

Florida Specifier

Practical Information For Environmental Professionals

GUEST COLUMNIST

By **E. Crone Knoy, PE**
Tank Industry Consultants, Inc.

An Update On Regulations Affecting The Water Storage Industry

Increased concern for the protection of the environment has prompted regulatory agencies to enforce regulations governing the coating systems applied to water storage tanks, and the removal of existing coatings. The following is an update on the regulations affecting the water storage industry.

NSF/ANSI Standard 61 - Drinking Water System Components - Health Effects, deals with indirect additives that may contaminate drinking water. The National Sanitation Foundation is the lead organization of a consortium contracted by the Environmental Protection Agency to develop a standard using a voluntary consensus process. All previous EPA approvals were withdrawn on April 7, 1990.

As of the writing of this article, just three coatings have been approved for use in contact with potable water, and several dozen others are undergoing the testing process. Most states have indicated that they will ultimately use the

NSF standards as their criteria for acceptance, but many states are allowing a "stay of execution" until such time as more coatings can complete the NSF's testing and approval process.

VOCs - Present rules governing the allowable levels of solvent emission of volatile organic compounds (VOCs) during the application of protective coatings varies from state to state. Many states, however, are modeling their VOC restrictions on the criteria established by the state of California. Familiar water storage tank coatings that do not appear to meet this criteria include solvent-based vinyls, conventional alkyds, and epoxy and polyurethane coatings with relatively low solids content.

The compliant coatings are mostly high solids conventional solvent-based materials or water-based coatings. The progression of VOC enforcement will apparently depend on the extent of compliance with clean air standards in each area. Areas currently under VOC restrictions are portions of California, New Jersey, New York, Texas and Arizona.

Land Ban - The removal of lead-based paints from water storage tanks has been an area of concern for some time now. The use of silica sand as an abrasive has been restricted in some areas of the country due to the air pollution caused by the release of free silica into the atmosphere. In addition, many of the coatings on water storage tanks contain lead.

State and local EPA regulations

restrict the levels of lead and silica to which the public can be exposed. New blast abrasives can creative methods of abrasive blast residue containment have been necessary for compliance with these restrictions, and the blast residue has had to be disposed of as potentially hazardous waste. The implementation of the EPA's Land Ban restrictions prohibits the disposal of much of the abrasive blast residue in hazardous waste dump sites.

The Land Ban requires that debris which is tested and found to contain grater than the allowable levels of lead must, in many cases, be stabilized or the lead extracted prior to disposing of the materials. These added restrictions on disposal of the abrasive blast residue further escalate the already costly procedure of removing lead-based coatings from water storage tanks.

The water storage industry is currently faced with a number of environmental restrictions which greatly affect the industry as a whole. Specifying engineers, water storage tank owners, contractors, and suppliers must all be aware of the current regulations governing the application of protective coatings and the removal of existing coatings.

E. Crone Knoy, PE, is president of Tank Industry Consultants Inc., Speedway, Ind. He has a Bachelor of Science in Mechanical Engineering from Rose-Hulman Institute of Technology and a Master of Business Administration from Indiana University. Knoy is a Professional Engineer in 33 states.