NC DEQ/DWR WASTEWATER/GROUNDWATER LABORATORY CERTIFICATION

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| LABORATORY NAME: |  | | CERT #: |  |
| PRIMARY ANALYST: |  | | DATE: |  |
| NAME OF PERSON COMPLETING CHECKLIST (PRINT): | |  | | |
| SIGNATURE OF PERSON COMPLETING CHECKLIST: | |  | | |

Parameter: **Specific Conductance (Conductivity)**

Method: **SM 2510 B-2011**

Equipment:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Conductivity meter (type): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  | Conductivity standards:  Value: \_\_\_\_\_\_\_\_\_\_ Exp: \_\_\_\_\_\_\_\_\_  Value: \_\_\_\_\_\_\_\_\_\_ Exp: \_\_\_\_\_\_\_\_\_  (if needed)  Value: \_\_\_\_\_\_\_\_\_\_ Exp: \_\_\_\_\_\_\_\_\_ |  |  |
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| **PLEASE COMPLETE CHECKLIST IN INDELIBLE INK**  **Please mark Y, N or NA in the column labeled LAB to indicate the common lab practice**  **and in the column labeled SOP to indicate whether it is addressed in the SOP.** | | | | |
|  | **GENERAL** | **LAB** | **SOP** | **EXPLANATION** | |
|  | Is the SOP reviewed at least every 2 years? What is the most recent review/revision date of the SOP? [Non-field: 15A NCAC 2H .0805 (a) (7)] [Field: 15A NCAC 2H .0805 (g) (4)] |  |  | **Date:**  Quality assurance, quality control, and Standard Operating Procedure documentation shall indicate the effective date of the document and be reviewed every two years and updated if changes in procedures are made.  Verify proper method reference. During review notate deviations from the approved method and SOP. | |
|  | Are all review/revision dates and procedural edits tracked and documented? [Non-field: 15A NCAC 2H .0805 (a) (7)] [Field: 15A NCAC 2H .0805 (g) (4)] |  |  | Each laboratory shall have a formal process to track and document review dates and any revisions made in all quality assurance, quality control and SOP documents. | |
|  | Has the laboratory developed and implemented a documented training program? [Non-field: 15A NCAC 2H .0805 (a) (7) (P)] [Field: 15A NCAC 2H .0805 (g) (5)] |  |  | Each laboratory shall develop and implement a documented training program that includes documentation that:  (i) [or (A)] that staff have the education, training, experience, or demonstrated skills needed to generate quality control results within method-specified limits and that meet the requirements of these Rules;  (ii) [or (B)] that staff have read the laboratory quality assurance manual or applicable Standard Operating Procedures;  (iii) [or (C)] that staff have obtained acceptable results on Proficiency Testing samples pursuant to Rule .0803(1) of this Section or other demonstrations of proficiency (e.g., side-by-side comparison with a trained analyst, acceptable results on a single-blind performance evaluation sample, an initial demonstration of capability study prescribed by the reference method). | |
|  | Is there North Carolina data available for review? |  |  | If not, review PT data | |
|  | Are ALL analytical records, including original observations maintained for 5 years? [Non-field: 15A NCAC 2H .0805 (a) (7) (E)]  [Field:15A NCAC 2H .0805 (g) (1)] |  |  |  | |
|  | Are all manual data and log entries written in indelible ink? [Non-field:15A NCAC 2H .0805 (a) (7) (E)]  [Field:15A NCAC 2H .0805 (g) (1)] |  |  |  | |
|  | Are error corrections performed properly? [Non-field:15A NCAC 2H .0805 (a) (7) (E)] [Field:15A NCAC 2H .0805 (g) (1)] |  |  | All documentation errors shall be corrected by drawing a single line through the error so that the original entry remains legible. Entries shall not be obliterated by erasures or markings. Wite-Out®, correction tape, or similar products designed to obliterate documentation shall not to be used; instead, the correction shall be written adjacent to the error. The correction shall be initialed by the responsible individual and the date of change documented. | |
|  | Are the following items documented with each analysis?  [Non-field:15A NCAC 2H .0805 (a) (7) (F)]  [Field:15A NCAC 2H .0805 (g) (2)] |  |  |  | |
|  | The method or SOP reference |  |  |  | |
|  | Laboratory identification |  |  |  | |
|  | Instrument identification |  |  |  | |
|  | Sample collector |  |  |  | |
|  | Signature or initials of the analyst |  |  |  | |
|  | Date of sample collection |  |  |  | |
|  | Time of sample collection |  |  |  | |
|  | Date of sample analysis |  |  |  | |
|  | Sample identification |  |  |  | |
|  | Proper units of measure |  |  |  | |
|  | Final value to be reported |  |  |  | |
|  | Facility ID or Permit number [Approved Procedure for the Analysis of Specific Conductance] |  |  |  | |
|  | Parameter analyzed [Approved Procedure for the Analysis of Specific Conductance] |  |  |  | |
|  | **PRESERVATION and STORAGE** | **LAB** | **SOP** | **EXPLANATION** | |
|  | If not analyzed within 15 minutes, is the sample transported and stored ≤ 6°C, without freezing? [40 CFR Part 136.3, Table II and footnote 2] |  |  |  | |
|  | Is the sample analyzed within 28 days of collection? [40 CFR Part 136.3, Table II and footnote 2] |  |  |  | |
|  | **PROCEDURE – Meter Calibration** | **LAB** | **SOP** | **EXPLANATION** | |
|  | Is the meter calibrated daily before sample analysis? [Approved Procedure for the Analysis of Specific Conductance] |  |  | Use manufacturer instructions, but at least one standard must be used for calibration | |
|  | What standard concentration is used for meter calibration?  **Standard:** |  |  |  | |
|  | **PROCEDURE – Sample Analysis** | **LAB** | **SOP** | **EXPLANATION** | |
|  | Is the conductivity cell thoroughly rinsed with one or more portions of sample before sample measurements? [Approved Procedure for the Analysis of Specific Conductance] |  |  |  | |
|  | Are conductivity samples ever diluted? [Approved Procedure for the Analysis of Specific Conductance] |  |  | Conductivity samples must not be diluted | |
|  | **QUALITY ASSURANCE** | **LAB** | **SOP** | **EXPLANATION** | |
|  | Is a second-source calibration verification check-standard analyzed after meter calibration, before sample analysis? [Approved Procedure for the Analysis of Specific Conductance] |  |  |  | |
|  | What is the true value of the check standard?  **Check standard value:** |  |  |  | |
|  | Is the acceptance criterion for the calibration verification check-standard ±10% of true value? [Approved Procedure for the Analysis of Specific Conductance] |  |  |  | |
|  | What corrective action is taken if the check standard does not meet the acceptance criterion? [Non-field: 15A NCAC 2H .0805 (a) (7) (B)] [Field: 15A NCAC 2H .0805 (g) (8)] |  |  |  | |
|  | If multiple samples are analyzed, is a post-analysis calibration verification check-standard analyzed following the last sample? [Approved Procedure for the Analysis of Specific Conductance] |  |  |  | |
|  | Is the acceptance criterion for the calibration verification check-standard ±10% of true value? [Approved Procedure for the Analysis of Specific Conductance] |  |  |  | |
|  | What corrective action is taken if the calibration verification check-standard does not meet the acceptance criterion? [Non-field: 15A NCAC 2H .0805 (a) (7) (B)] [Field: 15A NCAC 2H .0805 (g) (8)] |  |  |  | |
|  | Is the Automatic Temperature Compensator (ATC) checked initially and every 12 months? [Approved Procedure for the Analysis of Specific Conductance] |  |  |  | |
|  | What temperatures are used for the (ATC) verification? [Approved Procedure for the Analysis of Specific Conductance]  **Temperatures:** |  |  | One sample or standard must be measured at 25 °C. The other temperature(s) must bracket the range of temperatures of compliance samples throughout the year. This means a third temperature above 25°C may be necessary. | |
|  | What were the values for the standard or sample during the ATC verification?  **Standard/sample values:** |  |  |  | |
|  | What is the acceptance criterion for the standard or sample during the ATC verification? [Approved Procedure for the Analysis of Specific Conductance]  **Acceptance criterion:** |  |  | As the temperature increases or decreases, the value of the conductivity standard or sample must be within 10% of the true value of the standard or 10% of the value of the sample at 25°C. | |
|  | Is the data qualified on the Discharge Monitoring Report (DMR) or client report if Quality Control (QC) requirements are not met?[Non-field: 15A NCAC 2H .0805 (a) (7) (B)] [Field: 15A NCAC 2H .0805 (g) (8)] |  |  |  | |

Additional Comments:

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Inspector: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_