

**VOLUNTARY CONSENSUS STANDARDS:
BRINGING YOUR SAFETY PROGRAM
BEYOND COMPLIANCE**

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Introduction

For many years, voluntary health and safety standards have been promulgated by non-governmental organizations. The Government has long relied on these non-governmental organizations and their promulgated standards in adopting mandatory health and safety standards. Recently, both Congress and executive agencies have re-committed themselves to utilizing voluntary consensus standards whenever possible.

The utilization of national consensus standards will be of increased importance to this country as the economy of the United States moves towards more of a global perspective. National consensus safety and health standards purportedly reflect the opinions of the professionals and end-users working at all levels of the public and private sectors in technology development, manufacturing, training and academia. This approach, when properly conducted, enables standards to be crafted in a way that not only benefits and protects users of the standard, but also furthers the interests of the affected businesses. However, the far-reaching implications of such standards in OSHA enforcement actions and in tort litigation must be recognized.

Under OMB Circular A-119, *Federal Participation in the Development and Use of Voluntary Consensus Standards in Conformity Assessment Activities* (Feb. 10, 1998), if an applicable voluntary consensus standard exists in an area where the agency seeks to regulate, the agency should use this as the basis for a proposed rule rather than starting from scratch or adopting a differing approach. The Circular requires that “[a]ll federal agencies must use voluntary consensus standards in lieu of government-unique standards in their procurement and regulatory activities, except where inconsistent with law or otherwise impractical.”¹ The Circular revision was prompted by Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA).² Whereas Section 12(d) of the NTTAA was limited to voluntary consensus “technical standards,” the Circular applies to all standards, technical and non-technical, and to “all agencies and agency employees who use standards.” If an agency decides to use a government-unique standard rather than a voluntary consensus standard it must submit a report, via the National Institute of Standards and Technology (NIST), justifying its decision to the OMB.

The Circular, further, requires agencies to consult “with voluntary consensus standards bodies, both domestic and international, and [to] participate with such bodies in the development of voluntary standards when consultation and participation is in the public interest and is compatible with their missions, authorities, priorities, and budget resources.” Agency support may include 1) direct financial support; 2) administrative support; 3) technical support; 4) joint planning with voluntary consensus standards bodies to promote the identification and development of needed standards; and 5) participation of agency personnel.

Therefore, the directives contained in existing and pending voluntary consensus standards carry more weight than ever before because, in time, they may be incorporated by reference into the binding standards and regulations of OSHA, MSHA, EPA and other agencies.

¹ See <http://www.whitehouse.gov/OMB/circulars/a119/a119.html>

² Pub. L. 104-113.

Some of the perceived advantages of utilizing consensus standard are:

- ◆ National consensus standards have fewer procedural burdens;
- ◆ The consensus method provides for a balance between competing interests;
- ◆ The voluntary nature of consensus standards enables users to adapt provisions to meet unusual circumstances; and
- ◆ Standards can be developed at a lower cost to the government and general public.

The fact is, many MSHA and OSHA standards are grossly out-of-date and, where they do utilize information contained in voluntary consensus standards, they must “incorporate by reference” these standards . . . which means that the references are also outdated (see examples in the attached Appendix).

As safety and health professionals, CMSPs are expected to keep abreast of the latest knowledge and include “best practices” in their safety programs, to the maximum extent feasible. Moreover, knowledge of the most recent finalized consensus standards is likely to be imputed to safety professionals, in terms of determining what a “reasonable person” with similar training would be likely to know. Therefore, willful ignorance of known hazards (which are illustrated by such consensus standards) and failure to incorporate such preventative measures in the workplace can lead to personal tort liability in the event of an injury or illness, and may also lead to higher penalties because of the greater degree of negligence that may be found by the enforcement agency.

Although MSHA has been somewhat slow to take this approach, OSHA has for years used voluntary consensus standards (e.g., those published by ANSI, ASTM and NFPA) in finding that violations of its “General Duty Clause” have occurred.³ To constitute a “recognized hazard,” the dangerous potential of a condition or activity must actually be known either to the particular employer, or generally in the industry⁴. *Brennan v. OSHRC and Vy Lactos Laboratories*, 494 F.2d 460, 463-65 (8th Cir. 1974); *National Realty & Construction Co. v. OSHRC*, 489 F.2d 1257 (DC Cir. 1973).⁵

A national consensus standard that is “known generally” in a particular industry can reasonably be construed as providing the requisite actual or constructive knowledge to support a citation in litigation brought by OSHA. *See United States v. B&L Supply Co.*, 486 F.Supp. 26 (N.D.Tex. 1980) (recognized hazard is one known after taking into account standard of knowledge in the industry, and employer cannot defend citation by claiming ignorance of the practice/condition or its potential for harm). This occurred in *Titanium Metals Corp. v. Usery*, 579 F.2d 536 (9th Cir. 1978), where an OSHA General Duty Clause citation was affirmed because the National Fire Code provided substantial evidence that the industry recognized the particular hazard presented by titanium dust and fines. *Accord, Getty Oil Co. v. OSHRC*, 530 F.2d 1143 (5th Cir. 1976) and

³ The “General Duty Clause” is codified at Section 5(a)(1) of the Occupational Safety and Health Act (OSH Act). In order to prove a section 5(a)(1) violation, OSHA had the burden of showing that “a condition or activity in the employer's workplace presents a hazard to employees.” See, e.g., *Secretary of Labor v. Pepperidge Farm, Inc.*, 17 O.S.H. Cas. (BNA) 1993, 2009 (April 26, 1997).

⁴ However, OSHA need not prove that an injury actually occurred in order to sustain a violation under Section 5(a)(1).

⁵ In *National Realty*, the standard of knowledge was held to be that of “safety experts” who are familiar with the circumstances of the industry or activity in question.

Boeing Co., Wichita Div., 1977-78 CCH OSHD ¶ 22266 (1977) (violations occurred where employer deviated from “standard industry practice” or “industry pressure vessel code” concerning testing of pressure vessels). *See also, American Smelting & Refining Co. v. OSHRC*, 501 F.2d 504 (8th Cir. 1974) (affirming violation of Section 5(a)(1) where employer exposed workers to lead concentrations “greater than an acceptable nationwide standard”).

In summary, the courts and the OSHRC have looked to industry standards in determining industry recognition of a hazard. *E.g., Bethlehem Steel Corp. v. OSHRC & Marshall*, 607 F.2d 871 (3d Cir. 1979) (Respondent's safety officer admitted that advisory ANSI standard represented industry consensus); *Titanium Metals Corp. of America v. Usery*, 579 F.2d 536 (9th Cir. 1978) (recognition established by NFPA standard that Respondent helped draft); *Betten Processing Corp.*, 75 OSAHRC 43/E2, 2 BNA OSHC 1724, 1974-75 CCH OSHD P19,481 (No. 2648, 1978) (judge erred in failing to consider ANSI standard as evidence of recognized hazard). This, to the extent industry consensus standards reflect an industry's recognition of a hazard, they are relevant, probative evidence of a recognized hazard.

OSHA's Use of Consensus Standards

The Occupational Safety and Health Act of 1970 ("OSH Act"), 29 U.S.C. § 651 *et seq.*, authorizes standards of three types: national consensus standards or established federal standards adopted for OSHA use within two years of the Act's effective date, 29 U.S.C. § 655(a), permanent standards developed by the Secretary of Labor along with an advisory committee, 29 U.S.C. § 655(b), and emergency temporary standards, 29 U.S.C. § 655(c). An "established Federal standard" is any operative occupational safety and health standard established by any federal agency in effect at the enactment of the Act. 29 U.S.C. § 652(10). "National consensus" standards are those emanating from a nationally recognized standard producing organization. 29 U.S.C. § 652(9).

The OSH Act's authorization of expedited rulemaking was based on a congressional belief that industry would already be thoroughly familiar with the "interim standards." S.Rep.No. 1282, 1970 U.S.C.C.A.N. at 5182. As has become obvious in the years since the OSH Act's passage, however, Congress was mistaken: Neither the "established Federal" nor the "national consensus" standards were widely known to or understood by industry at the time of their promulgation by the Secretary. *See, e.g., Brennan v. Smoke-Craft, Inc.*, 530 F.2d 843, 845 (9th Cir. 1976).

The occupational safety and health standards that the Secretary is authorized to promulgate are defined as rules requiring practices, methods, and processes "reasonably necessary or appropriate to provide safe or healthful employment and places of employment." 29 U.S.C. § 652(8). The OSH Act mandated the initial adoption of any federal or national consensus standards that will "result in improved safety or health" for covered employees, § 655(a), and provides that in the event of conflict between such standards, the one shall be adopted that assures "the greatest protection." *Id.*

In the area of toxic materials or harmful physical agents, the Secretary is directed to "set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity." 29 U.S.C. § 655(b)(5). Considerations are to include the "latest available scientific data in the field, the feasibility of the standards, and experience gained" in enforcing the OSH Act, as well as "the highest degree of health and safety protection for the employee." *Id.* Variances are available if an employer demonstrates that it

is impossible to comply because of unavailability of necessary personnel, materials, and equipment, while the employer does the best he possibly can with what is available and adopts a plan to reach compliance as soon as possible. 29 U.S.C. § 655(b)(6)(A).

The relevant legislative history of the OSH Act indicates congressional recognition of the American National Standards Institute ("ANSI") and the National Fire Protection Association ("NFPA") as the major sources of national consensus standards. National consensus standards adopted on May 29, 1971, pursuant to section 6(a) of the OSH Act are from those two sources. However, any organization which deems itself a producer of national consensus standards, within the meaning of Section 3(9) of the OSH Act, was permitted to submit to OSHA, at any time prior to February 1, 1973, all relevant information that would help the agency determine whether any of its standards satisfied the requirements of the definition of "national consensus standard" in section 3(9) of the Act." 29 C.F.R. § 1910.3(b)(1).

Under the current administration, OSHA has attempted to publish "direct final rules" using updated voluntary consensus standards (e.g., incorporation of portions of the Manual of Uniform Traffic Control Devices, and ANSI standards dealing with first aid). However, the agency is still required to go through the "Notice and Comment" rulemaking process required by the Administrative Procedures Act.

MSHA's Use of Consensus Standards

MSHA does incorporate by reference many voluntary consensus standards into its binding regulations published in 30 CFR Parts 1-199.6 Some of the most commonly referenced consensus standards are those promulgated by:

- ◆ American Conference of Governmental Industrial Hygienists ("ACGIH")
- ◆ American Insurance Association (AIA's National Building Code)
- ◆ American National Standards Institute ("ANSI")
- ◆ American Society of Mechanical Engineers International ("ASME")
- ◆ American Society of Testing and Materials ("ASTM")
- ◆ American Welding Society
- ◆ Institute of Electrical and Electronic Engineers
- ◆ National Board of Boiler and Pressure Vessel Inspectors
- ◆ National Bureau of Standards (National Electrical Code, or "NEC")
- ◆ National Fire Protection Association International ("NFPA")
- ◆ Society of Automotive Engineers ("SAE")
- ◆ Underwriters Laboratories ("UL").

Perhaps the most recent utilization of a consensus standard was MSHA's incorporation by reference into its Hazard Communication Standard (30 CFR Part 47) of the 2001 edition of the ACGIH TLVs for purposes of preparing Material Safety Data Sheets for chemicals produced at mine sites. And, in its current publication, *CONTROLLING MERCURY HAZARDS IN GOLD MINING: A BEST*

⁶ MSHA also occasionally uses standards put out by trade groups such as the Institute of Makers of Explosives (IME).

PRACTICES TOOLBOX, MSHA specifically references ACGIH's 1996 TLV booklet with respect to mercury exposure limits.

The text of these consensus standards does not appear in the Code of Federal Regulations ("CFR"), and copies of these standards may not be readily available to employers and their workers, since the standards must be purchased from their developer or reviewed at a full-service library that has such documents. They cannot be photocopied because of copyright restrictions.

Another problem is that, while libraries may have the most recent standard, often agencies have incorporated older, less accessible versions (e.g., MSHA incorporates the 1973 ACGIH Threshold Limit Values for metal/nonmetal mining air contaminants standards, and the 1972 version for coal – both of which are extremely hard to find outside of ACGIH and some MSHA District Offices). Although newer versions offer greater protection than the ones specifically referenced in the "CFR," safety professionals should review both versions and be prepared to defend the use of the newer version in enforcement proceedings. Today, OSHA will permit employers to comply with a newer, different, version of a VCS in order to enhance safety and will view any variation as a "de minimis" violation (with no penalty or contribution to history of compliance). However, MSHA has never publicly taken this position and under the strict liability provisions of the Mine Act, there is always the potential for enforcement action in such circumstances (where the mine operator varies from the plain language of the standard).

General Issues Involving "Incorporation by Reference" of Consensus Standards

One problem in the federal government's adoption of consensus standards– both in the past and prospectively under the directive in OMB Circular A-119 -- is that advisory provisions of voluntary consensus standards may be incorporated as mandatory provisions of government regulations. In other words, not only is the voluntary standard made into a mandatory regulation, but also many advisory provisions that use the word "should" are made into mandatory provisions when a federal agency replaces the word "should" with "shall."

Thus, members of consensus standards committees must look beyond conveying general principles and concepts and concern themselves with exceptions to the rule, adverse impact on specific industries, legal implications of standards, and the potential for misinterpretation. It is important to note that the concept of consensus and the input of most, if not all, materially interested parties is critical to the consensus system. Care must be exercised in the makeup and organization of consensus committees to assure the integrity of the process. Without these attributes the validity of a consensus standard is suspect.

As a result of federal agency compliance mandates linked to such standards and other factors⁷, the development and maintenance of consensus standards related to occupational safety and health has become a much more complicated and demanding endeavor. The National Advisory Committee on Occupational Safety and Health ("NACOSH") recently issued a report evaluating OSHA's standard-setting process that included analysis of the rule that consensus standards can play in facilitating rulemaking.

⁷Notable among these "other factors" are product liability and international trade concerns.

During NACOSH hearings on the issue during 1999, OSHA suggested that a “direct final rule” approach could be used for relatively non-controversial subjects. In this process, a consensus standard could be published as a “final rule” with 30 days permitted for public comment. Absent adverse reaction, the rule would become final. Several consensus organizations have suggested suitable subjects for a pilot project – e.g., the ASTM silica standard and the ANSI Z-117 standard for confined spaces (re: a possible confined space rule for construction). Under the OSH Act and Administrative Procedure Act, OSHA cannot simply adopt a consensus standard, but the existence of a consensus standard helps OSHA demonstrate that there is a way to reduce a significant risk, and that an approach exists that is both technically and economically feasible. Citation to a consensus standard as the basis for a regulatory decision also shields OSHA – at least theoretically – from claims that its decision is “arbitrary and capricious.”

A binding federal regulation is required when a higher level of validity or greater objectivity is required for enforcement. If industry wants high objectivity (i.e. little or no discretion or interpretation by OSHA compliance officers), then detailed and comprehensive regulations must exist. A potential danger in increased use of consensus standards is that the process will become targeted by special interests. However, viewed another way, increased use and application of consensus standards by OSHA—and their potential use as a “direct final rule” should motivate increased participation in the consensus process and thereby increase the quality and validity of consensus standard related to occupational safety and health. While the "political" intensity of the process may increase, each party in the process will proceed with the understanding that (1) consensus does not require unanimity, and (2) failure to reach consensus may result in federal regulation.

Consensus Standards and Litigation

The Occupational Safety & Health Review Commission ("OSHRC") has stated that OSHA consensus standards taken from private standard-setting organizations "were not intended to be used as mandatory, inflexible legal requirements." *Dun-Par Engd. Form Co.*, 12 BNA OSHC 1949, 1954, 1986-87, CCH OSHD ¶ 27,650, p. 36,021 (No. 79-2553, 1986). In addition, the OSHRC and the courts have held that, in adopting consensus standards under Section 6(a) of the OSH Act, the Secretary "was not empowered to make substantive changes from the source standard." *Senco Products, Inc.*, 82 OSAHRC 59/E9, 10 BNA OSHC 2091, 2095, 1982 CCH OSHD ¶ 26,304, p. 33,271 (No. 79-3291, 1982). *See also Diebold, Inc. v. Marshall*, 585 F.2d 1327, 1332 & n.6 (6th Cir. 1978). However, these standards often are referenced in litigation brought by OSHA or by third parties against employers and/or mine operators.

The courts have devised various tests for determining the standard for compliance with mandatory safety and health standards, especially those that are performance-oriented. For example, the test of Fifth Circuit in *B & B Insulation, Inc. v. OSHRC, Et. Al.*, 583 F.2d 1364, 1367-1368 (5th Cir. 1978), requires only those protective measures which the knowledge and experience of the employer's industry would clearly deem appropriate under the circumstances. The Court further states that:

Where the Government seeks to encourage a higher standard of safety performance from the industry than customary industry practices exhibit,

the proper recourse is to the standard-making machinery provided in the Act, selective enforcement of general standards being inappropriate to achieve such a purpose.

Id. at 1371.⁸ However, other courts have applied a higher standard than industry custom and practice and have used voluntary consensus standards for guidance. As the court in *National Realty & Construction Co., Inc. v. OSHRC*, 489 F.2d 1257 (D.C. Cir. 1973), recognized, "[t]he question is whether a precaution is recognized by safety experts as feasible, not whether the precaution's use has become customary." *Id.* at 1266 n. 37.

In addition to the use of voluntary consensus standards against employers (e.g., through enforcement of OSHA's "General Duty Clause" as discussed above), consensus standards are occasionally cited by the courts in tort litigation to establish an industry "standard practice" or to demonstrate the "standard of care" required. Such standards – especially those in the health area (e.g., ACGIH standards and the findings of international organizations such as IARC) also can serve as the basis for tort litigation by independent contractors or employees who circumvent the worker's compensation shield by proving willful conduct on the part of their employer under state laws.

Consensus standards are increasingly used by plaintiff's attorneys to demonstrate the appropriate "standard of care" which, when violated, support awards for personal injuries. *See, e.g., Hansen v. Abrasive Engineering & Manufacturing, Inc.*, 831 P.2d 693 (Ct. App. Ore. 1992) (jury considered ANSI standard violation in determining liability because it was relevant to standard of care manufacturer should be expected to meet, even though it was voluntary consensus standard).

The state worker's compensation laws provide compensation to workers for injury, illness or death resulting from occupational incidents or exposures.⁹ For the most part, worker's compensation is considered to be an exclusive remedy for employees, and tort actions arising from the same injuries, illnesses or fatalities covered by worker's compensation are barred as a matter of law. *See, e.g., Phifer v. Union Carbide Corp.*, 492 F. Supp. 483 (E.D.Ark. 1980) (barring suit against employer despite failure to warn employee of dangerous nature of chemicals to which he was exposed. Moreover, because OSHA is specifically constrained from superseding or affecting any worker's compensation law, an OSHA violation is precluded from being used to prove negligence per se in such actions. *See Canape v. Peterson*, 878 P.2d 83 (Colo. Ct. App. 1994).

⁸ Moreover, common practice may not be viewed as the appropriate test of what is feasible or possible because the OSH Act and the Mine Act both envisioned that higher levels of safety practices may be required than is customary in industry. It is common that an abatement order may prescribe practices of a higher standard than those an industry presently considers to be reasonable. *E.g., Williams Enterprises, Inc.*, 79 OSAHRC 24/A2, 7 BNA OSHC 1247, 1979 CCH OSHD P23,478 (No. 4533, 1979), *aff'd*, No. 79-1559 (D.C. Cir. June 9, 1980).

⁹ Worker's compensation is based on the theory that common law rules of liability for personal injury are not sufficient to compensation for work-related injuries *See, e.g., Johnson v. WR Grace & Co.*, 642 F.Supp. 1102 (D.C. Mont. 1986) (vermiculite miner could sue employer for injuries outside worker's compensation because employer intentionally concealed critical information related to worker's x-rays and risks of inhaling vermiculite); *Goodman v. Dixie Machine Welding & Metal Works, Inc.*, 467 So.2d 61 (La. App. 1985) (sandblaster who contracted pneumoconiosis as result of exposure to silica dust stated cause of action under intentional tort against employer due to employer's knowing concealment of hazards).

However, there may be exceptions where the employer took affirmative action to conceal a workplace hazard, or to conceal the nature, cause, or extent of the employee's injury or illness, based on the common law theory of fraud. The existence of a voluntary consensus standard alerting the employer to the potential hazard can be compelling evidence for a finding of "knowing and willful" misconduct in such cases.

Several states have recognized a common law action in tort where the employer or co-workers commit acts with a deliberate intent to injure employees. In 1999, Ohio's Supreme Court struck down the state's "employment intentional tort" statute, which shielded employers from liability for workplace injuries. The high court declared the law unconstitutional in its entirety. *Johnson v. BP Chemicals*, Ohio Sup. Ct., No. 97-2723, April 14, 1999.

The modern course in civil litigation is to allow an injured employee to recover for damages sustained because of employer conduct that aggravated an injury, even though worker's compensation would be the exclusive remedy for the worker's initial injury.¹⁰ And last year, the 10th Circuit Court of Appeals reinstated an employee's "failure-to-warn" suit related to workplace chemical exposure injuries. *Ybarra v. Amoco*, No. 98-2189 (10th Cir., June 16, 1999). In a recent Texas case, an employee was awarded \$2 million for multiple myeloma that the jury found was "caused" by her 20-year exposure to diesel exhaust while working for a railroad.¹¹ The suit was based on the railroad's alleged failure to "satisfy contemporary industrial and governmental standards." These cases are relying in part on the findings of ACGIH concerning the carcinogenicity of diesel exhaust and its recommended TLV, which is significantly below many actual occupational exposures. A plaintiff-oriented jury can easily impute knowledge of such IARC and ACGIH positions to an employer.

There is also an emerging trend toward criminally prosecuting employers who have exposed workers to toxic chemicals or harmful substances without informing them of the hazards or providing appropriate personal protective equipment. *See, e.g., United States v. Elias*, D. Id. No. CR-98-070-E-BLW, May 7, 1999 (jury convicted owner of fertilizer company for workplace exposures to cyanide that left worker with permanent brain damage; employer faces 15 years in prison); *California v. Beeson*, Calif. Super. Ct., No. SCR 27293, Jan. 19, 1999 (owner of plating shop sentenced to one year in jail and \$30,000 fine for endangering employees through reckless handling of hazardous materials). The existence of a consensus standard can help the government sustain its burden of providing that an employer (or its safety staff) had or should have had the requisite knowledge necessary to prosecute such a case criminally.

¹⁰ *See Patterson v. E.I. DuPont de Nemours & Co., Inc.*, Calif. Ct. App., No. B113317, Feb. 25, 1999 (appeals court upheld most of \$4.6 million verdict awarded to group of employees for illnesses stemming from occupational chemical exposure); *Johns-Manville Products corp. v. Superior Court of Contra Costa County*, 612 P2d 948 (Cal. 1980) (employee could bring action based on fraudulent concealment of employee's asbestos-related illness by employer).

¹¹ *Navarro v. Missouri Pacific Railroad Co.*, Tex. Dist. Ct., August 27, 1999. The plaintiff's attorney told the press that while the jury could not award punitive damages to Ms. Navarro because the suit was brought under the Federal Employer's Liability Act, he also represented "residents near the [railroad] terminal" whose diesel-related claims would not be limited to compensatory damages. *Occupational Safety & Health*, Vol. 29, No. 15 at 409 (BNA, Sept. 15, 1999).

NIOSH's Role

The National Institute for Occupational Safety and Health (“NIOSH”) frequently becomes involved with voluntary consensus standard development. NIOSH offers representatives to serve on the standards committees, and NIOSH’s own reports are often used to trigger the standard process – both in the private sector and within OSHA and MSHA. Similarly, NIOSH’s criteria documents are frequently reviewed and cited by standard-setting organizations as justification for a recommendation. Some NIOSH criteria documents in the mining industry have addressed noise, coal dust and crystalline silica exposure, and hand-arm vibration syndrome.

Legislative Action On PELs

Congress is getting into the standards-setting business, with legislation likely to be introduced this year that would permit OSHA to update its “Permissible Exposure Limits” for chemicals and air contaminants in a pilot project “group” rulemaking of 30-50 substances at one time. Although the proposed legislation would not impact MSHA at this time, it does lay the groundwork for altering the burden of proof that the agency must bear in supporting its selection of a PEL for a particular substance. MSHA had initiated a PELs rulemaking in 1989, but took it off the agenda after a similar OSHA rulemaking effort was invalidated by the U.S. Court of Appeals, 11th Circuit. Therefore, mine safety and health professionals should monitor the activities of Congress in this regard carefully.

Significantly, the working group that is reviewing the PELs proposal is using Threshold Limit Values (TLVs) developed by ACGIH, as well as the “Recommended Exposure Limits” set by NIOSH, Cal-OSHA PELs, and limits set by several foreign governments in selecting candidate substances for this rulemaking. Among the chemicals “on the table” for possible inclusion in the PELs revision are: Portland Cement, crystalline silica, vermiculite, talc, mica and refractory ceramic fibers. Coal dust and carbon black have also been included on some participants’ lists. If this project goes forward, it will establish minimum safe exposure limits, and failure to protect workers and third parties at mines down to these levels may subject mine operators and their safety professionals to possible liability.

Conclusion

The Department of Labor’s legal position is that agencies such as MSHA and OSHA cannot simply adopt consensus standards, but must first examine whether they meet the statutory criteria – e.g., reduction of a “significant risk” – before moving forward. Although OSHA and MSHA have fallen behind schedule in terms of updating their standards, the voluntary consensus organizations have moved more quickly in developing recommended specifications, exposure limits, policies and procedures. A complementary relationship should exist between OSHA and MSHA rules and consensus standards. As a matter of policy, the federal safety and health agencies should take advantage of valid consensus standards and use them prudently in enforcement, mindful of the fact that consensus standards are not written to address every foreseeable circumstance and that they were not created to have the binding force of law. The federal government also can spend less money developing regulations.

Consensus standards can be problematic where they simply establish practices or set exposure limits without an accompanying rationale as to why the practice or limit was deemed necessary and correct for the industry or industries covered. Recently, however, the Department of Labor has urged consensus bodies to provide more explanation of their decisionmaking process, so that VCS can be employed by OSHA and MSHA in their rulemaking processes without raising the specter of having a rule invalidated because of deficient justification in the rulemaking record.

The impact of the Technology Transfer Act of 1996 and its implementation through OMB Circular A-119 has yet to be fully felt by the safety and health community as MSHA and OSHA have been slow to utilize consensus standards for creating new binding rules and regulations. However, prudent mine safety professionals will include consensus standards as valuable parts of their reference library and ensure that the best practices suggested by such standards are integrated into the work environment to the maximum extent feasible.

Armed with common sense, consensus standards, and reasonable discretion, federal compliance officers AND mine safety professionals can do their job more effectively. While government regulation appears fundamental to safety/health standardization, it should, nevertheless, be efficient, participative, and centralized. The regulated community will more likely view these characteristics as a value-added process where they are encouraged to provide input – either through normal “APA” MSHA/OSHA rulemaking processes, negotiated rulemaking, or the public participation opportunities inherent in the crafting of voluntary consensus standards.

Finally, the implications of voluntary consensus standards in tort litigation and under OSHA’s General Duty Clause also cannot be ignored. Because of the broad application of such standards, they must utilize only sound science and technically feasible engineering practices, lest they impose a duty of care on American business that cannot be reasonably satisfied.

APPENDIX A

Overview of Key Standards Development Organizations (“SDOs”)

American National Standards Institute (“ANSI”): Although ANSI itself does not develop voluntary consensus standards (“VCS”), it provides all interested U.S. parties with a neutral venue to come together and work towards common agreements. The process to create these voluntary standards is guided by the Institute’s cardinal principles of consensus, due process and openness and depends heavily upon data gathering and compromises among a diverse range of stakeholders. The Institute ensures that access to the standards process, including an appeals mechanism, is made available to anyone directly or materially affected by a standard that is under development. Thousands of individuals, companies, government agencies and other organizations such as labor, industrial and consumer groups voluntarily contribute their knowledge, talents and efforts to standards development.

In addition to facilitating the formation of standards in the U.S., ANSI promotes the use of U. S. standards internationally, advocates U.S. policy and technical positions in international and regional standards organizations and encourages the adoption of international standards as national standards where these meet the needs of the user community.

ANSI standards developers work closely with OSHA, MSHA and other federal agencies. ANSI accredits SDOs. ANSI currently provides a forum for over 270 ANSI-accredited standards developers representing approximately 200 distinct organizations in the private and public sectors. These groups work cooperatively to develop voluntary national consensus standards and American National Standards (“ANS”). In 2002, there were approximately 10,000 such documents.

ANSI assures the integrity of the process because there must be openness, balance, public review, due process, and development of a record of evidence. It is up to standards users to decide whether they want standards developed. Some statutes (CPSA, Technology Transfer Act, and some insurance and telecommunication laws) require consideration of Voluntary Consensus Standards (“VCS”) and encourage agencies to better coordinate with the private sector. ANSI has had a Memorandum of Understanding with OSHA since the late 1970s but has never entered into an agreement with MSHA. Both MSHA and OSHA incorporate by reference many consensus standards, and many of these are outdated but cannot be revised without going through the formal rulemaking process. ANSI has discussed this problem with both the agencies and Congress, and there may ultimately be a legislative solution to this problem. Generally, it is recognized that the ANSI process guards against arbitrary and capricious action or dominance by government officials.

American Conference of Governmental Industrial Hygienists (“ACGIH”): The ACGIH published Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs) each year that set recommended exposure limits for a wide array of chemical substances/air contaminants. This is the “bible” for industrial hygienists and is often accepted in litigation as a “finding” of the appropriate exposure limit when determining the required standard of care. MSHA has incorporated by reference ACGIH TLVs from 1972 (coal) and 1973 (metal/nonmetal) into its air contaminants standards. Therefore, the agency cannot enforce current TLV limits.

ACGIH has been the subject of controversy in recent years because of the domination by governmental personnel (including representatives from OSHA, MSHA and NIOSH) and the “de

facto” standards it develops. However, ACGIH maintains that it does not set standards, but simply issues recommended TLV and BEI guidelines that are tools for industrial hygienists to use. TLVs were never intended to be used as standards, according to ACGIH -- they simply indicate that a review of the scientific literature occurred and concluded that workers could be exposed for up to the TLV without adverse health effects. TLVs are published with extensive documentation and citations to the literature. Although in the past, meetings of the TLV committees were closed and appearances were “by invitation” only, this process has loosened up in the wake of litigation against ACGIH.

National Fire Protection Association (“NFPA”): NFPA’s codes and standards are accredited by ANSI and meet the criteria of the Technology Transfer Act for VCS. NFPA has over 5000 volunteers and 200 standard committees. The NFPA process is open, balanced and provides for appeals. NFPA covers fire and electrical safety. The NFPA standards must be updated at least every 5 years, but many are updated more frequently to reflect new technology. The standards are also published through NIST. The OSH Act originally permitted adoption of VCS through the Section 6A process on an expedited basis. Many NFPA standards now in force through incorporation into MSHA and OSHA standards date back to the 1960s. New versions have been published by the SDOs but have not been adopted by the agencies through revised rulemaking. Although OSHA views adherence to an updated (revised) version of a VCS to be a “de minimis” violation and usually does not impose a civil penalty, this still stays on an employer’s record and discourages adoption of safer procedures and technologies. MSHA has not taken a formal position on utilization of updated VCS for compliance.

American Society for Testing and Materials/ASTM International: Founded in 1898, ASTM International is a not-for-profit organization that provides a global forum for the development and publication of voluntary consensus standards for materials, products, systems, and services. Over 30,000 individuals from 100 nations are the members of ASTM International, who are producers, users, consumers, and representatives of government and academia. In over 130 varied industry areas, ASTM standards serve as the basis for manufacturing, procurement, and regulatory activities. Formerly known as the American Society for Testing and Materials, ASTM International provides standards that are accepted and used in research and development, product testing, quality systems, and commercial transactions around the globe.

As used in ASTM, a standard is a document that has been developed and established within the consensus principles of the organization and which meets the requirements of ASTM procedures and regulations. Full consensus standards are developed with the participation of all parties who have a stake in the standards' development and/or use. ASTM standards are "voluntary" in the sense that their use is not mandated by ASTM. However, government regulators often give voluntary standards the force of law by citing them in laws, regulations, and codes. In the United States, the relationship between private-sector standards developers and the public sector has been strengthened with the 1995 passage of the National Technology Transfer and Advancement Act (Public Law 104-113). The Law requires government agencies to use privately developed standards whenever it is at all possible, saving taxpayers millions of dollars in formerly duplicative standards development efforts. There are countless notable uses of ASTM standards in the safety, health and environmental field. For example: Developers of commercial real estate can satisfy requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) using ASTM standards for environmental site

assessments.

ASTM has a specific committee that focuses on occupational health and safety issues. Committee E34 was formed in 1972 and meets twice annually, in April and November. The Committee, with current membership of approximately 230, has jurisdiction of over 20 standards. These standards are published each October in the Annual Book of ASTM Standards, Volume 11.03. The Committee's standards address the identification, exposure, symptomatology, treatment, control and administrative aspects of diverse occupational safety and health issues such as silicas, metalworking fluids and ergonomics.

Of particular interest/relevance to the mining industry are the following ASTM standards:

[E1132 Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable **CRYSTALLINE SILICA**](#)

[WK266- Test Method for Monitoring **DIESEL PARTICULATE** Exhaust in the Workplace](#)

[D2946-01 Standard Terminology for **ASBESTOS** and **ASBESTOS**-Cement Products](#)

[D2590-98\(2002\) Standard Test Method for Sampling Chrysotile **ASBESTOS**](#)

[D3879 Standard Test Method for Sampling Amphibole **ASBESTOS**](#)

[WK1009- Standard Guide for the Integration of **ERGONOMICS**/Human Factors into New Occupational Systems](#)

[D6832-02 Standard Test Method for the Determination of **HEXAVALENT CHROMIUM** in Workplace Air by Ion Chromatography and Spectrophotometric Measurement Using 1,5-diphenylcarbazine](#)

[E2052 Standard Guide for Evaluation, Management, and Control of Lead **HAZARDS** in Facilities](#)

[D6234-98\(2002\) Standard Test Method for Shake Extraction of **MINING** Waste by the Synthetic Precipitation Leaching Procedure](#)

[D4879-02 Standard Guide for Geotechnical Mapping of Large Underground Openings in Rock](#)

[E1915-99 Standard Test Method for Analysis of Metal Bearing Ores and Related Materials by Combustion Infrared Absorption Spectrometry](#)

An online search of more than 11,000 ASTM standards enables you to locate ASTM standards in dozens of industrial, management, and other areas. Available on the ASTM Web site www.astm.org, this function facilitates searches by keyword or standard numbers; you can see the titles and scopes of all ASTM standards and the documents referenced in each standard. You can also purchase any standard as a PDF download immediately or place an order through Customer Service at ASTM International (610/832-9585).

APPENDIX B

Selected MSHA Standards With “Outdated” VCS References

56/57.5001 Airborne Contaminants

(a) Except as provided in paragraph (b) of this section, the exposure to airborne contaminants shall not exceed, on the basis of a time weighted average, the threshold limit values adopted by the American Conference of Governmental Industrial Hygienists, as set forth and explained in the 1973 edition of the Conference's publication, entitled "TLV's Threshold Limit Values for Chemical Substances in Workroom Air Adopted by ACGIH for 1973," pages 1 through 54, which are hereby incorporated by reference and made a part hereof. This publication may be obtained from the American Conference of Governmental industrial Hygienists by writing to the Secretary-Treasurer, P.O Box 1937, Cincinnati, Ohio 45201, or may be examined in any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration. Excursions above the listed thresholds shall not be of a greater magnitude than is characterized as permissible by the Conference.

56/57.5005 Respiratory Protection

(b) A respirator program consistent with the requirements of ANSI Z88.2-1969, published by the American National Standards Institute and entitled "American National Standards Practices for Respiratory Protection ANSI Z88.2-1969," approved August 11, 1969, which is hereby incorporated by reference and made a part hereof.

57.5037 Radon Daughters

In all mines at least one sample shall be taken in exhaust mine air by a competent person to determine if concentrations of radon daughters are present. Sampling shall be done using suggested equipment and procedures described in section 14.3 of ANSI N13.8-1973, entitled "American National Standard Radiation Protection in Uranium Mines," approved July 18, 1973, pages 13-15, by the American National Standards Institute, Inc., which is incorporated by reference and made a part of the standard or equivalent procedures and equipment acceptable to the Administrator, Metal and Nonmetal Mine Safety and Health, Mine Safety and Health Administration.

57.5040 Radon Daughters

(4) The operator's records of individual exposure to concentrations of radon daughters and copies of "Record of Individual Exposure to Radon Daughters" (Form 4000-9) or acceptable equivalent form or true legible facsimiles thereof (microfilm or other), shall be retained at the mine or nearest mine office for a period as specified in paragraph 9.8, ANSI N13.8-1973, or shall be submitted to the Mine Safety and Health Administration. These records, if retained by the operator, shall be open for inspection by the Secretary of Labor, his authorized representative, and authorized representatives of the official mine inspection agency of the State in which the mine is located. Paragraph 9.8, ANSI N13.8-1973, is incorporated by reference and made a part of this standard. ANSI N13.8-1973 may be examined at any Metal and Nonmetal Mine Safety and Health District Office of the Mine Safety and Health Administration, and may be obtained from the American National Standards Institute, Inc., at 1430 Broadway, New York, New York 10018.

56.14106 FOPS

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Equipment	National consensus standard
Front-end loaders	Society of Automotive Engineers (SAE) minimum
and bulldozers	performance criteria for falling object
	protective structures (FOPS) SAE J231

January, 1981.

| Fork-lift trucks American National Standards Institute (ANSI)
| safety standard for low lift and high lift
| trucks, B 56.1, section 7.27 1983; or,
| American National Standards Institute (ANSI)
| standard, rough terrain fork lift trucks, B56.6 1987.

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72.710 Respiratory Protection

In order to ensure the maximum amount of respiratory protection, approved respirators shall be selected, fitted, used, and maintained in accordance with the provisions of the American National Standards Institute's "Practices for Respiratory Protection ANSI Z88.2-1969," which is hereby incorporated by reference.

75.333 Doors (Flammability Rating)

(d) Doors, other than personnel doors, constructed after November 15, 1992, that are used in lieu of permanent stoppings or to control ventilation within an air course shall be:

(1) Made of noncombustible material or coated on all accessible surfaces with flame-retardant materials having a flame-spread index of 25 or less, as tested under ASTM E162-87, "Standard Test Method for Surface Flammability of Materials Using A Radiant Heat Energy Source." This publication is incorporated by reference and may be inspected at any Coal Mine Health and Safety District and Subdistrict Office, or at MSHA's Office of Standards, 4015 Wilson Boulevard, Arlington, VA, and at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

75.335 Seals

(a)(1) Each seal constructed after November 15, 1992, shall be--

(i) Constructed of solid concrete blocks at least 6 by 8 by 16 inches, laid in a transverse pattern with mortar between all joints;

(ii) Hitched into solid ribs to a depth of at least 4 inches and hitched at least 4 inches into the floor;

(iii) At least 16 inches thick. When the thickness of the seal is less than 24 inches and the width is greater than 16 feet or the height is greater than 10 feet, a pilaster shall be interlocked near the center of the seal. The pilaster shall be at least 16 inches by 32 inches; and

(iv) Coated on all accessible surfaces with flame-retardant material that will minimize leakage and that has a flame-spread index of 25 or less, as tested under ASTM E162-87, "Standard Test Method for Surface Flammability of Materials Using A Radiant Heat Energy Source."