

From: Marlo Berg
Sent: Fri, 24 Apr 2015 04:27:47 +0000
To: David Sloan; Craig Stowell
Cc: Joel Klumpp; Vera Poe; Russell Schreiber (Wichita Falls); Daniel Nix (Wichita Falls); Mark Southard (mark.southard@wichitafallstx.gov)
Subject: Re: Wichita Falls DPR UV Alarm & Shutdown Triggers

Great I will call you in the morning

Sent using OWA for iPhone

From: David Sloan <DWS@freese.com>
Sent: Thursday, April 23, 2015 4:38:06 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: RE: Wichita Falls DPR UV Alarm & Shutdown Triggers

Craig: The City has prepared an additional SOP document to address monitoring provisions, consistent with the SWMOR-Alt documentation they are providing. I am attaching a copy of this document. They have also updated the Alarm & Shutdown Triggers document as attached to reference the monitoring SOP. If there are still any missing points, please give me a call so I can be sure I understand what is needed. Thanks.

Best regards,

DAVID SLOAN / FREESE AND NICHOLS, INC.

From: Craig Stowell [mailto:Craig.Stowell@tceq.texas.gov]
Sent: Thursday, April 23, 2015 9:56 AM
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
Water Supply Division
Utilities Technical Review Team, MC-159
P.O. Box 13087
Austin, Texas 78711-3087
Tel. 512-239-4633

How is our customer service? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey.

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,

DAVID W. SLOAN, P.E., BCEE
SENIOR PROCESS ENGINEER
BOARD CERTIFIED ENVIRONMENTAL ENGINEER



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