Inline System Calibration and Verification Policy
(NC WW/GW LC Branch 09/22/2021)

Based on guidance from the Enforcement & Compliance Assurance Division at USEPA Region 4, daily calibration and/or verification is required unless the approved method specifically states that less frequent calibrations and/or verifications are allowed.

Reclaimed water permits are not under the purview of the EPA. Requirements associated with those permits are solely under the purview of State regulatory agencies. Inline meters used in conjunction with reclaimed water permits shall be calibrated and/or verified according to the procedures below except that the frequency will be annually, instead of daily.

pH: Inline pH meters must be calibrated, if possible, daily with certified pH buffers. Direct calibrations must be verified as described in the "North Carolina Wastewater/Groundwater Laboratory Certification Approved Procedure for the Analysis of pH" document. If direct calibration is not possible due to the configuration of the meter, daily calibration verification must be performed by analyzing a sample from a bleed line or the outflow with a calibrated hand-held or benchtop meter and comparing results to the inline reading. Readings must agree within ± 0.5 S.U.

Conductivity: Inline conductivity meters must be calibrated, if possible, daily with standards. Direct calibrations must be verified as described in the "North Carolina Wastewater/ Groundwater Laboratory Certification Approved Procedure for the Analysis of Conductivity" document. If direct calibration is not possible due to the configuration of the meter, daily calibration verification must be performed by analyzing a sample from a bleed line or the outflow with a calibrated hand-held or benchtop meter and comparing results to the inline reading. Readings must agree within ± 20%.

Turbidity: Inline turbidimeters must be calibrated, if possible, daily with Primary standards or Secondary sealed standards. Direct calibrations must meet the meter manufacturer's acceptance criteria, if available. If no acceptance criteria are available, the laboratory must establish performance acceptance criteria. If direct calibration is not possible due to the configuration of the meter, daily calibration verification must be performed by analyzing a sample from a bleed line or the outflow with a calibrated hand-held or benchtop turbidimeter and comparing results to the inline reading. Readings must agree within ± 20%.

Total Residual Chlorine (TRC): Inline TRC meter calibrations must be verified with 5 standards, every 12 months. Verifications must adhere to acceptance criteria described in the "North Carolina Wastewater/Groundwater Laboratory Certification Approved Procedure for the Analysis of Total Residual Chlorine (DPD Colorimetric)" document. Daily calibration verification must also be performed by analyzing a standard or analyzing a sample from a bleed line or the outflow with a calibrated hand-held or benchtop TRC meter and comparing results to the inline reading. Standard concentrations must read within 10% of the true value. Sample concentrations from the inline meter and calibrated hand-held or benchtop meter must agree within ± 20%.

Amperometric probe meters often used in drinking water processes are not an approved inline meter type for compliance sample analysis.