

From: [Joel Klumpp](#)
To: [Daniel Nix](#)
Cc: [Linda Brookins](#); [Kerry D. Maroney](#); [Russell Schreiber](#); [Ada Lichaa](#); [Vera Poe](#)
Subject: [Wichita Falls]: rtPCR Method
Date: Thursday, August 15, 2013 5:51:31 PM
Attachments: [~WRD000.jpg](#)
[Requested CT Templates.msg](#)
[California Challenge Study.msg](#)
[Recent Virus Results.msg](#)
[rtPCR Method.msg](#)
[image001.jpg](#)

Daniel,

Thank you for this email. The TCEQ project team will review the information you have provided. I also acknowledge receipt of your emails with information on:

- CT Study Templates;
- California Challenge Study for the City's MF Membranes; and
- Recent Virus Results.

Joel

Joel Klumpp | Team Leader | Technical Review and Oversight Team | TCEQ

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From: Daniel Nix [mailto:daniel.nix@wichitafallstx.gov]
Sent: Thursday, August 15, 2013 4:02 PM
To: Linda Brookins; Joel Klumpp; Kerry D. Maroney; Russell Schreiber
Subject: rtPCR Method

Joel,

Attached is the City's response to the TCEQ's request for information on the rtPCR Method that is being evaluated for use during the DPR.

The SOP is a brief synopsis of where we are in the development of a procedure. We have just only recently (within the last 2 weeks) started to make advances in getting the PCR to produce quantitative results. We have had to combine several different methods into one that will work for the wastewater effluent.

This SOP is a living document and will change to reflect future advancements in our knowledge and procedural protocols. The SOP as it is currently written, answers your inquiries for 1) Detailed information on the analytical method and QA/QC methods being used, and 2) Test equipment required.

I have also attached several documents that are referenced in our SOP, so that you can see where we are getting our information and references from.

As for "Staff Training" and "Lab Accreditation", there is no specific training or accreditation that is available for this method.

Mark Southard, our Water Purification Superintendent, has been trained by the PCR

manufacturer on the unit and methods for qualitative analysis. He has in turn, trained the current laboratory staff. As we refine the SOP, the lab staff will be trained on those changes.

The Wichita Falls Water Purification Lab currently has NELAP Certification (Certificate #T104704384-13-4, attached) for its microbiological lab, as it relates to the Bacteriological testing for compliance with the Total Coliform Rule. However, this does not translate to the PCR analysis.

Linda Brookins had indicated to Russell that the TCEQ would like to see some of the results from the rtPCR. Unfortunately, because we have only just recently been able to work past the effluent inhibitors and started getting results, we do not have any quantitative results to send, yet. When we are comfortable that the procedure is working and we have some results, we will forward them. Also, we plan on conducting a dual rtPCR/EPA Method 1623 sampling next week to see if the methods are comparable. We should be able to report that data to you by the week of September 2nd.

I hope this is adequate to answer your questions related to the City's use of rtPCR as a process control method during the DPR. Let me know if you have any further questions.

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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