Since the notification of the approval of the revised Z244.1 Standard, there continues to be significant interest from ASSE members, OSH profession, and business and industry overall in the standard. LOTO (Lockout, Tagout, and Control of hazardous energy) related hazards and exposures are addressed by OSH Professionals on an almost daily basis. Hazardous energy related incidents continue to be a significant generator of fatalities, injuries, and citations.

ASSE, as secretariat of the Z244 ANSI Accredited Standards Committee (ASC) has continued to receive a number of inquiries related to the revision of the ANSI/ASSE Z244.1-2016 American National Standard titled: The Control of Hazardous Energy Lockout, Tagout and Alternative Methods. The changes in the revised standard are extensive and significant. The overall consensus of the committee is control of hazardous energy is changing in regard to control of hazards and exposures and the newly revised standard is a game changer.

Due to these inquiries for information about the standard we have put together what we call a “guide” for those with an interest. The following information below should hopefully be of assistance:

Title: ANSI/ASSE Z244.1-2016: The Control of Hazardous Energy Lockout, Tagout and Alternative Methods

Past Versions of the Standard:

- ANSI/ASSE Z244.1-2003 (R2014)
- ANSI/ASSE Z244.1-2003 (R2008)
- ANSI/ASSE Z244.1-2003
- Z244.1-1982 (R1993)
- Z244.1-1982
- Z244.1-1970

The content of this standard was approached from a business and industry perspective. However, the principles, methods and guidance are applicable to a variety of other settings and circumstances where unexpected release of hazardous energy can occur. The procedures, techniques, methods and design guidance contained in this standard are recommended for use by
all those whose activities fall within its scope and purpose.

The standard recognizes that zero risk is only a theoretical possibility, but is not an operative reality - zero risk does not exist. The concept of feasible risk reduction to achieve acceptable or tolerable risk is emphasized whether using conventional lockout, tagout or alternative methods. With regard to hazardous energy control the term “safe” suggests the absence of risk. More accurately, “safe” should be viewed as the acceptability of risk to those who may be exposed. There are numerous terms that reflect the circumstances under which servicing and maintenance is done routinely today. Terms such as AFARP (as far as reasonably practical), ALARA (as low as reasonably achievable), or ALARP (as low as reasonably practicable) convey a more realistic approach to risk reduction and in particular the use of alternative methods.

The standards committee and the secretariat have made a concerted effort to produce a standard that represents the best practice regarding the control of hazardous energy. All circumstances or situations where personnel are exposed to unexpected energy release may not have been anticipated and adequately addressed with respect to the standard’s content. New developments are to be expected, and revisions of the standard will be necessary as the state of the art progresses and further experience is gained. However, uniform requirements are needed and the standard in its present form provides performance requirements that are necessary when developing and implementing a system for protecting personnel from unexpected hazardous energy.

Scope, Purpose, and Application

1.1 Scope. This standard covers machines, equipment and processes in which the unexpected energization or start-up of the machines or equipment, release of stored energy or the actions of persons could result in harm.

This standard establishes requirements for the control of hazardous energy associated with machines, equipment or processes that could cause harm to personnel. The standard specifies the use of lockout (primary method), tagout or alternative methods to control hazardous energy associated with machines, equipment or processes that could cause harm to personnel.

This standard applies to activities such as erecting, installing, constructing, repairing, adjusting, inspecting, unjamming, set up, testing, troubleshooting, cleaning, dismantling, servicing and maintaining machines, equipment or processes.

NOTE: Different organizations characterize the above tasks as servicing, maintenance or operations. Each organization should evaluate how best to control hazardous energy for tasks that are performed.

This standard does not apply to work on cord and plug connected electric equipment for which electricity is the single source of energy; is solely controlled by the unplugging of the equipment from the energy source; and by the plug being under the exclusive control of the person.
This standard does not apply to hot tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipelines.

This standard does not apply to standard passenger vehicles, personal pleasure boats, private aircraft or recreational/sport type vehicles.

1.2 Purpose: The purpose of this standard is to establish requirements that protect personnel where harm can occur as a result of the unexpected release of hazardous energy.

This document is a performance standard and, as such, is not intended to limit or restrict the use of other existing specific standards, procedures or regulations that meet the performance objectives defined in this standard and provide an acceptable level of personal protection from exposure to hazardous energy.

Deviations from the requirements of this standard shall be based on a documented risk assessment.

1.3 Application Exceptions: The presence of an energy source alone does not by itself warrant the need for energy control. The risk assessment process shall determine which energy sources are considered hazardous for each task.

Energy sources that do not present a hazard, or exposure to the hazard, do not require control of hazardous energies or alternative methods.

NOTE 1: An electrical shock example includes voltages with electromotive force rated at less than 50V nominal line to line AC, or less than 30V DC to ground, and limited to 5 amperes. Energy sources that help prevent the hazardous release of energy for the performance of a task do not require control of hazardous energies or alternative methods.

NOTE 2: An example includes a counter-balance on a press during a die change.

Certain tasks require partial (or full) energization to perform the task. Additional tasks shall not be performed on the machine, equipment or process if partial energization is not required for those other tasks.

NOTE: The scope of work should not be allowed to creep to include tasks that should be performed under lockout. Certain diagnostic activities may require power, but the scope of activities should not expand to include repair activities that can be performed without power.

Energy control is not required for activities where power is required to perform a task and either safe positioning of persons away from a hazard, or safeguarding is used for protection.
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8. ALTERNATIVE METHODS OF HAZARDOUS ENERGY CONTROL

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BIBLIOGRAPHY
Useful Links:

- American National Standards Institute
- Safeguarding: Are ANSI Standards Really Voluntary?
- Standards History Article
- Position Statement on Consensus Standards
- What’s the Difference Between an OSHA Rule and an ANSI Standard?

OSHA Related – Federal Links&Information

- There is an official memorandum of understanding between OSHA and ANSI. The link to the read the memorandum is at:
  

***Recognition of ANSI/ASSE Z244.1-2003 "Control of Hazardous Energy — Lockout/Tagout and Alternative Methods" consensus standard:


***Safety and Health Topics: OSHA Assistance for the Electrical Contractors Industry – Standards:

  http://www.osha.gov/SLTC/electricalcontractors/standards.html

***9/14/2007 - CPL 02-01-043 - Slide-locks – Enforcement Policy, Inspection Procedures and Performance Guidance Criteria:


***1910 Subpart S App A – Referenced Documents:


***Remediation Technology for Safety and Health Hazards:

  http://www.osha.gov/dts/shib/shib_02_03_03_tsds9.html
Below are some the 5A1 Citations (General Duty Clause) using the ANSI/ASSE Z244.1 Standard over the past two years. These examples related to Federal OSHA States as we have not seen the data from the OSHA State-Plan-States.

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Additional Examples:

- Occupational Safety and Health Review Commission

- Canadian Example – Earlier version actually listed: