Paula Wilson

From: Harold Wright <HWright@carollo.com>
Sent: Monday, December 26, 2011 4:27 PM
To: Paula Wilson
Subject: RE: Negotiated Rulemaking - Idaho Rules for Public Drinking Water Systems, Docket No. 58-0108-1101

Hi Paula

Thanks for sending this. Please see the following comments.

Section 529 06 a. My interpretation of the language here is that the UV system must be designed with at least two duty reactors sized to treat the design flow. In others words, one could not have a two reactor design where one reactor is a duty reactor sized to treat the design flowrate and a second reactor is redundant. If this is the case, recommend changing language to allow one reactor plus one redundant reactor. There are many systems in the US designed and working with this approach and the UVDGM does not restrict systems from being designed with one duty and one redundant reactor. If this is not the case, pls modify the language to clarify.

Section 529 06 a. Please clarify the statement "The system must be capable of producing the plant design capacity during any component failure prior to distribution." Not sure I understand what is being said here.

Section 529 06 c. If UVT is greater than the validated range of UVT, the UV dose monitoring algorithm should default to the maximum of the validated range. This approach provide conservative UV dose monitoring. If UVT is below the validated range, the UV system operation should be recorded as off spec.

Should have a similar section on flowrate. If less than validated range, default to validated range. If greater, then offspec.

Section 529 07 d. It is not typical with a UV system's monitoring algorithm to monitor turbidity. Please specify that this requirement is part of regular plant monitoring.

Section 529 08 e. Never heard of a high water level alarm with closed vessel systems used in drinking water. Is this a requirements taken from open channel wastewater UV applications? Suspect this is the case.

Section 529 08 e. Consider adding low UV dose, high flowrate, online UVT monitor failure, UV sensor failure.

Section 529 10 d. Lamp Breakage. Formatting needs to be fixed.

Also consider adding a section on UV design criteria: target pathogen, required log inactivation and UV dose, flowrate, UVT, lamp aging factor and fouling factor. Would recommend that design flowrate and UVT are selected to account for seasonal changes in UVT, supported by data and analysis. That fouling and lamp aging factors are supported by documentation or pilot study data.

Also, does DEQ have any issue with the validation test microbe. Some States only want to see MS2 phage. The UVDGM promotes the use of alternate test microbes whose UV dose response better matches that of Crypto and Giardia to provide more accurate and efficient UV dose monitoring. Therefore, I would recommend accepting MS2 and alternates.

Thanks for giving me the opportunity to comment.

Regards

Harold Wright
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