to draw more comment and criticism than a mandatory standard that simply incorporates a voluntary standard by reference. This is partially a result of substitution of the unfamiliar for the familiar; of course, the substitution of precise for more generally phrased requirements may itself be controversial and may conceal substantive changes. It appears clearly desirable for agencies to work within the structure of the voluntary standards-writing organizations to develop the required specificity rather than to devote their limited resources to in-house restating of these standards. One problem with this suggestion is the internal structure of most agencies: the lawyers who develop rules and prosecute violations demand specificity, but it is the technical personnel who become the members or observers of the voluntary standards technical committees. Nevertheless, greater efforts to develop the necessary specificity through the standards-writing committees seem desirable and feasible; it is usually in the interest of the standards-writing organization to participate in the development of more precise language.

Some agencies have been concerned with excessive detail in certain voluntary standards and have considered the substitution of more general performance standards for design specifications that could have undesirable anticompetitive effects. It appears beneficial and possible to develop the preferred generality through the standards-writing committee in this situation as well; as is the case with developing specificity for enforcement purposes, it is usually in the interest of the standards-writing organization to participate in the development of more general provisions.

5. *Substantive Revision of the Voluntary Standard and Writing Standards from Scratch.*—Several agency employees I interviewed commented that, as a practical matter, their agencies lacked the necessary technical personnel to develop mandatory standards covering all aspects of their regulatory responsibility and that therefore some reliance on voluntary standards was essential. On the other hand, some agencies have developed a large number of substantive safety and health standards virtually without regard to existing voluntary stand-

498. 5 U.S.C. § 553 (1976).

ards. Two agencies that follow this approach are the Environmental Protection Agency (EPA), which developed environmental standards in many areas in which there were few or no existing voluntary standards, and the National Highway Traffic Safety Administration (NHTSA), which was given a virtual legislative command to ignore existing standards and start from scratch. The EPA, however, uses voluntary standards established by ASTM, the American Public Health Association, and the American Water Works Association extensively for test methods and similar matters. NHTSA uses voluntary standards for similar purposes and for interim regulations as well.

The track records of these two agencies and the problems faced by other agencies in writing standards from scratch reveal the problems faced by agencies developing their own balance between cost and health or safety. The EPA has been involved in extensive litigation over its health and environmental standards; it is perhaps the governmental agency most active in litigation, aside from the Department of Justice. NHTSA automobile occupant restraint system regulations (providing for the famous seat belt interlock and buzzer system) were so unpopular with motorists that Congress legislatively overruled the agency in 1974,⁴⁹⁹ and Congress added a legislative veto provision for all future motor vehicle safety standards.⁵⁰⁰

Other agencies have not started from scratch, but have used a voluntary standard as the nucleus of their regulations, making changes they consider appropriate. An example of this practice is HUD's development of mobile home standards,⁵⁰¹ which also probably involves the copyright issue discussed previously. MTB's development of natural gas pipeline regulations followed a similar pattern. It originally adopted regulations based closely on the available voluntary standards and then gradually developed its own regulations, primarily with a view toward developing performance rather than design requirements.⁵⁰²

The major problem faced by an agency when it develops mandatory standards independently, whether from scratch or by revising an existing standard, is the agency's limited knowledge. The economy and

499. 15 U.S.C. § 1410b(a) (1976) provides that "[n]ot later than 60 days after October 27, 1974, the Secretary shall amend the Federal motor vehicle safety standard numbered 208 (49 C.F.R. 571.208), so as to bring such standard into conformity with the requirements . . . of subsection (b) of this section."

500. *Id.* § 1410b(c), (d).

501. *See* text accompanying notes 327-29 *supra*.

502. An ultimate goal being considered by MTB is the "substitution of performance requirements for as many of the existing references to industry documents as practical." 40 Fed. Reg. 27245 (1975).

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its methods of operation can be exceedingly complex and dynamic. There is a risk that agency personnel will develop proposals that are superficially reasonable but have unexpected, and unacceptable, consequences.⁵⁰³ When an agency believes it necessary to develop its own mandatory standard, it is particularly important that it consider all points of view and assess as accurately as possible the cost and implications of its proposal. The great strength of modern technical committees is that they embody the wealth of knowledge and experience about current practices and products that agencies usually lack and should seek. Therefore, when an agency is proposing a new substantive regulation that differs from an existing voluntary standard, it should attempt to utilize this knowledge and expertise by working cooperatively with the committee, without, of course, agreeing in advance to accept the committee's conclusions. I suspect that in many instances the committee will accept the proposition that the voluntary standard needs to be revised in the way suggested by the agency, and the resulting voluntary standard may be incorporated by reference. In any event, the mandatory standard should command greater acceptance if it is approved, or at least considered, by a voluntary standards committee rather than if it is simply proposed by the agency without apparent external input. If the committee does not revise the voluntary standard to the satisfaction of the agency, the agency should proceed to develop its own standard.⁵⁰⁴ In any event, agencies should consider the possible interim use of the voluntary standard while the federal standard is being developed.

The independent development of a mandatory standard by an agency obviously has an impact on the relative roles of the agency and the voluntary standards committee active in the same area. The experience of MTB with the ASME natural gas pipeline committee, of HUD with the NFPA mobile homes committee, and the dialogue now going on between MTB and NFPA about their respective roles with respect to LNG facilities regulation all indicate that the development of com-

503. The following example is taken more or less at random: NHTSA's Standard No. 222, School Bus Passenger Seating and Crash Protection, originally required school bus seats to be no more than 20 inches behind the seat in front. Later, NHTSA conceded that its failure to consider the necessary manufacturing tolerances employed by school bus manufacturers had caused the manufacturers to space the seats as a rule somewhat closer than 20 inches in order to keep all buses within the limit. On reconsideration, NHTSA extended the limit to 21 inches so manufacturers could "provide approximately the 20 inches of space intended under the initial standard." 42 Fed. Reg. 64119-20 (1977).

504. This would involve the "in-house" development of a proposed standard, its publication for comment, and institution of the rulemaking procedures required by the Administrative Procedure Act and applicable provisions of substantive statutes, if any.

patible roles may not be easy and that the development of a mandatory standard may signal the end of the voluntary committee. While I may be oversimplifying the problems, some kind of accommodation should be possible to allow the committee continued meaningful input while reserving the ultimate power of decision on substantive requirements to the agency. The Nuclear Regulatory Commission appears to have worked out such an accommodation without relinquishing its authority to adopt final safety standards. Subsequent recommendations embodying the suggestions that cooperative efforts between the agency and the voluntary standards committees should be improved and that so-called "regulatory guides" should be used more are both designed with this problem in mind.

6. *Regulatory Guides.*—The Nuclear Regulatory Commission has utilized voluntary standards (as well as some staff-created guides) extensively and effectively through its series of regulatory guides. Other agencies might profitably develop a similar approach. A regulatory guide is a document that states that a standard or portion thereof provides an acceptable, though not exclusive, means to achieve a broad goal specified in regulations or in the statute itself. Since the guide is not incorporated by reference it is not formally a rule, and violations of it cannot be charged as independent offenses.⁵⁰⁵ As utilized by the NRC, regulatory guides represent the views of the staff rather than of the Commission itself, but this does not appear to be an essential part of the regulatory guide concept. The use of voluntary standards in this way has several apparent advantages. First, it forces the agency to focus on the broad goal as well as on narrow product design questions, thus encouraging the development of general performance standards rather than specific design standards—a trend that is generally viewed as desirable.⁵⁰⁶ Second, it permits the use of detailed voluntary standards without the freezing of development and innovation at that level, which occurs with incorporation by reference. Third, it results in the use of voluntary standards for which they were designed: as a voluntary, nonexclusive way to do things. Finally, the problems encountered when agencies change "should" to "shall" or when they revise voluntary standards to add precision are also avoided.

My generally favorable reaction to this approach is based partially on its successful development and use by NRC. A presidential task

505. An offender may, of course, be charged under the more general mandatory standard if the agency believes the violations create unsafe or unhealthy conditions.

506. See notes 484-85 *supra*.

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force has also recommended that OSHA explore its use in machine tool guarding regulations.⁵⁰⁷ FDA is actively considering the use of voluntary standards in its regulation of medical devices in a way that essentially follows the regulatory guide concept, though that phrase is not specifically used.⁵⁰⁸ Portions of MTB's regulations regarding natural gas pipelines also involve a variation of this regulatory guide concept.⁵⁰⁹ The approach seems potentially promising and is one that other agencies with serious regulatory problems might explore.

D. Coordination and Cooperation

At the present time the relationship between government agencies and the voluntary standards organizations is widely varied: it includes formal memoranda of understanding, such as the OSHA-ANSI agreement creating a joint, high level committee; elaborate, but ad hoc, cooperative working relationships at the technical level, such as that developed by the NRC; and virtually total agency separation from the voluntary standards organization, such as the very limited informal relationship presently maintained by MTB of the Department of Transportation. Of course, problems faced by agencies differ greatly and a considerable amount of diversity in these relationships should be expected.

Both the proposed OMB Circular and the Recommended National Standards Policy contemplate active participation in standards development by government agencies. In the OMB Circular, the goal of agency participation is to contribute to the development of standards that "will minimize the need for development of mandatory Federal standards or, as a minimum, [to collect] technical and other information which will provide a basis for well-considered Federal regulatory actions."⁵¹⁰ The National Standards Policy states that such participation is designed to make the Government's "needs known and to help assure that, where necessary, the standards developed will be in a form

507. PRESIDENTIAL TASK FORCE, *supra* note 183, at 28.

508. See text accompanying note 313 *supra*.

509. See, e.g., 49 C.F.R. § 192.55(a)(1) (1977) (new steel pipe qualified for use if manufactured in accordance with an ASTM or API "listed specification").

510. 43 Fed. Reg. 48, 50 (1978).

It is very difficult to estimate the extent of federal participation in voluntary consensus standards setting activities. The U.S. Department of Commerce has published a *Guide to Standards Activities of Federal Agencies 1976* which enumerates a number of nongovernmental standards bodies in which specific agencies participate, but gives no indication of the scope of such participation. The following table lists the number of nongovernmental standards bodies in which the following agencies are listed as participating through "technical experts":

suitable for government use."⁵¹¹ The Circular also suggests federal assistance to voluntary standards-developing committees in the form of direct financial support, administrative support (*e.g.*, hosting meetings), technical support (*e.g.*, cooperative testing), and joint planning "to ensure a coordinated effort in resolving priority standardization problems."⁵¹² Such support, however, is "limited to that which is clearly in furtherance of an agency's missions and responsibilities" and in no event shall it be "greater than that of all non-federal participants in that committee."⁵¹³ The proposed National Standards Policy is less specific as to details, but does suggest that "governments should be the primary, though not the exclusive, source of . . . funds" to finance participation by small business and consumers in the standards development process.⁵¹⁴

These proposals, of course, involve procurement as well as regulatory uses of standards. The discussion below attempts to delineate the extent to which agencies concerned with matters of safety or health should participate in standards development activities.

1. Government Employee Participation in Technical Committees and Standards-Developing Organizations.—Government employees have participated in technical committees throughout the history of the

<u>Name of Agency</u>	<u>No. of Nongovernmental Standards Bodies Listed</u>
Department of Commerce	120
ERDA	13
EPA	7
Department of Health, Education & Welfare	34
Department of Housing & Urban Development	5
Department of Interior	24
Department of Labor	5
NRC	23
Department of Transportation	12
Department of Treasury	6
Veterans Administration	7

See U.S. DEP'T OF COMMERCE, GUIDE TO STANDARDS ACTIVITIES OF FEDERAL AGENCIES (1976).

The figures in the foregoing table are misleading because organizations, such as ASTM and NFPA, are listed as single organizations. As indicated in the text, the number of agency participants in such organizations may run into the hundreds.

ASTM estimates that there are currently 1350 federal employees and representatives serving on technical committees, representing approximately nine percent of all units of participation. Letter from William T. Cavanaugh, Managing Director, ASTM, to Lester A. Fettig, Administrator for Federal Procurement Policy, Office of Management and Budget (Mar. 21, 1978). Of course, many of these represent procurement or other interests.

511. 43 Fed. Reg. 6298, 6299 (1978).

512. *Id.* at 48, 50.

513. *Id.*

514. *Id.* at 6298-99.

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voluntary standards process. Although there is no way to estimate the current number of public employees participating on these committees in all capacities, their membership is certainly in the thousands. For instance, 170 representatives of the National Bureau of Standards are active in ASTM alone.⁵¹⁵ Of the approximately 2500 persons employed in all NRC offices, about 230 of them participate on technical committees.⁵¹⁶

Many of these government employees are scientists or engineers who are interested in the technology or process considered by the committee more or less independently of their employment by a government agency, and consequently may feel that they participate as individuals rather than as "representatives" of their agency. Voluntary standards organizations classify this type of government employee as a "general," "consumer," or some other class of representative to indicate that he or she does not represent a producer, user, or other direct economic interest. A recent study has pointed out that the word "represent" may also be used in a legislative or delegational sense, as contrasted with an agent-principal notion of representation.⁵¹⁷ Several agencies with regulatory responsibilities in the areas of safety or health, including FDA, OSHA, and CPSC, have adopted regulations or guidelines for employee participation in voluntary standards organizations that contemplate to a greater or lesser extent that employees should serve as "representatives" of the agency in the delegational sense.⁵¹⁸ These regulations usually restrict participation to technical employees, barring participation by higher level employees with the power to make, or directly advise on, final regulatory decisions that may involve use of the voluntary standards.⁵¹⁹ Agency permission to engage in

515. ASTM, *ASTM and Voluntary Consensus Standards 10* (undated brochure sent to all potential ASTM members).

516. Letter from Robert B. Minogue, Director, Office of Standards Development, NRC, to the author (May 1, 1978).

517. R. DIXON, *supra* note 42, at 18-21.

518. *See, e.g.*, 16 C.F.R. § 1031 (1978) (CPSC); 21 C.F.R. § 10.95 (1977) (FDA).

519. The CPSC regulations also require that if a participant thereafter makes any recommendation or proposed decision for the agency, the fact of his earlier participation must be disclosed. 16 C.F.R. § 1031.5(i) (1978).

In April 1978, CPSC, by a vote of three-to-two, decided that under the policy described in the text "program managers" should not participate in voluntary standards programs. A "program manager" is "responsible for the overall management of the Commission's standards development activities, voluntary as well as mandatory," subject to review by: (1) the Director of the Office of Program Management; (2) the Executive Director; (3) the Office of the General Counsel; and (4) the Commissioners and their staffs. Memorandum from D. R. Mackay, Director, Voluntary Standards, CPSC, to Bert Simson, Director of the Office of Program Management, CPSC (May 18, 1978). In July 1978, the Commission revised its policy on employee participation so that program managers are allowed "to participate in particular voluntary standards activities on a case-

standards-writing activity is also usually required.⁵²⁰ Further, these guidelines, including those promulgated by OSHA and CPSC, limit the role of the employee to a "non-voting, advisory capacity" and preclude the employee from directing the committee's course and from serving as chairman or in any other position that might dominate the nature of the committee output.⁵²¹ Other agencies, such as NRC, expect their representatives to cast votes that reflect the agency's position. Still other agencies, such as EPA, simply state that employees should vote their technical opinions and indicate clearly that they are not representing EPA. These employees, however, are encouraged to press EPA's viewpoint at meetings since EPA considers the committee a sounding board from which the point of view of regulated persons may be obtained. Some agencies limit participation to committees that follow specified procedures. NIOSH, for example, permits its employees to participate on a voluntary standards-setting body only if its meetings, minutes, and membership records are open to the public.⁵²² Though usually not in a regulatory capacity, the National Bureau of Standards of the Department of Commerce has participated in the development of voluntary standards through committee involvement during most of the twentieth century and has developed standards to guide its employees when participating in the standards-writing process—the general standard of conduct is that the representation should further the "public interests of the United States in the broadest sense."⁵²³ Employees may participate if there is balanced membership, "including adequate and effective user and consumer representation," and if the ultimate standard serves the public interest rather than the interests of private individuals or organizations.⁵²⁴ NBS recognizes four types of participation: participation as an official spokesman of NBS or the Department of Commerce; participation as a technical representative of NBS or the Department; participation as an individual; and participation as a spokesman or representative of another organization (*e.g.*, an NBS employee could be designated by the Institute of Electrical and Electronics Engineers to be

by-case basis." This policy also includes participation by the Executive Directors, their Deputies, and their Special Assistants. 43 Fed. Reg. 30796 (1978).

520. *See* 21 C.F.R. § 10.95(d)(1) (1977) (FDA). Agency approval may also be required to maintain control over employee travel costs. 43 Fed. Reg. 30796 (1978) (to be codified in 16 C.F.R. § 1031.5(d)) (CPSC).

521. *See, e.g.*, 16 C.F.R. § 1031.5(f), (g) (1978) (CPSC).

522. *Hearings, supra* note 8, at 345 (statement of John M. Finklea, Director, NIOSH).

523. NATIONAL BUREAU OF STANDARDS, GUIDELINES FOR NATIONAL BUREAU OF STANDARDS PARTICIPANTS IN VOLUNTARY STANDARDIZATION PROGRAMS 2 (Jan. 1972).

524. *Id.*

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its representative on an ANSI committee).⁵²⁵ The regulations address each of these four types of participation individually. For example, individual participation requires prior clearance for possible conflicts of interest.⁵²⁶ Because of the large number of NBS employees serving on various committees, NBS has developed forms for obtaining approval of standards participation activity and for changes in such activity.⁵²⁷

Not all agencies restrict their employees to an agency-representative role in the voluntary standards process. Employees of the Coast Guard serve as regular voting members of several technical committees. Some government employees serve as chairmen of technical committees and presumably affect the directions their committees take significantly. For example, the 1976 ASTM Directory reveals that the Chairman of Committee F9 on tires is an employee of the National Highway Safety Administration, an agency involved in developing regulatory standards.⁵²⁸ Relatively high-level government employees serve on the boards of directors and various administrative committees of ANSI and other voluntary standards-writing organizations: four government employees are on ANSI's board of directors,⁵²⁹ a Bureau of Standards employee has served on ASTM's;⁵³⁰ and others serve on ANSI's Energy Council and Consumer Council.⁵³¹

The 1976 version of the OMB Circular encouraged agencies to develop standards for the participation of employees in voluntary standards-writing committees. Each agency was encouraged to "[p]articipate in commercial standards-setting activities when such participation is in the public interest and is compatible with the agency's missions and authorities. Participation by agency personnel shall have the approval of appropriate officials and shall be consistent with the agency's regulations."⁵³² These provisions elicited some comment. A few private organizations expressed an apprehension that extensive participation by government employees might result in government domination of the standards-writing process and urged that their role be limited.⁵³³ The

525. *Id.* at 3.

526. *Id.* at 4.

527. NBS employees are apprised of these regulations by the Guidelines for National Bureau of Standards Participants in Voluntary Standardization Programs. NATIONAL BUREAU OF STANDARDS, *supra* note 523.

528. ASTM, ASTM Directory 63 (Oct. 1976).

529. ANSI, 1977 ANSI Progress Report (Mar. 1977).

530. ASTM, ASTM Directory 1 (Oct. 1976).

531. ANSI, 1977 ANSI Progress Report (Mar. 1977).

532. 41 Fed. Reg. 53723-24 (1976).

533. Letter from Roland E. Moore, Vice President and Chief Engineer of Texas Eastern

Comptroller General commented that in some instances representatives of two or more agencies were on the same committee and worked at cross-purposes, effectively cancelling out the governmental influence.⁵³⁴

The 1977 OMB Circular contains quite different provisions. Agency participation is limited to those committees listed by the Secretary of Commerce as meeting specific "due process and other basic criteria."⁵³⁵ The Circular also directed agency heads to develop "appropriate procedures by which agency representatives . . . will, to the extent possible, ascertain the views of the agency on matters of paramount interest and will, as a minimum, express views which are not inconsistent or in conflict with agency views."⁵³⁶ In addition, when two or more agencies have representatives on the same technical committee their participation is to be coordinated.⁵³⁷ The number of participants is to be kept "to the minimum required for effective presentation of the various program, technical, and other concerns of Federal agencies."⁵³⁸ The form of participation may extend "to voting in standards-developing and standards-approving committees, if authorized by the head of the department or agency."⁵³⁹ Employee participants are to "avoid dominating or exerting undue influence in such committees,"⁵⁴⁰ and should not become involved in "the internal management of such bodies (*e.g.*, election of officers, or setting of membership fees), except in accordance with the policies and procedures established by the Secretary of Commerce."⁵⁴¹

There are obvious advantages to participation by government employees of agencies with regulatory responsibilities in voluntary standards activities. Obviously, monitoring and encouraging the development of agency-acceptable voluntary standards simplifies or lightens the agency's regulatory load. Moreover, benefits to the individual involved may also accrue to his agency. A government engineer, who was an expert on skid resistance patterns of tires, commented to me at the ASTM meeting in 1977 that service on an ASTM commit-

Transmission Corp., to Hugh E. Witt, Administrator, Office of Management and Budget (Jan. 17, 1977).

534. Letter from Elmer B. Staats, Comptroller General of the United States, to Hugh E. Witt, Administrator, Office of Management and Budget (Jan. 5, 1977).

535. 43 Fed. Reg. 50 (1978).

536. *Id.* at 51.

537. *Id.*

538. *Id.* at 50.

539. *Id.*

540. *Id.*

541. *Id.*

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tee was important in helping him keep abreast of current thinking and developments in the private sector. He felt it was undesirable for government scientists and engineers to spend their time closeted in government offices. While this may be an important function, the cost of employee participation, particularly travel expenses, is sufficiently high that agencies can hardly be expected to utilize this method of education on a broad scale for that reason alone.

Participation also has potential drawbacks, and concern has occasionally been expressed about the propriety of government employees serving on technical committees or on the boards of directors or other committees of voluntary standards organizations.⁵⁴² One problem is the possible preemption of the agency's statutory authority. I know of no agency that believes that its participation in the voluntary standards process binds it to the outcome without further discretionary review; yet participation may be construed as a tacit agreement to accept the outcome, particularly if the agency employee is a voting member of the committee. Another possible problem is a conflict of interest, particularly if the agency employee is also serving in a policy capacity in the technical committee or within the voluntary standards organization itself.⁵⁴³ An image of undue favoritism toward the voluntary standards process may be created by extensive cooperation. Finally, there is the potential problem of incidental agency participation in decisions that are later found anticompetitive or unlawful. A few agencies have declined to name a person to serve as a member of, representative to, or observer of a technical committee on the basis of these concerns. This attitude seems unduly rigid; participation by government employees is not inherently unlawful, may be beneficial to both the agency and individual employee, and need not compromise the integrity or independence of the agency.

There is at present considerable diversity in the nature of participation by government employees in the voluntary standards process. Some government employees are fully active, voting members of the committee; others are "observers" or nonvoting members. For example, the CPSC policy statement distinguishes between "liaison," "monitoring," and "participation," each representing a different level of

542. *Energy Conservation—Home Heating Systems: Hearings Before the Subcomm. on Energy and Power of the House Comm. on Interstate and Foreign Commerce, 95th Cong., 1st Sess. 444 (1977).*

543. One of the principal draftsmen of the 1976 OMB Circular was the representative of the Department of Interior on the Interagency Committee on Standards Policy who was also on the Board of Directors of ANSI. A considerable amount of attention was paid to this claimed conflict of interest when a House committee inquired into the background of the Circular. *Id.* at 435-36.

employee participation. It is probably desirable that the relationships should remain flexible, varying from agency to agency, and quite possibly varying from time to time within a single agency. Any recommendation should therefore explicitly disavow the notion that approval of certain forms of participation constitutes rejection of others. If voluntary standards are to be utilized as described in the earlier recommendations, however, it is desirable to outline a model role for government employees participating in the voluntary standards development process as agency representatives.

Basically, technical committees serve two functions from the perspective of potential agency participation: they provide expertise and advice, and they develop standards that the agency hopes will adequately address considerations of health and safety. The agency representative should monitor the proceedings and serve as a liaison between the agency and the committee. An ideal employee for this purpose would have the following characteristics and authority. The employee should be a middle level, technical employee whose participation is approved by the agency. To preserve the appearance of agency independence and objectivity, the employee should not be in a position of ultimate responsibility nor, to the extent feasible, in a position to advise directly those with the power of ultimate decision. The employee's role in the review of the standard should be limited to a written statement, and he should not otherwise actively participate in the review. The separation between such an employee and responsible agency officials should not be total, however, since one can readily conceive of a situation in which the participating employee is the only agency employee who possesses the basic technical information and background to assess the proposed voluntary standard. In such cases, the employee's views must necessarily be considered if the agency is to make a reasoned decision. Another reason for not directly involving a person with the power of ultimate responsibility is that his views might be considered commitments of the agency by other participants in the voluntary standards development process.

The employee should "represent" the agency and express the agency position rather than his views (when there is an agency position).

The employee should make it clear that he has no power to bind the agency to any specific proposal. As the proposed OMB Circular states, participation on technical committees by agency employees "of itself, shall not connote agency agreement with, or endorsement of, decisions reached by voluntary standards-developing committees or of

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standards approved and published by voluntary consensus standards-developing bodies.”⁵⁴⁴

Finally, the employee should generally not be a voting member of the panel and should not participate in the active control or management of the technical committee. The ability to vote is probably not as important as the ability to participate actively in the decisional process. While a voting member could conceivably attract more attention than an observer or nonvoting member, voting capacity may also increase the apparent involvement of the agency in the voluntary standards process and may lead to misunderstanding if the agency later declines to follow the view of the predominant members of the committee. On balance, a nonvoting membership is more consistent with the suggested role of the agency representative participating on such committees. This is also the attitude that has been taken by several agencies, including CPSC, OSHA, and FDA.

The basic roles of the representative should be to participate actively in discussions when appropriate, to monitor the standards development process, and to serve as a liaison between the committee and the agency. Given these roles, the basic conclusions of the proposed OMB Circular that the agency should not seek to dominate or exert undue influence on the committee and that the agency employee should normally not accept appointment to a policy-making position seem sound for regulatory agencies. Several agencies have developed regulations governing the participation of government employees on technical committees. The development of such regulations by additional agencies will protect the participating employee, delineate his role, and ensure the independence and impartiality of the agency. A recommendation to that effect is appropriate.

2. Effective Utilization of the Voluntary Standards Process.—Effective utilization of voluntary standards committees requires agencies to involve these committees regularly in the prerulemaking process and to defer agency action for a reasonable period if a committee appears to be willing and able to develop a voluntary standard that in the view of the agency adequately addresses its regulatory concerns.

If an agency receives or develops technical information or data that reveals problems with the level of health or safety protection reflected in either a voluntary or mandatory standard, it should usually refer or submit that information or data to the technical committee for

544. 43 Fed. Reg. 50 (1978).

review and a possible recommendation. At the same time, it should issue an advance notice of proposed rulemaking that advises the public how to communicate with the committee. If the committee does not believe that the information merits a change in the voluntary or mandatory standard, the agency should consider the reasons advanced by the technical committee for its "no change" position before proceeding further. This process is likely to be much more fruitful from the agency's standpoint than relying on comments to a proposed regulation after it has been published in the *Federal Register*. The formality of the latter process may discourage free interchange of ideas. Formal comments are often negative without suggesting constructive alternatives, and they tend to be polemical in tone, perhaps because the writer believes that the mere act of publishing a proposed regulation indicates that the agency is firmly committed to a particular course. If the committee begins to develop a revised standard that appears promising, the agency should normally monitor that development rather than proceed to develop independently a mandatory standard.

In appropriate cases, the agency should consider providing financial or other support to a technical committee when that action is legally permissible and appears to further the agency's responsibility. Such support may be designed to broaden the base of representation within the committee, or to encourage it to address problems of immediate concern to the agency. In most cases, I assume, such support will be unnecessary.

Agencies should also be willing to consider problems or questions raised by technical committees. The NRC has a policy of responding to technical committee recommendations or proposals within a brief period of time. This practice has improved the relationship between committees and the agency; the former feel that they can make a productive contribution while the latter gets the benefit of committee insight and advice that would otherwise be inaccessible. I have been told of several incidents in which voluntary standards organizations invested considerable resources in developing proposed standards for submission to other federal agencies, only to find that months elapsed without agency response. While agency resources are limited and priorities must be considered, a greater effort to respond promptly, even on an interim basis, would often improve agency relations with the voluntary standards-writing organizations.

The use of the technical committee by a government agency that I propose—seeking the committee's views before commencing a rule-making proceeding to create or modify a mandatory standard and re-

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sponding to the extent possible to committee-generated voluntary standards or amendments—should provide a meaningful role for the voluntary standards committee even in the face of agency adoption of a mandatory standard. Since the suggested utilization of voluntary committees occurs before the promulgation of a proposed standard and as part of the agency's routine prerulemaking procedures, it should not be formally structured by notice, comment, or similar procedures other than the advance notice of proposed rulemaking referred to above. Agencies may, in addition, wish to publish a notice that certain data or information has been developed, that it is publicly available, and that it has been referred or submitted to a technical committee for consideration.

3. *Possible Application of the Federal Advisory Committee Act.*—The most serious legal question raised by the contemplated use of technical committees by agencies is whether they will then become subject to the Federal Advisory Committee Act.⁵⁴⁵ The current use of technical committees by some agencies presents the same question, but apparently the agencies have not yet squarely addressed the issue. The Act defines an “advisory committee” very broadly to include groups used by an agency “in the interest of obtaining advice or recommendations for . . . one or more agencies.”⁵⁴⁶ Several proposed functions of technical committees seem to involve this kind of use by an agency.⁵⁴⁷

Apparently, there has been little or no discussion of the possible application of this statute to technical committees that work closely with specific agencies. The case law that has arisen under the statute, however, indicates that a problem exists, a view that is confirmed by a letter opinion from the Office of Legal Counsel of the Department of Justice.⁵⁴⁸ A relatively early case held that the Act applied to meetings

545. 5 U.S.C. app. (1976).

546. Section 3(2) of the Act reads:

(2) The term “advisory committee” means any committee, board, commission, council, conference, panel, task force, or other similar group, or any subcommittee or other subgroup thereof (hereafter in this paragraph referred to as “committee”), which is—

(A) established by statute or reorganization plan, or

(B) established or utilized by the President, or

(C) established or utilized by one or more agencies, in the interest of obtaining advice or recommendations for the President or one or more agencies or officers of the Federal Government, except that such term excludes (i) the Advisory Commission on Intergovernmental Relations, (ii) the Commission on Government Procurement, and (iii) any committee which is composed wholly of full-time officers or employees of the Federal Government.

Id. § 3(2).

547. See, e.g., text accompanying notes 438–43 *supra*.

548. Letter from Leon Ulman, Acting Assistant Attorney General, Office of Legal Counsel,

between representatives of the Bureau of Alcohol, Tobacco and Firearms of the Department of the Treasury and interested industry and consumer committees for the purpose of discussing drafts of proposed rules.⁵⁴⁹ On the other hand, meetings between FDA officials and representatives of the Cosmetic, Toiletry and Fragrance Association (CTFA) were held to be not subject to the Act when they were requested by CTFA to discuss a draft of a safety review program being created by CTFA.⁵⁵⁰ The Treasury Department case was distinguished on the ground that it involved an "agency, acting under clear regulatory authority, [soliciting] industry and consumer viewpoints on amendments which the agency itself was preparing."⁵⁵¹ In contrast, in the case involving CTFA, "FDA was not undertaking a regulatory program. . . . At issue were not agency policy matters which FDA could consider and resolve, with assistance from an advisory group. Rather, FDA had before it a voluntary plan drafted by CTFA, to be amended by CTFA, and eventually to be implemented or rejected by CTFA."⁵⁵²

The view that an outside organization is an advisory committee subject to the Act when it is "utilized" for advice or recommendations on proposed regulations is firmly supported by the only court of appeals opinion dealing with the scope of the Act. In *Center for Auto Safety v. Cox*,⁵⁵³ the Court of Appeals for the District of Columbia concluded that the American Association of State Highway and Transportation Officials (AASHTO) acted as an advisory committee subject to the Act when the Federal Highway Administration (FHWA) circulated drafts of proposed regulations to AASHTO for comment, and representatives of FHWA later met with AASHTO's Executive Director to discuss them.⁵⁵⁴ While the case involved discussions of actual draft regulations rather than the more preliminary interaction contemplated above, the court's reasoning seems to clearly encompass much of this interaction as well. The court stressed, for example, that when an agency obtains "advice and recommendations," it "utilizes" the committee.⁵⁵⁵ The court also stated that the Act regulates the *agency's use*

Department of Justice, to John M. Torbet, Executive Director, Federal Communications Commission (June 27, 1974). The letter concludes that two ad hoc technical committees of the Radio Technical Commission for Aeronautics and the Radio Technical Commission for Marine Services were "utilized" by the FCC and therefore subject to the Act.

549. *Food Chem. News, Inc. v. Davis*, 378 F. Supp. 1048 (D.D.C. 1974).

550. *Consumers Union, Inc. v. Department of HEW*, 409 F. Supp. 473 (D.D.C. 1976), *aff'd mem.*, 551 F.2d 466 (D.C. Cir. 1977).

551. *Id.* at 477.

552. *Id.*

553. 580 F.2d 689 (D.C. Cir. 1978).

554. *Id.* at 694.

555. *Id.*

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of the committee rather than the committee itself, and that merely because some of the provisions of the Act are not applicable to “utilized” existing committees, it does not follow that the entire Act is inapplicable.⁵⁵⁶

Application of many of the provisions of the Federal Advisory Committee Act to such technical committees would be unfortunate. While some of the general requirements seem clearly desirable—*e.g.*, provisions relating to open meetings and records and balanced committee memberships—many other provisions are completely inapt. Glaring examples include the mandatory presence of a government employee with power to adjourn the meeting,⁵⁵⁷ total agency control over meetings and agenda of each committee,⁵⁵⁸ the mandatory deposit of committee records in the Library of Congress,⁵⁵⁹ and the mandatory two-year review of the existence of each committee by Congress and OMB.⁵⁶⁰ Even more fundamental objections exist. It is probable that many committees would refuse to cooperate with federal agencies if the Act were fully applicable to them, and the desired benefits would thus be lost. Further, it seems undesirable to federalize an uncertain portion of these committees’ operations as part of the price of utilizing their strengths and knowledge. The simple fact is that the technical committees created by the voluntary standards-writing organizations are primarily nongovernmental in organization and outlook and are not at all like the numerous committees created by federal agencies that were the principal target of the legislation.⁵⁶¹

E. Incorporation by Reference Procedures

As described above, incorporation by reference is most common at the state and local levels but is also widely used at the federal level. Although I recommend continuing that practice, it generates some procedural problems. In order to appreciate these problems at the federal level, a brief description of the history of the practice is necessary. Incorporation by reference was first specifically authorized in 1967 in section 552(a)(1) of the Administrative Procedure Act (APA), which provides that “matter reasonably available to the class of persons af-

556. *Id.* at 693-94.

557. 5 U.S.C. app. 1 § 10(e) (1976).

558. *Id.* § 10(f).

559. *Id.* § 13.

560. *Id.* § 14.

561. Legislative amendment of the act seems essential. Such an amendment might involve the inclusion of an exemptive device or, preferably, a clearer distinction between those procedures designed to apply to committees *created* by an agency and those applicable to committees *utilized* by an agency.

fectured thereby is deemed published in the Federal Register when incorporated by reference therein with the approval of the Director of the Federal Register."⁵⁶² Prior to 1967 the APA neither authorized nor prohibited incorporation by reference, with the result that attempts to incorporate voluntary standards were of uncertain validity. A number of such attempts were made, however, and in some instances reference was made to undated documents.⁵⁶³ Even after the 1967 amendments to the APA, the Office of the Federal Register did not require the actual filing of copies of referenced material until 1970; consequently, at the present time the Office does not have complete records of materials incorporated by reference prior to 1970. Since about 1972 a complete index of all incorporations by reference, both by agency and by matter referenced, has been maintained. The Director of the Federal Register has informally indicated that he hopes that complete information concerning all incorporations by reference can be obtained shortly, either through computerization of the Code of Federal Regulations or by the Office of the Federal Register revoking all outstanding incorporations by reference and requiring a refiling if the referenced material is to have continuing relevance. Presently, however, complete information about all incorporations by reference cannot be obtained.

The Office of the Federal Register has promulgated regulations setting forth standards to be applied by the Director in considering requests to permit incorporation by reference.⁵⁶⁴ The regulations state that the Director "will strictly interpret" the requirements of section 552(a).⁵⁶⁵ Further, the material must "be in the nature of published data, criteria, standards, specifications, techniques, illustrations or other published information."⁵⁶⁶ Material incorporated by reference must be readily available "to the extent necessary to afford fairness and uniformity in the administrative process" and the proposed incorporation must lead to a substantial reduction in the volume of material published in the *Federal Register*.⁵⁶⁷ The regulations also establish other requirements, such as precise identification of what is in fact being incorporated⁵⁶⁸ and indication of the source from which the referenced document may be obtained.⁵⁶⁹ One recent case construed these proce-

562. 5 U.S.C. § 552(a)(1) (1976).

563. *See, e.g.*, 46 C.F.R. § 63.05-85(b) (1977); 49 C.F.R. §§ 192.153(a), 192.163(e) (1977).

564. 1 C.F.R. §§ 51.1-.12 (1978).

565. *Id.* § 51.1(b).

566. *Id.* §§ 51.1(b), 51.2.

567. *Id.* § 51.4.

568. *Id.* § 51.6.

569. *Id.* § 51.8.

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dural requirements strictly, holding that a document referred to in an EPA regulation was not part of the regulations because the procedures had not been followed.⁵⁷⁰ In its regulations,⁵⁷¹ EPA had stated that in determining the best available technology for cooling water intake structures, “[t]he information contained in the Development Document shall be considered.” The “Development Document,” however, was not itself published in the *Federal Register* and had not been approved by the Director of the Federal Register for incorporation by reference. The court held the “[Development Document] ineffective to impose obligations upon, or to adversely affect,” the regulated industry.⁵⁷²

It appears to be well established as a matter of state law that incorporation by reference must relate to a document in existence and that an attempt to incorporate by reference future changes is an invalid delegation of legislative power.⁵⁷³ The regulations of the Office of the Federal Register take the same position and state that changes in the referenced document “may be added as they become available, or at any later time, by the issuance of an amendatory document.”⁵⁷⁴ This position gives rise to the major problem with incorporation by reference: ensuring that the mandatory standard is periodically revised to refer to the latest version of the referenced standard. The previous description of agency experience with referenced standards—particularly the experience of OSHA in revising the section 6(a) standards⁵⁷⁵—reveals that in some instances the mandatory standard remains unchanged for several years despite revisions to (and presumably improvements in) the referenced voluntary standard. The result is unseemly: the agency continues to enforce an obsolete standard despite the presence of an improved standard. The following paragraphs develop a suggested procedure to minimize this problem of regulatory delay.

Because the procedures developed by the voluntary standards organizations evolved entirely independent of the rulemaking procedures set forth in the Administrative Procedure Act and in the various federal statutes granting substantive rulemaking authority, there is now considerable duplication of procedures within the private sector itself and between the private sector and the governmental sector. At present, a proposed change in a voluntary standard goes through the complex

570. *Appalachian Power Co. v. Train*, 566 F.2d 451 (4th Cir. 1977).

571. 40 C.F.R. § 402.12 (1977).

572. 566 F.2d at 457.

573. *See, e.g.*, note 497 *supra*.

574. 1 C.F.R. § 51.8(c) (1978).

575. *See* text accompanying notes 181-83 *supra*.

procedures of the standards-writing organization, including notice in the organization's publication of the proposal to develop a standard, development of the revised standard, notice of the availability of the proposed revised standard, balloting at the committee and membership levels, and approval by the voluntary standards organization. It then usually goes through ANSI's notice and publication requirements for approval as an American National Standard, although ANSI allows these procedures to be consolidated with the later stages of the approval process by the standards-writing organization.⁵⁷⁶ Finally, after formal promulgation by the voluntary standards organizations, the government agency considers whether to revise the regulation to incorporate the new revised standard by reference. This requires notice in the *Federal Register*, an opportunity for public comment, and publication of the final regulation. The total number of published notices in this aggregate process may vary from six to as many as eleven or twelve; and there are at least three and usually more opportunities to comment on the proposed revision or to register negative views on the proposed revision. Presently, the steps usually occur seriatim.⁵⁷⁷ It is true, of course, that the notices appear in different publications and there may be diverse readership. I have made no comparison of the circulation of NFPA's *Fire News*, ASTM's *Standardization News*, ANSI's *Standards Action*, or similar private journals, and the *Federal Register*. I suspect there is considerable overlapping of readership, although the *Federal Register* probably reaches members of the legal community, most of whom probably rarely see (or are aware of) the other publications.

Many revisions of voluntary standards reflect changed technology, new products, new knowledge, and the like. If an agency originally incorporates a voluntary standard by reference, it is highly probable (though not certain) that the agency will also desire to adopt the revisions, usually without extended consideration of specific changes. For this reason, elaborate procedures by the agency serve little purpose. What is needed is a speedy and efficient method whereby the agency can adopt revisions in incorporated standards while preserving its option to reject the revision if that is thought appropriate.

When an agency has incorporated a standard by reference and is

576. See note 94 *supra* & accompanying text.

577. Like virtually all broad statements about the voluntary standards process, there probably are exceptions to this one. One could easily envision, for example, a revised standard approved by NFPA being simultaneously considered by ANSI (for approval as an American National Standard) and by the agency proposing to revise its regulations to incorporate the new standard by reference.

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monitoring the standards development process through an agency representative, it is feasible for the agency to promulgate a notice of a proposed rulemaking proceeding to incorporate the proposed revisions while it is still being reviewed within the voluntary standards organization. A decision to incorporate by reference the final revision could then promptly follow final approval of the revision. In any event, a general recommendation that agencies should update incorporations by reference more promptly is desirable. The manner in which the agency determines that a change is being proposed or has been made when no agency representative is monitoring the standards will vary from agency to agency, and quite possibly may also depend on which voluntary standards organization is involved. Thus, a more specific recommendation on this detail seems inappropriate.

A somewhat different problem is presented by the very popular codes, such as some of those maintained by the NFPA, that have been incorporated by reference by eight or more different agencies. It is evident that these are also often not updated because references to different editions of the same Code appear in many places in the current Code of Federal Regulations.⁵⁷⁸ The Office of the Federal Register has recently adopted the practice of publishing in the *Federal Register* a notice of proposed NFPA changes to the National Fire Codes, directing that comments be sent to NFPA. NFPA itself, of course, publishes notice of proposed revisions in the Fire Codes through its publication, *Fire News*. The justification for also publishing the list of proposed changes in the *Federal Register* is simply that “[t]he standards are frequently used as the basis for Federal regulations concerning fire safety and are published in the public interest.”⁵⁷⁹ This practice assumes that the *Federal Register* reaches a broader, or at least a different, readership than *Fire News*. It does not solve the problem of overlapping and duplicative procedures; it is, however, an innovative development that suggests further possible integrations of the overall process in this situation. First, rather than simply publishing a notice under the title of the General Services Administration and requesting that comments be sent directly to the voluntary standard organization, the notice should be published and indexed under the names of all the various agencies that have incorporated the standard by reference and elect to participate in the plan. The notice should also request that

578. Compare, e.g., 29 C.F.R. § 1910.103(b)(i) (1977) (referring to the 1968 edition of ASME's Boiler and Pressure Vessel Code) and 42 C.F.R. § 57.112 app. A(b)(3) (1977) (referring to the 1971 edition) with 49 C.F.R. § 171.7(d)(1) (1977) (referring to the 1974 edition and “addenda thereto through June 30, 1976”).

579. 42 Fed. Reg. 25767 (1977).

comments be sent both to the standards organization and the named agencies. Second, the notice should be identified as a notice of proposed rulemaking complying with section 553(b) of the Administrative Procedure Act, requesting comment, and stating that each agency may adopt the revised standard as a final rule any time after its final adoption by the voluntary standards organization. Third, agencies should attempt to arrange an exchange of comments with the voluntary standards organization and otherwise structure their procedures so that they will be in a position to act shortly after the voluntary standard revision has been approved.⁵⁸⁰ Each agency may thereby promptly review the proposed revision in the light of any comments received, decide whether or not to incorporate the proposed revision by reference, and proceed with a final notice promulgating the revised standard. Overlapping procedures should be significantly reduced by this procedure, and agencies will be encouraged to adopt revisions of existing standards more promptly than in the past. If the agency decides not to promulgate the revised standard, it should publish a notice to that effect in the *Federal Register*, stating that the agency will continue to enforce the older standard.

The above proposal contemplates that the public notice in the *Federal Register* will constitute a notice of proposed rulemaking under section 553(b) of the Administrative Procedure Act. The last sentence of that section states:

The notice shall include—

- (1) a statement of the time, place, and nature of public rule making proceedings;
- (2) reference to the legal authority under which the rule is proposed; and
- (3) either the terms or substance of the proposed rule or a description of the subjects and issues involved.⁵⁸¹

While these requirements have had some judicial gloss,⁵⁸² the most im-

580. The extent to which this is feasible depends, of course, on the statutory procedures that the agency is required to follow. Prompt implementation should be possible for agencies subject only to the rulemaking provisions of the Administrative Procedure Act, 5 U.S.C. § 553 (1976). Where an oral hearing or other procedures are required, delays may be inevitable.

581. 5 U.S.C. § 553(b) (1976).

582. See, e.g., *Ethyl Corp. v. Environmental Protection Agency*, 541 F.2d 1, 48 (D.C. Cir.), cert. denied, 426 U.S. 941 (1976), in which the court stated that the notice should be "sufficiently descriptive of the 'subjects and issues involved' so that interested parties may offer informed criticism and comments. But the notice need not contain 'every precise proposal which [the agency] may ultimately adopt as a rule.' This last qualification is important since the notice invites comments and the comments will frequently prompt changes in the ultimate regulations" (citations omitted). See also *E.I. duPont de Nemours & Co. v. Train*, 541 F.2d 1018, 1026 (4th Cir. 1976). See also *Forester v. Consumer Product Safety Comm'n*, 559 F.2d 774, 787-788 (D.C. Cir. 1977). One case invalidating amendments of motor vehicle safety standards for failure to give notice of

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portant interpretation of these requirements appears in regulations adopted by the Office of the Federal Register.⁵⁸³ These regulations impose specific obligations on the agency to describe “the basis and purpose for the rule or proposal” in a preamble that will “inform the reader, who is not an expert in the subject area.”⁵⁸⁴ The summary of the action being taken must describe “the circumstances which created the need for the action” and “the intended effect of the action.”⁵⁸⁵ These requirements, while appropriate for agency-generated action, seem less appropriate for a notice of a proposed action, probably prepared by the Office of the Federal Register based on a proposed revision of a voluntary standard by a nongovernmental technical committee. Because of the distinctly different problems involved in commenting on proposed revisions of material created by a nongovernmental organization and incorporated by reference, the Office of the Federal Register should develop a separate regulation for compliance with the last sentence of section 553(b) in this situation. Some kind of notice referring to changes in materials incorporated by reference rather than the more detailed substantive descriptions and justifications now required for agency-developed regulations might be appropriate.

Implementation of this proposal presents some additional practical problems that will primarily have to be addressed by the Office of the Federal Register. The discussion below is not a definitive exploration of these problems; rather, it offers suggestions or comments for that Office to consider in effecting this recommendation.

A significant problem is that the Office does not have a complete list of all incorporations by reference that currently appear in the Code of Federal Regulations. As indicated above, some thought has been given to developing such a list. It is probably necessary for the Office to implement these possible solutions before the proposal can be instituted, since the proposal presupposes the existence of a complete list of incorporations by reference, indexed by the standards rather than by agencies.

The present position of the Office is that it is the responsibility of the agency proposing a rule to prepare the document; the Office pro-

what was proposed to be done is *Wagner Elec. Corp. v. Volpe*, 466 F.2d 1013 (3d Cir. 1972). In this case NHTSA proposed changes in certain SAE voluntary standards that had been incorporated by reference and then made changes quite different from those originally proposed. *Tabor v. Joint Bd. for Enrollment of Actuaries*, 566 F.2d 705, 709-11 (D.C. Cir. 1977), holds that an unpublished “statement of reasons” filed with a motion to dismiss is not compliance with 5 U.S.C. § 553.

583. 1 C.F.R. § 18.12 (1978).

584. *Id.*

585. *Id.*

vides cooperation, informal assistance, and advice.⁵⁸⁶ Where multiple agencies are "proposing" a revision based on a contemplated change in a standard being prepared by a voluntary standards-writing organization, there is no assurance that any agency will bring the revision to the attention of the Office of the Federal Register. That Office will have to develop avenues of communication to learn of proposals to revise standards that have been incorporated by reference. How serious the problem of locating revisions may be is unknown, but certainly most revisions can be located by informal liaison between the principal organizations involved in writing voluntary safety or health standards, ANSI, and the Office of the Federal Register. It may be appropriate for the Office to request formally that all agencies and standards-writing organizations notify the Office of proposed changes in referenced standards.

The logistics of handling comments may also be a problem depending on the number of agencies that have incorporated a specific standard by reference. When the number is reasonably large (which I believe is rare), the Office of the Federal Register may find it desirable to serve as a clearinghouse for comments to ensure that each incorporating agency receives copies of all comments. The Office might, for example, request that all comments be sent directly to it, reproduce them, and deliver them to each incorporating agency, and work out an agreement with the promulgating organization to obtain copies of negatives received by them for distribution to each agency. Conceivably, an agency with an unusually direct interest in the standard might agree to serve as a clearinghouse for other agencies.

VII. Postscript

It is my view that standards promulgated by private organizations can play a useful role in the development of mandatory health or safety standards by agencies of the federal government. The maximum benefit from voluntary standards in that development can be achieved through a consistent federal policy relating to their use. As a step in the right direction, on December 14, 1978 the plenary session of the Administrative Conference of the United States considered a formal recommendation based largely on the foregoing analysis. After nearly three hours of debate—much of which was devoted to the basic question of the value of voluntary standards in federal regulatory programs—the recommendation was revised and adopted.

586. *Id.* §§ 15.1, 15.3, 18.1 (1978).