

From: Russell Schreiber
Sent: Thu, 25 Jul 2013 08:07:08 -0500
To: David Sloan
Cc: daniel.nix@wichitafallstx.gov; Kerry D. Maroney
Subject: Re: Removal Credit

Thanks David

Just so I completely understand the chain of events at CRMWD related to the DPR project. MF/RO were piloted and the results indicated no crypto or giardia was found in the permeate. Based on those results, TCEQ did not set any level of log removal requirements for crypto, giardia, or virus on the MF/RO treatment plant.

UV was added at a later date and the TCEQ then set a 4 log removal requirement for virus which is achieved through the UV.

Standard log removals for surface water treatment still apply with the blended source water. The blend rate is up to 20% wastewater effluent.

The crypto, giardia testing which CRMWD will begin this fall is being performed as part of the TWDB research project and will be used to try to correlate PCR testing results to an approved EPA method for Crypto/ giardia testing. It will not be used to determine if the DPR plant will be allowed to remain in operation or to set shut-down triggers for the plant.

If I have this wrong or have left any major requirement out, please let me know.

Thanks for your time David

Russell Schreiber P.E
Director of Public Works
City of Wichita Falls Texas
940 761 7477

On Wed, Jul 24, 2013 at 10:51 AM, David Sloan <DWS@freese.com> wrote:

Russell: Sorry I missed your call yesterday. I'm in Utah and my service is pretty spotty. The Crypto/Giardia testing required by the TCEQ is the standard type with its delayed results. There is a component of the pending TWDB research grant to compare PCR test methods (with near real-time results) but this would not be for compliance.

Connected by DROID on Verizon Wireless

-----Original message-----

From: Russell Schreiber <russell.schreiber@wichitafallstx.gov>
To: Daniel Nix <daniel.nix@wichitafallstx.gov>, David Sloan <DWS@freese.com>
Cc: "Kerry D. Maroney" <kdm@bmiwf.com>
Sent: Tue, Jul 23, 2013 21:31:03 GMT+00:00
Subject: Re: Removal Credit

David

I noticed that CRMWD is only now beginning to perform Crypto and Giardia testing. Can you tell us what method they are using and is it a real-time method. To be more exact, how long before the sample results are available? All the methods we are aware of that are approved by the EPA require a minimum of 2 to 4 weeks.

Thanks

Russell Schreiber P.E
Director of Public Works
City of Wichita Falls Texas
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On Fri, Jul 19, 2013 at 3:42 PM, Daniel Nix
<daniel.nix@wichitafallstx.gov<mailto:daniel.nix@wichitafallstx.gov>> wrote:
FYI

----- Forwarded message -----

From: David Sloan <DWS@freese.com<mailto:DWS@freese.com>>
Date: Fri, Jul 19, 2013 at 3:28 PM
Subject: RE: Removal Credit
To: Daniel Nix <daniel.nix@wichitafallstx.gov<mailto:daniel.nix@wichitafallstx.gov>>

We have not had explicit log removal requirements. Pilot testing showed that after MF/RO treatment, there was no detection of Crypto, Giardia or Virus. Based on that, in 2010 they considered the treatment to be adequate, provided all the pilot conditions were met. Included in that was a requirement for a free chlorine residual of 1.0 mg/l in the effluent (our source water), although it was never actually free chlorine. When we went to document the UV treatment in lieu of the free chlorine requirement, they imposed a 4-log virus inactivation requirement documented by the UV system in lieu of the free chlorine in the source water. My understanding is that the MF system can provide a 4-log Crypto removal, but that has not been an explicit requirement. We will be conducting monthly Crypto and Giardia for 24 months beginning this fall.

Obviously, in the CRMWD case, the log removals are in addition to those provided by the surface water treatment plants which receive the blended water.

David Sloan / Freese and Nichols, Inc.

From: Daniel Nix
[mailto:daniel.nix@wichitafallstx.gov<mailto:daniel.nix@wichitafallstx.gov>]
Sent: Friday, July 19, 2013 2:25 PM
To: David Sloan
Subject: Removal Credit

Can you tell me what the TCEQ is requiring for log removal of Cryptosporidium, Giardia and Virus at Big Spring?

For us (so far) they are requiring 5.5 log removal of Cryptosporidium, 7 log for Giardia and 9 log for Virus.

How did the TCEQ set the log removals for Big Spring? Was it based on historical concentrations coming out of the Wastewater Effluent?

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Daniel K. Nix
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Those who have the privilege to know have the duty to act. ~Albert Einstein

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