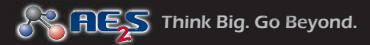


The Update

March/April 2009



Spill Prevention, Control, and Countermeasure Rule Compliance Date Update

The United States Environmental Protection Agency (USEPA) is delaying the effective date of the final rule that amends the Spill Prevention, Control, and Countermeasure (SPCC) regulations described by the Federal Register on December 5, 2008. The amendments will become effective on January 14, 2010. USEPA additionally is requesting public comment on whether a further extension of the effective date may be warranted. Comments must be received by May 1, 2009. Comments may be submitted at www.regulations.gov. More information about this rule can be found at www.epa.gov. ■

Flood Cleanup

With recent flooding in much of North Dakota and parts of Minnesota, many water utilities may be wondering how to make sure their water doesn't get contaminated. USEPA has some instructions for water treatment plants and pumping stations for cleaning up after a flood. The following list contains some of the highlights:

- Sample appropriate system elements (storage tanks, filters, sediment basins, solids handling) to determine if residual contamination exists;
- Inspect electrical motors for damage caused by silt, mud, and dirt getting into the windings;
- Replace electrical motors if damaged from the flooding;

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With nearly \$1.3 billion of the American Recovery and Reinvestment Act of 2009 set aside for "green infrastructure", one of the big questions is what exactly is the definition of "green infrastructure"? The USEPA defines it as "An adaptable term used to describe an array of products, technologies, and practices that use natural systems – or engineered systems that mimic natural processes – to enhance overall environmental quality and provide utility services."

Definition of "Green Infrastructure"

There are a number of technologies that incorporate "green infrastructure" in the stormwater and wastewater world, including techniques that use soils and vegetation to infiltrate, evapotranspire, and/or recycle stormwater runoff. Stormwater can be redirected into rain gardens, vegetated swales, permeable pavements, rain barrels, and green roofs that mimic the natural capacity of the landscape to absorb precipitation where it falls. Benefits include allowing stormwater to infiltrate into soil instead of rushing into sewers and streams with suspended solids, oils, or heavy metals which can degrade drinking water and harm fish and other animals. In addition to effectively retaining and infiltrating rainfall, these technologies can simultaneously help filter air pollutants, reduce energy demands, mitigate urban heat islands, and sequester carbon while also providing communities with aesthetic and natural resource benefits.

Engineered wetlands used as secondary wastewater treatment are considered "green infrastructure". This method, which incorporates natural resources such as vegetation instead of chemicals, has become popular. There are three types of engineered wetlands - free water surface, horizontal subsurface flow, and vertical flow systems. A combination of the horizontal and vertical flow systems has become most common in residential applications. As water is not exposed, there are no odors or mosquito breeding grounds. They can also be insulated with a mulch layer to avoid freezing in cold climates, can have an aeration system installed to introduce oxygen, and can be designed to provide denitrification.

The Membrane Bioreactor (MBR) is an improvement over the conventional activated sludge (CAS) secondary treatment process for municipal wastewater treatment. MBR combines activated sludge treatment with a membrane liquid-solid separation process. The membrane component uses low pressure microfiltration or ultrafiltration membranes and eliminates the need for clarification and tertiary filtration. MBR technology provides several advantages compared to the CAS processes, such as high effluent quality, limited space requirements, and the possibility of a flexible and phased expansion of existing wastewater treatment plants.

Ultraviolet (UV) disinfection of wastewater has some innovative technologies currently being tested. UV disinfection is used to inactivate harmful pathogens from wastewater by passing wastewater through a tunnel with UV lamps mounted inside it. Recent advances in UV technology are now also allowing it to be used to reduce pesticides and other contaminants. UV is a clean technology which does not rely on the use of chemicals and leaves no unwanted residues or by-products.

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(Flood Cleanup from first page)

- Submerged motors should be washed with clean water and dried, and in most cases restored to service;
- Continue to maintain elevated storage at full capacity as appropriate if possible; and
- Monitor chlorine residuals and system pressure as soon as you can safely gain access to the system and its control facilities.

More information can be found at <http://www.epa.gov/safewater/index.html>. ■



(Green Infrastructure from first page)

The USEPA has a number of resources and tools on their website at: http://www.epa.gov/greenkit/green_infrastructure.htm. Please feel free to contact AE2S about any of the above technologies or other “green” technologies for your water and wastewater needs. ■

Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) Important Dates

Schedule 1, Public Water System Serving 100,000 or More People	
March 2009	Filtered systems must report their initial bin classification to the USEPA or state for approval
March 2009	Unfiltered systems must report the mean of all cryptosporidium sample results to the USEPA or the state
April 1, 2009	Uncovered finished water storage facilities must be covered, or the water must be treated before entry into the distribution system, or the system must be in compliance with a state approved schedule
Schedule 2, Public Water System Serving 50,000-99,999 People	
March 2009	Systems must complete their initial round of source water monitoring
April 1, 2009	Uncovered finished water storage facilities must be covered, or the water must be treated before entry into the distribution system, or the system must be in compliance with a state approved schedule
Schedule 3, Public Water System Serving 10,000-49,999 People	
April 1, 2009	Uncovered finished water storage facilities must be covered, or the water must be treated before entry into the distribution system, or the system must be in compliance with a state approved schedule
Schedule 4, Public Water Systems Serving Fewer than 10,000 People	
April 1, 2009	Uncovered finished water storage facilities must be covered, or the water must be treated before entry into the distribution system, or the system must be in compliance with a state approved schedule

There is a link to other information about this rule at: <http://www.epa.gov/OGWDW/disinfection/lt2/compliance.html#quickguides>. ■

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