1 Purpose

1.1 The primary purpose of this standard is to reduce risk from asphyxiation, poisoning, and explosions when entering confined space manure storages by specifying the positive pressure, forced ventilation requirements, including ventilation system layout, air exchange rates, and minimum ventilation times, for evacuation of contaminant gases from, and replenishment of oxygen into, empty or nearly empty covered or partially covered confined-space, on-farm, manure storages, reception tanks, agitation tanks and other similar containers that hold/contain manure prior to entry.

1.2 This standard is to be used in conjunction with the appropriate confined space entry considerations defined in ASAE EP470, JAN 1992 (R2005), Manure Storage Safety.

2 Scope

2.1 This Standard specifies the forced-ventilation times required to evacuate contaminant gases (H₂S, CH₄, and CO₂) from on-farm, confined-space, manure storages with either solid, totally slotted or partially slotted covers to concentrations below American Conference of Governmental Industrial Hygienists (ACGIH) recommended 8-hr. Threshold Limit Values (TLVs).

2.1.1 This Standard specifies forced-ventilation contaminant gas evacuation procedures and times for solid covered on-farm, confined-space manure storages located outside enclosed animal living quarters and for partially or totally covered on-farm, confined manure storages located beneath enclosed animal living quarters.

2.1.2 This Standard specifies forced-ventilation contaminant gas evacuation times for ventilation systems with supply air taken from directly above the manure storage or ventilation systems with supply air ducted from a location with negligible or nearly zero contaminant gas concentrations and approximately 20.4% oxygen by volume at sea level.

2.1.3 This Standard specifies forced-ventilation contaminant gas evacuation times for maximum possible initial contaminant gas concentration levels or for known (measured) initial contaminant gas concentration levels.

2.2 This Standard specifies the forced-ventilation times required to replenish oxygen levels from 0% to 20% by volume at sea level in on-farm, confined-space, manure storages with either solid, totally slotted or partially slotted covers.

2.2.1 This Standard specifies forced-ventilation times required to replenish oxygen levels for on-farm, confined-space manure storages located either beneath or outside enclosed animal living quarters.