Project Management Relies on Effective Use of Voluntary Consensus Standards

by David Elam

As seasoned EH&S project managers know, the selection, application, and verification of voluntary consensus standards to projects can be quite challenging.

Project management involves the application and integration of processes for financial, technical, and personnel management. In some cases—communication procedures and authorities, for example—processes are project-specific and must be designed by the project manager to address detailed and specific project needs. Other processes, such as employee hiring and training, are defined by organizational policy and procedures. Additionally, technical processes, procedures, and requirements for many environment, health, and safety (EH&S) projects are determined by voluntary consensus standards (VCS). A key role of the EH&S project manager is to select and implement the range of processes required for the project. Although there are often checks and balances that govern the application of company policy and project-specific procedures, the selection, application, and verification of VCS to projects can be challenging.

Standard Setting Organizations
The American National Standards Institute (ANSI) coordinates and promotes VCS and serves as the U.S. representative in non-treaty international and regional standards-setting activities. VCS are published by standard setting organizations (SSOs) and SSOs exist for virtually every aspect of commerce.
EH&S project managers in the United States are readily familiar with the following SSOs:

- American Society of Mechanical Engineers (ASME)
- ASHRAE (formerly American Society of Heating and Refrigeration Engineers)
- ASTM International (formerly American Society for Testing and Materials)
- American Water Works Association (AWWA)
- Indoor Air Quality Association (IAQA)
- International Organization for Standardization (ISO)
- National Fire Protection Association (NFPA)
- PMI (Project Management Institute)
- TNI (formerly The NELAC Institute)
- Underwriters Laboratories (UL)

Beyond these listed organizations there are hundreds of other SSOs in the United States and thousands of SSOs around the world.

SSOs can be prolific in the generation of standards. ASTM, for example, provides several hundred environmental standards in five areas: Atmospheric Analysis Standards, Environmental Assessment Standards and Risk Management Standards, Environmental Toxicology Standards, Waste Management Standards, and Water Testing Standards. Further, SSOs may publish complementary or contradicting VCS. For example, ASTM and IAQA both publish standards related to mold growth in buildings. Similarly, ASTM and AWWA both publish standards related to water supply systems. It is therefore important for the project manager to understand the focus of SSOs and how VCS published by different SSOs may complement or contradict one another.

The National Technology and Transfer Act (NTTAA) was signed into law in 1996 to foster innovation and commercialization of technology. The NTTAA requires that federal agencies use technical standards developed by voluntary consensus bodies instead of unique government standards if compliance with the VCS is consistent with applicable law. Accordingly, many VCS are incorporated into federal regulations.

**Accreditation**

Once the appropriate VCS has been identified for the project, it is important to verify that the standard is implemented properly. In some cases, independent, third-party accreditation may serve as evidence that an organization is properly implementing the standard. For example, most environmental laboratories are accredited to ISO 17025 and/or TNI standards, which means that they have the management systems, equipment, personnel, and proficiency testing programs in place to support the analytical methods they perform. In other cases, an organization may self-declare that its products or services conform to a VCS. In this case, the project manager is best-served by obtaining supporting documentation, by an independent auditor if necessary, that the product or service does indeed conform to the requirements of the standard.

To remain relevant, VCS must evolve as technology advances. Some VCS must be retired, some must be revised, and, in some cases, new VCS must be developed. Project managers and technical project personnel who rely on VCS best positioned to identify changes in VCS. For this reason, project managers and technical professionals will benefit from participation in SSOs, taking an active role in the revision or development of standards. Although standards may evolve, it is important to understand that if a regulation cites a specific version of a standard, that version must be used for compliance until the regulation is updated to reflect the newer version of the standard. This prevents regulations from being “re-written” by SSOs instead of the agency responsible for their promulgation.

VCS are an important component of EH&S projects. Project managers who understand the SSOs that issue VCS, know the relationship of VCS to federal regulations, ensure conformance of products and services with VCS, and who actively engage in the revision and development of VCS will employ VCS effectively.

David L. Elam, Jr., CIH, CMQ/OE, PMP, is a consultant with TRC. E-mail: delam@trcsolutions.com.