

Regulatory Update: Construction Control

U.S. EPA proposing new effluent guidelines for C&D activity

By Shirley D. Morrow

The U.S. Environmental Protection Agency (EPA) has developed new draft effluent limitations guidelines for the construction and development (C&D) point source category to go with the other industrial discharges, including manufacturing, agriculture and service industries.

As required by the Clean Water Act, the EPA publishes an effluent guideline program plan every other year to announce the agency's plans to develop new effluent guidelines and revise existing ones. Effluent guidelines are technology-based national regulations that control the discharge of pollutants to surface waters and to publicly owned treatment works.

The EPA initially began work on developing effluent guidelines for the

C&D industry and listed C&D in the 2000 and 2002 effluent guidelines plans. The agency even proposed several options for C&D back in 2002, but it withdrew the proposal two years later. The EPA was then sued by the Natural Resources Defense Council, Waterkeeper Alliance and the states of New York and Connecticut over its failure to promulgate effluent guideline regulations for the C&D industry.

The court found that the EPA has a mandatory duty to promulgate effluent guidelines for an industrial category listed in the biennial effluent guidelines plan. The court ordered the EPA to publish proposed regulations in the *Federal Register* by Dec. 1, 2008, and publish final regulations for the C&D category by Dec. 1, 2009.

National effluent guideline regulations typically specify the maximum allowable levels of pollutants that may be discharged by facilities within an industrial category or subcategory. Even though the limits are based on the performance of specific technologies, they do not usually require the industry to use these technologies; rather, the regulations allow the industry to use any effective alternatives to meet the numerical pollutant limits. Effluent guidelines may also be based on best management practices (BMPs).

The proposed rule for establishment of effluent guidelines for the C&D industry was published in the *Federal Register* on Nov. 28, 2008, and public comments were received on or before Feb. 26, 2009.

Proposed Rule Summary

The proposed rule would establish a set of non-numeric effluent limitations requiring dischargers to provide and maintain effective erosion control measures, sediment control measures and other pollution prevention measures to minimize and control the discharge of pollutants in storm water and other wastewater from construction sites. This is not much different than the existing regulations. The rule would also specify particular minimum BMPs to meet the effluent limitations requiring effective erosion control and pollution prevention.

In addition, reflecting current requirements in the EPA Construction General Permit, sites disturbing 10 or more acres at one time would be required to install a sediment basin to contain and settle sediment from storm water runoff. The proposed rule would require minimum standards of design for sediment basins; however, alternatives that control sediment discharges in a manner equivalent to sediment basins would be authorized where approved by the permitting authority.

Finally, reflecting the best available technology and new source performance standards' levels of control, for certain large sites located in areas of high rainfall energy with a rainfall erosivity factor of 50 or more and with soils with significant clay content of 10 percent or greater,



An active treatment sand filter system using a polymer

discharges of storm water from the site would be required to meet a numeric effluent limit on the allowable level of turbidity. The proposed numeric turbidity limit is 13 NTUs. The technology basis for the turbidity limit is active treatment systems, which consists of polymer-assisted clarification followed by filtration. There are no requirements in the proposed rule for sampling of the storm water discharge from a construction site.

Active treatment systems are typically used in conjunction with other sediment controls to improve pollutant removals, especially of fine-grained and slowly settling or nonsettling particles and turbidity contained in storm water. The EPA has identified several demonstrated technologies capable of achieving significant reductions of these particles. Electrocoagulation, polymer clarification and chitosan-enhanced filtration treatment technologies are demonstrated as being capable of achieving low levels of turbidity in storm water discharges.

These active treatment systems add polyacrylamides or chitosan, which is a natural polymer, to the storm water on site. Due to the polymers being the opposite charge of a soil particle, when the polymer mixes with sediment-laden water, the polymer and soil particles attach to one another and form larger particles that should settle out more quickly.

Caution should be taken, however, when using polymers. If the polymers do not attach to the soil particles before leaving the site, they can attach to the gills of fish and cause suffocation. The EPA briefly mentions this in the proposed rule but does not think it will be an issue that needs to be addressed until there is further research on the subject.

Resources

Storm water professionals can find additional information about the EPA's proposed effluent guidelines at www.epa.gov/guide/construction/. The published proposed rule is available for download there. The link will provide the purpose and summary of the proposed rule as well as a summary of the data collected, the three options

reviewed, the methodology for estimating costs of each option and other related information. **SWS**

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