ANSI/ASSE Z9.11-2016 "Laboratory Decommissioning" Update and Revision

The American Society of Safety Engineers (ASSE), the secretariat for the American National Standards Institute (ANSI), published the revised laboratory decommissioning standard ANSI/ASSE Z9.11 in February 2016. ANSI/ASSE Z9.11-2016 supersedes ANSI/ASSE Z9.11 - 2008. ANSI requires that standards be maintained by review or affirmation of the entire document at least five years from the date of approval as an American National Standard.

Farhad Memarzadeh, Ph.D., P.E., National Institutes of Health (NIH), chaired the ANSI/ASSE Z9.11 revision subcommittee and Lou DiBerardinis CIH, CSP, Massachusetts Institute of Technology (MIT) was Vice Chair. A twelve-member subcommittee representing federal agencies (NIH, National Regulatory Commission [NRC]); Universities (MIT, University of Wisconsin, University of Michigan); Pharmaceutical Companies (Millennium, Inc., Emergent BioSolutions) and private consultants with experience in laboratory decommissioning (Alliance BioScience, Life Support Services, McCarthy Holdings, Inc., and SCB Compose) revised the standard.

Decommissioning is addressed in the 2008 National Institutes of Health (NIH) Design Requirements Manual (DRM) for biomedical laboratories and animal research facilities. Decommissioning, as defined in ANSI Z9.11- 2016 is a process to ensure that a facility and its associated infrastructure meet environmental health and safety requirements for its next use. For biomedical research laboratories, the ANSI Z9.11 standard provides a risk-based approach for dealing with common contaminants and waste management and provides details for managing the presence of extremely hazardous materials or exceptional circumstances. ANSI/ASSE Z9.11-2016 asserts a strategy to perform a risk assessment of a laboratory space to ensure the safety and readiness for the demolition worker to begin work and/or for the next occupant. This standard applies to research laboratories that will undergo a change of use or occupancy as a result of deconstruction for renovation or demolition. While other laboratories, such as teaching or quality control laboratories, are not specifically covered by this standard, the techniques recommended here can be used. This standard does not apply to decommissioning activities in non-laboratory space, such as office buildings and chemical plants. General concepts expressed here may be appropriate to other types of facilities only after careful evaluation.

The intent of ANSI/ASSE Z9.11-2016 is to provide an overarching roadmap for the research laboratory decommissioning process that can assist an institution in developing its own decommissioning plan. The standard identifies the minimum acceptable criteria for completing the decommissioning process, and documenting the necessary information for regulatory and historical purposes. Those involved in the development of a decommissioning plan for a research laboratory of any size will benefit by this guidance document. References, tables, and other resources for assessing the risk level of the project have been updated.
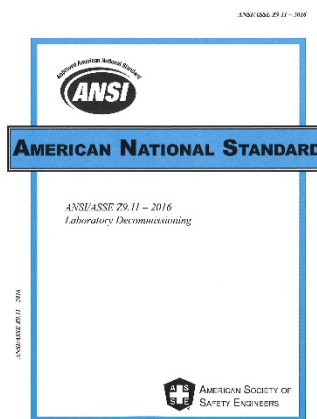
ANSI/ASSE Z9.11-2016 was carefully reviewed to ensure that the updated standard reflects acceptable procedures and techniques. The subcommittee added new definitions, acronyms and additional applicable reference regulations; a new section on the risk assessment and characterization of radiological hazards in relation to NRC regulations; a new appendix, 'Crisis Management Planning for Decommissioning Project's; and revised tables and diagrams that are more user friendly. Numerous edits and a few deletions were made as part of the revision process but the processes to achieve decommissioning described in the original version remain essentially the same.

The scope of this standard has not changed from its earlier version. ANSI/ASSE Z9.11-2016 provides:

1. Guidance for the decommissioning of all or parts of laboratory facilities.
2. Guidance to determine extent of acceptable risk given the future use of the facility.
3. Methodologies to document, monitor, and verify the decommissioning process.
4. Criteria for development of a decommissioning plan for laboratories that address human health and environmental protection and meets the goals of the overall decommissioning process and,
5. Identifies stakeholders, their roles, responsibilities and relationships.

References
1. http://www.asse.org/ansi/asse-z9-11-2016-laboratory-decommissioning-/

Further details on this month's topic are available on the DRM website
http://orf.od.nih.gov/PoliciesAndGuidelines/BiomedicalandAnimalResearchFacilitiesDesignPoliciesandGuidelines/Pages/DesignRequirementsManualPDF.aspx
DRM Chapter 1 Section 9 Environmental Management/Radiation Safety