

## EPA Requires Cr6 Monitoring In New List Of Drinking Water Contaminants

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EPA is adding hexavalent chromium (Cr6) to the list of currently unregulated contaminants for which utilities must monitor, responding to calls from drinking water utilities and environmentalists that required monitoring could inform the agency's risk assessment of the metal and potential revisions to current drinking water standards.

"The utilities are interested in a good chromium standard, and understanding the occurrence of hexavalent chromium is part of having a good standard," says a source at the American Water Works Association (AWWA), which submitted comments in support of Cr6 monitoring.

The final version of the third Unregulated Contaminant Monitoring Rule list (UCMR3), scheduled to be published in the *Federal Register* May 2, also expands the number of utilities required to participate in contaminant monitoring to include drinking-water systems that purchase, rather than produce, the water they supply, as long as they serve at least 10,000 customers.

The agency is required under the Safe Drinking Water Act to list every five years no more than 30 contaminants that are believed to be widespread in drinking water but lack enforceable cleanup standards, known as maximum contaminant levels (MCLs). After three years of monitoring, EPA then uses the data in deciding whether to promulgate MCLs for those substances.

UCMR3 follows a 2011 proposal that did not formally include Cr6, but asked for public comment on whether the metal should be added to the final list after environmentalists released data showing potentially high levels of the compound in several major cities' water supplies. In an appendix to the rule, EPA says it received 28 comments in favor of the addition and only two opposed.

Utilities had previously urged EPA to await its pending risk assessment of the metal before requiring monitoring. But they later supported monitoring after the draft assessment was delayed until 2013, arguing that under the new timetable, requiring monitoring as a way to gather occurrence data will help provide EPA with a more complete picture by the time its risk assessment is completed. In subsequent statements, EPA officials agreed with that approach.

EPA does not currently regulate Cr6 as a stand-alone contaminant but instead regulates total chromium -- which includes both Cr6 and trivalent chromium (Cr3), another form of the compound that is a necessary nutrient in small doses. But environmentalists and public health activists argue Cr3 may mask Cr6's toxicity and have pushed for a separate Cr6 standard.

EPA, however, has indicated that its total chromium standard of 100 parts per billion is based on an assumption that all of the chromium is Cr6, rather than a mixture of valence states.

### Chromium Monitoring

UCMR3 requires utilities to monitor levels of both total chromium and Cr6. In an appendix to the rule, EPA says it hopes to use simultaneous monitoring of Cr6 and total chromium to generate relative occurrence data, which could allow Cr6 levels to be extrapolated from measurements of total chromium -- a process which, the appendix notes, "is less costly and has better holding time requirements."

In order to accommodate Cr6 in the UCMR list -- which is limited by statute to 30 items -- EPA dropped *sec*-butylbenzene and *n*-propylbenzene, both of which are non-carcinogenic volatile organic compounds (VOCs), from the 2011 proposal. An appendix to the rule says the agency chose to remove the VOCs after

considering state-submitted data indicating “very low occurrence rates,” which the agency described as substantially below currently available health reference levels for the compounds.

While Cr6 and total chromium are the only substances added to the list after the 2011 proposal, the agency continued to require monitoring of seven hormones that it had proposed for listing: 17- $\beta$ -estradiol, estriol, 17- $\alpha$ -ethynylestradiol (ethinyl estradiol), equilin, estrone, testosterone and 4-androstene-3,17-dione. However, the hormones were moved to the “screening survey” category, in which monitoring is only mandatory for systems serving at least 100,000 customers. Of utilities below that threshold, only 800 randomly-selected systems will be required to monitor for hormones.

“The change makes sense because of the analytical method involved” in testing for hormones, the AWWA source says, which is more practical for large systems. “It will make the data more useful, and will make it easier for the utilities to implement it in a timely fashion.”

UCMR3 also expands the number of utilities required to monitor, adding systems that have over 10,000 customers and purchase, rather than produce, the water they supply to customers.

The change is designed to improve EPA's ability to connect occurrence data with human-health effects, an appendix to the rule says, “since exposure estimates will be based on the monitoring data collected from where the water is consumed rather than where it is sold.”

The AWWA source says the group supports the change, even though requiring more systems to monitor “puts more burden on the utility community,” because expanding the universe of utilities subject to UCMR3 is expected to generate more robust occurrence data.

“One thing we saw with UCMR2, particularly with nitrosamines, is that we would have liked to see that more complete occurrence data,” the source says.

Nitrosamines, a class of chemical used in a variety of industrial processes but also a byproduct of certain drinking water disinfection processes, were among the most detected chemicals listed in UCMR2. EPA is now considering regulating the substance, a top agency official says.

Of the UCMR3 chemicals, the source continues, occurrence data from so-called “retail utilities” will be particularly useful in monitoring for chlorates, which occur as byproducts of certain kinds of disinfection.

EPA says in the rule that the addition of retail utilities is expected to require 1,200 systems to participate in UCMR3 that were previously exempt. “To help mitigate the burden,” the rule says, systems which receive water through multiple connections from the same wholesaler may select a representative connection for sampling rather than testing every connection.

The rule, which takes effect 30 days after publication, gives large systems until Oct. 31 to develop and submit a testing schedule to EPA. Monitoring will begin in January 2013. -- *David LaRoss* ([dlaross@iwpnews.com](mailto:dlaross@iwpnews.com)) This e-mail address is being protected from spambots. You need JavaScript enabled to view it )

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