**TSC Methods Approval Q & A**

**AWOP National Meeting**

**July 19 – 21, 2021**

1. **Nancy Feagin – As plants install laser turbidimeters their measurements drop by one to two hundredths. Why?**

* The lasers can measure smaller particles so we would expect a higher result. We could eval­uate it. It is difficult to diagnose what the issue is. It is important to evaluate the instrument, not the unit, so from one instrument to another you might get two different readings. There is no way to say if the old reading was too high. When you change technologies there are differences. In the *chat*, Michigan, Virginia, Alabama, and Pennsylvania all reported similar experiences to what Nancy has seen in Washington; when switching to laser instruments the values went down.

1. **Nancy Feagin – Regarding ITS chlorine test strips, the state of Washington allowed sys­tems to use these once they were approved. When we tested them, we found they were not very reliable. Can you take back an approval, or how does the field aspect impact approvability?**

* Steve Wendelken: In the CFR approval, there was a comment that said, *“if accepted by the state.”* There was a discussion about color wheels and these test strips, and there were some concerns, but there may have been some political aspects to this approval. The state has the option to not approve the test strips if they don’t feel that they are reliable. Greg Carroll recalled that there were some indications that the test strips did not work that well at the time of approval, so this could be reviewed.

1. **Evan Hofeld – Under LT2, systems installing membranes plants need to have an upper control limit (or LRV) to test membrane integrity. Have there been methods developed to test pressure measurements/instruments that are related to pressure decay/LRV.**

* Rick responded that this parameter doesn’t fit within the analytical methods followed by the group.

1. **What are your thoughts on infrared as a light source?**

* It is allowed in Europe, but at EPA we have not allowed it because we have not found that it is measuring particles in the same size range as other light sources. In Europe they are really measuring tannins in some sources which may give an indication of turbidity.
* Evan reported that USGS uses these types of light sources for their in-situ probes, and they published a paper explaining that they are just as accurate as NTU instruments if they are calibrated on the same standard, but once you add organics into the mix they become less accurate. They may be useful for some raw water monitoring if organic loading is light.
* Roy Robertson: We have seen a hand-held device that uses LED similar to the Hach LED hand-held. However, the wavelength was a little different, so it did not follow the approved EPA method, and we had to tell the system to get another. It was a shame because it was a fraction of the cost.