



The State of Regulations

Government Regulations and Safe Drinking Water Act Updates

As the POU/POE water treatment industry progresses to new levels and meets new challenges, issues regarding regulations and standards continually arise. As the industry waits for the EPA and U.S. government to finalize regulations, the industry is forced to ride out the MCL changes, rule withdrawals and estimated costs that each proposal brings. Listed here is a review of regulation changes the industry has seen in the last year and a brief look at which ones to watch for in the future.



Not much is more memorable than the rule reducing arsenic's MCL from 50 ppb to 10 ppb being revoked by the Bush Administration in early 2001. Despite the water industry's support, the administration halted this important regulation to allow further research and testing before making its final decision.

The U.S. Environmental Protection Agency

Future EPA Plans

2001

- **August**—Make determinations of whether or not to regulate at least five contaminants from contaminant candidate list. (States)—Report to EPA on success of enforcement mechanisms and assistance efforts in capacity development
- **Late Summer**—Ground Water Rule expected to be finalized.
- **Mid-2001**—Radon Rule expected to be finalized.
- **November**—(States) Complete local source water assessments. With FY 2003 Budget, report to Congress an evaluation of effectiveness of state DWSRF loan funds

2002

- Final arsenic rule expected.
- **May**—Promulgate Stage II Disinfection Byproducts Rule.
 - Promulgate LT2 Enhanced Surface Water Treatment Rule.
 - Promulgate Phase II rule on UIC Class V wells.
- **September**—(States) Submit publicly available report to governors on efficacy of state capacity development strategy and progress in implementation.

2003

- Radionuclides Rule will be put into effect.

(EPA) continues protecting drinking water with its published Filter Backwash Recycling Rule on June 8, 2001, which is intended to protect public health by reviewing and monitoring backwash recycling practices.

And a finalized radionuclides rule regulating uranium for the first time was finalized by the EPA in December of 2000. Each of these regulations acts as a driving force of the water treatment industry. It is

available treatment technologies are ion exchange, reverse osmosis, lime softening and enhanced coagulation/filtration. The rule will become effective in December 2003.

Ground Water Rule

The final Ground Water Rule is expected to address components of ground water systems and specify the appropriate use of disinfection in ground water including public drinking water supplies that draw from wells, springs or other ground water

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FBRR

The Filter Backwash Recycle Rule (FBRR) was finalized in June. Delayed since August 6, 2000, the FBRR aimed to govern the process of backwashing wastewater containing microbial contaminants generated by the backwashing of drinking water filters. The backwashing process was identified as one of the possible causes for recent *Cryptosporidium* outbreaks.

The rule requires public water systems to review recycle practices and work with state agencies to make any necessary changes to backwashing practices that may compromise the system.

Accurate documentation and reporting to states concerning backwashing practices also is required. An estimated cost of \$5.84 million will affect approximately 4,650 public water systems.

Radionuclides

In December 2000, the EPA finalized the radionuclides rule that regulates combined radium 226/228 at 5 pCi/L, beta emitters at 4 mrems, gross alpha standard at 15 pCi/L and uranium at 30 ug/L. It standardizes that all new monitoring must be conducted at the entry point to the distribution system. Dawn Kristoff, president of the Water and Wastewater Equipment Manufacturers Association, Inc., points out that the best

sources. According to the EPA, the rule "establishes multiple barriers (including periodic sanitary surveys, hydrogeologic assessments, source water monitoring, correction of deficiencies and compliance monitoring) to protect against bacteria and viruses in drinking water from ground water sources and will establish a targeted strategy to identify ground water systems at high risk for fecal contamination." A finalized rule is expected in late summer 2001.

Radon

The Radon Rule, which was expected in August 2000, was delayed until sometime in mid-2001. The proposed MCL for radon is 300 pCi/L although other alternatives are being proposed and considered.

backwash
An estimated cost of \$5.84 million will affect 4,650 public water systems to comply with the finalized Filter Backwash Recycle Rule.

Arsenic Rule

At the forefront this year has been the arsenic rule. As stated earlier, the finalized rule was passed in January 2001, but delayed by the EPA until 2002, leaving the current MCL at 50 ppb until further study has been completed including research of various treatment methods such as ion exchange, reverse osmosis, lime softening and nanofiltration.

Referred to as one of the most expensive drinking water regulations, the American Water Works Association estimated that at 10 ppb the rule would have affected approximately 10 percent of the 275,000 community water systems at a cost of \$6

billion in capital outlays and \$600 million annually. The EPA reports that the final rule can be expected in 2002 and will be enforced by 2006.

MDBP Rule

The Microbial Disinfection By-Products Rule (MDBP) encompasses both the Stage 2 Disinfectants/Disinfection By-Products Rule (D/DBPR) and an associated Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), resulting from a negotiated rulemaking agreement signed in September 2000. The EPA is expected to issue a final rule in May 2002.

According to the Water Quality Association (WQA), Stage I of the D/DBR set MCLs for five haloacetic acids at 60 ppb, bromate at 10 ppb, chlorine at 4 ppm, and chloramine at 4 ppm.

arsenic
It is estimated that at 10 ppb the arsenic rule would have cost \$6 billion in capital outlays and \$600 million annually.

'Since the 1996 amendments to the SDWA, EPA has been busy developing, proposing and finalizing a host of regulatory actions. This regulatory activity peaked in 2000 and remained steady in 2001.'

– Dawn Kristoff, President, WWEMA

The Stage 2 D/DBPR reduces disinfection by-products occurrence peaks in a distribution system by “monitoring for *Cryptosporidium* and complying with maximum contaminant levels for total trihalomethanes and five haloacetic acids,” Kristoff reports. Initial evaluations of distribution systems are required for the selection of new compliance monitoring sites established to protect against *Cryptosporidium* based on a system-specific basis.

“The LT2ESWTR incorporates system-specific treatment requirements based on a microbial framework approach,” Kristoff says. Depending on source water performance, additional treatment may be necessary including ultraviolet treatment.

Chromium 6

Lastly, Senator Barbara Boxer introduced legislation designating chromium 6 as a contaminant subject to regulation under the Safe Drinking Water Act. The bill directs the National Academy of Science to conduct a study on chromium 6 and recommend an appropriate maximum contaminant level goal.

In the meantime, the WQA recommends anion exchange, reverse osmosis, distillation and electrodialysis for chromium 6 treatment.

Each of these regulations continues shaping the water treatment industry’s future and helps decide where POU/POE will fit into other water markets. **WQP**

For more information visit www.epa.gov/safewater; www.wqa.org; or www.wwema.org.