

From: Craig Stowell
Sent: Thu, 23 Apr 2015 14:55:48 +0000
To: David Sloan
Cc: Joel Klumpp; Vera Poe; Marlo Berg; Russell Schreiber (Wichita Falls); Daniel Nix (Wichita Falls); Mark Southard (mark.southard@wichitafallstx.gov)
Subject: RE: Wichita Falls DPR UV Alarm & Shutdown Triggers

David, I am not seeing the following in any of the SOPs and the alarm and shutdown conditions. Please incorporate as appropriate:

- a. The City must provide at least a 3.0-log inactivation of *Cryptosporidium* through the use of UV. If the City produces off-spec water for more than four (4) consecutive hours during a day or for more than 5% of the water produced during a month, the reactor must be taken off line and the reactors must be inspected and, if necessary, repaired. The UV unit is considered to be operating off-spec when:
 - (1) The validated dose falls below the dose needed to achieve 3.0-log inactivation of *Cryptosporidium*,
 - (2) the reactor operates at a flow rate that exceeds 25.6 MGD
 - (3) the UV transmittance of the water falls below 70%, or
 - (4) one or more of the lamps is inoperable.

Reporting conditions for WF

- a. The UV intensity as measured by a UV sensor, lamp status, flow rate through the unit, UV transmittance, and lamp power continuously and record the results every 15 minutes in accordance with 30 TAC §290.111(d)(2)(A).
 - 1. If the reactor is operated at flow below 1.0 MGD, the calculated validated dose (D_{val}) value must be based on 1.0 MGD
 - 2. If the UVT of the water being treated by the UV reactor exceeds 98%, the D_{val} value must be based on 98%.
- b. The total amount of water treated by each UV unit each month
- c. The total amount of water produced each month when the UV unit is not operating within validated conditions (off-spec) in accordance with 30 TAC §290.111(d)(3)(B).
- d. The continuous time each day that the UV unit is not operating with validated conditions (off-spec).

Thanks,

Craig A. Stowell, P.E.

Texas Commission on Environmental Quality

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From: David Sloan [mailto:DWS@freese.com]
Sent: Wednesday, April 22, 2015 1:37 PM
To: Craig Stowell
Cc: Joel Klumpp; Vera Poe; Marlo Berg; Russell Schreiber (Wichita Falls); Daniel Nix (Wichita Falls); Mark Southard (mark.southard@wichitafallstx.gov)
Subject: Wichita Falls DPR UV Alarm & Shutdown Triggers

Craig: I am attaching Draft Version 5.4 of the Wichita Falls *DPR Alarm and Shutdown Triggers* document.

Please note the additions for the UV system on pages 35-38. The following items have been added:

1. Low permeate (UV) flow (<1 MGD)
2. Low UVT value (<70%)
3. Low UV Lamp Ballast Power (<30%)
4. Low Validated Dose (<12) [in lieu of RED value]

Please let me know if you have any questions or need additional information.

Best regards,

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