U.S. EPA UPDATE

Current status of effluent guidelines

By Janet Goodwin

The U.S. Environmental Protection Agency (EPA) Office of Water is working on regulations to establish technology-based effluent limitations guidelines for the airport deicing and steam electric categories, and it recently announced plans to initiate a regulation to control discharges of dental amalgam from dental offices. The EPA recently promulgated regulations on the construction and development industry and announced a new rulemaking for storm water from developed and redeveloped sites. Additionally, the agency has studied the coal bed methane sector in the oil and gas extraction industry.

Airport Deicing

The EPA proposed effluent limitations guidelines for airport deicing on Aug. 28, 2009. The proposed rule generally would apply to wastewater associated with the deicing of aircraft and airfield pavement at primary commercial airports. Airports that conduct aircraft deicing operations, have 1,000 or more annual jet departures and have 10,000 or more total annual departures would be required to collect spent aircraft deicing fluid and treat the wastewater.

The airports may either treat the wastewater on site or send it to an offsite treatment contractor or publicly owned treatment works. Some airports would be required to reduce the amount of ammonia discharged from urea-based airfield pavement deicers or use more environmentally friendly airfield deicers that do not contain urea. The proposed rule would require an airport to collect at least a specified proportion (either 20% or 60%) of available deicing fluid after it is sprayed on aircraft. If the airport chooses to discharge the deicing fluid, it would have to meet a specified numeric effluent limit for deicing fluid wastewater collected and discharged.

This rule is scheduled to be promulgated in the spring of 2011. For more information, visit http://water.epa.gov/scitech/wastetech/guide/airport/index.cfm.

Steam Electric

The EPA is revising the effluent guidelines regulations for the steam electric category. The steam electric category applies to electric-generating facilities that use fossil fuels and generate steam to power turbines that generate electricity.

The existing regulations for this category were issued in 1982. The EPA's decision to revise the current effluent guidelines is largely driven by the high level of toxic-weighted pollutant discharges from coal-fired power plants and the expectation that these discharges will increase significantly in the next few years as new air pollution controls are installed. The agency has identified technologies that can significantly reduce these pollutant discharges.

The EPA is currently gathering data to support this rulemaking. Data gathering is being conducted through a survey and sampling to determine the characteristics of steam electric waste streams and document the effectiveness of treatment technologies.

This rule is scheduled to be proposed in August 2012. For more information, visit http://water.epa.gov/scitech/wastetech/guide/steam_index.cfm.

Dental Discharges

EPA is initiating an effluent guideline rulemaking for dental facilities to reduce discharges of mercury to the environment. The agency intends to focus its technology assessment on amalgam separators. It expects to propose a rule in October 2011 and finalize it in 2012.

This rule will focus on amalgam separators for the removal of dental amalgam from dental office discharges. Dental amalgam contains mercury; the estimated discharge of mercury from amalgam to publicly owned treatment works is 3.7 tons per year.

For more information, visit http://water.epa.gov/scitech/wastetech/guide/dental/.

Construction & Development

On Dec. 1, 2009, the EPA published in the Federal Register (74 FR 62995) effluent limitation guidelines and new source performance standards for the Construction and Development (C&D) Point Source category. These requirements are referred to as "the C&D rule."

The C&D rule requirements control the discharge of pollutants from construction sites. They require construction site owners and operators to implement a range of erosion and sediment control measures and pollution

prevention practices to control pollutants in discharges from construction sites. These requirements became effective on Feb. 1, 2010. In addition, the rule subjected discharges from certain larger construction sites to a numeric effluent limit of 280 NTU starting in August 2011. These regulations are located at 40 CFR Part 450.

Subsequent to the promulgation of the C&D rule, the EPA received two petitions for reconsideration of the rule. These petitions pointed out a potential error in the calculation of the numeric limit. Based on the EPA's examination of the data set underlying the 280-NTU limit, the agency has concluded that it improperly interpreted the data. As a result, the calculations in the existing administrative record are no longer adequate to support the 280-NTU numeric limit.

Because the EPA acknowledges an error in calculating the 280-NTU limit, it understands that permitting authorities do not want to include the numeric limit in their Construction General Permits. Consequently, the EPA has moved quickly to issue a direct final rule staying the 280-NTU numeric limit until it is corrected. The stay will have an effective date of 60 days after Federal Register publication if the EPA receives no adverse comments. The stay notice was signed on Nov. 1, 2010.

The publication date was not available at the time of print. For more information, visit http://water.epa.gov/scitech/wastetech/guide/construction/index.cfm.

Storm Water Sites

Last year, the EPA announced it will develop regulations to control the discharge of storm water from developed sites. These are not effluent guidelines technology-based regulations, but the agency will use some similar approaches to identify best practices to control storm water discharges.

In December 2009, the EPA issued a Federal Register notice seeking stakeholder input to help it shape a program to reduce storm water impacts. Input was provided through both written comments and during a series of public listening sessions. The EPA has identified the following five considerations that will be considered as it moves forward with this rule:

1. Expand the area subject to federal storm water regulations;
2. Establish specific requirements to control storm water discharges from new development and redevelopment;
3. Develop one set of consistent storm water requirements for all municipal separate storm sewer systems (MS4s);
4. Require MS4s to address storm water discharges in areas of existing development through retrofitting the sewer system or drainage area with improved storm water control measures; and
5. Explore specific storm water provisions to protect sensitive areas.

The EPA is currently collecting data through six surveys to support this rulemaking. Surveys were sent to National Pollutant Discharge

Elimination System permitting authorities, federally regulated MS4s, unregulated MS4s, Department of Transportation MS4s and owners and developers of sites. The data collected through these surveys will provide the EPA with a baseline of existing storm water requirements and practices in order to evaluate the best storm water control practices and assess the costs and benefits of a proposed rulemaking.

The agency is scheduled to propose a regulation in September 2011. For more information, visit http://cfpub.epa.gov/npdes/stormwater/rulemaking.cfm.

Coal Bed Methane

The EPA is concluding its study of coal bed methane extraction. Coal bed methane is natural gas found in coal seams. Extraction of coal bed methane results in the generation of produced water. Before the methane can be extracted from the coal seam, the formation must be dewatered to allow the methane to be released.

Coal bed methane is being extracted from coal seams in several states. The volume of water produced and the method for handling it vary by location. Because the volume of water is significant and some coal bed basins do not have the ability to reinject this water, the water may be discharged. The produced water typically contains total dissolved solids (TDS). The EPA has studied the volumes and handling practices from coal bed methane production as well as possible wastewater treatment technologies capable of removing TDS.

For more information, visit http://water.epa.gov/scitech/wastetech/guide/cbm_index.cfm. SWS

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