

#### **10A NCAC 42D .0259 RADIOCHEMISTRY QUALITY CONTROL**

Requirements for quality control of radiochemical analyses shall be as follows:

- (1) Quality control data and records shall be available for inspection.
- (2) The laboratory shall participate at least twice each year in those EPA laboratory intercomparison studies that include each of the analyses for which the laboratory is, or wants to be, certified. Analytical results shall be within control limits described in "Environmental Radioactivity Laboratory Intercomparison Studies" Program-FY-1977 (EPA-600/4-77-001), which is hereby incorporated by reference including any subsequent amendments and editions. A copy is available for inspection at the Division of Public Health, 1915 Mail Service Center, Raleigh, North Carolina 27699-1915. A copy may be obtained by contacting the EPA Office of Research and Development at 513-569-7562 at no charge.
- (3) The laboratory shall participate once each year in an appropriate unknown performance study administered by EPA. Analytical results shall be within control limits established by EPA for each analysis for which the laboratory is, or wants to be, certified.
- (4) Operating manuals and calibration protocols for counting instruments shall be available to analysts and technicians.
- (5) Calibration data and maintenance records on all radiation instruments and analytical balances shall be maintained in a permanent record.
- (6) The following specifications shall be included in minimum daily quality control:
  - (a) To verify internal laboratory precision for a specific analysis, a minimum of 10 percent duplicate analyses shall be performed. The difference between duplicate measurements shall be less than two times the standard deviation of the specific analysis as described in EPA-600/4-77-001. If the difference exceeds two standard deviations, calculations and procedures shall be examined, and samples shall be reanalyzed.
  - (b) When 20 or more specific analyses are performed each day, a performance standard and a background sample shall be measured with each 20 samples. If less than 20 specific analyses are performed in any one day, a performance standard and a background sample shall be measured along with the samples.
  - (c) Quality control performance charts, or performance records, shall be available for inspection.

*History Note:* Authority G.S. 130A-315;  
Eff. December 1, 1991;  
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 23, 2017.