Application of ASME AG-1 to the DOE Hanford Tank Waste Treatment and Immobilization Plant

Dan Cragin, Gerard Garcia, Roshellia Goines
Bechtel National, Incorporated, Richland, Washington

Abstract

The Department of Energy (DOE) Hanford Tank Waste Treatment and Immobilization Plant (WTP) is a complex of waste treatment facilities where the DOE Hanford site tank waste will be put into stable glass form. The WTP will consist of three main process facilities and an analytical laboratory. The process facilities include the pretreatment facility, low-activity waste (LAW) vitrification facility, and high-level waste (HLW) vitrification facility. During the pretreatment and vitrification of the various types of wastes, airborne emissions will be created. Radial flow HEPA filtration systems will be used to control these emissions. The DOE WTP contract, and the Washington Administrative Code, both require compliance with ASME AG-1. This paper will discuss the challenges encountered in implementing ASME AG-1 to WTP ventilation systems, working with code sections that were not complete at contract inception, and related challenges. These include the challenge of applying axial flow design criteria to radial flow HEPA filtration systems for safe change and remote ventilation system applications.