

15A NCAC 02L .0413 ANALYTICAL PROCEDURES FOR GROUNDWATER SAMPLES

(a) Analytical procedures for groundwater samples required under this Section shall be methods accepted by the US EPA as suitable for determining the presence and concentration of petroleum hydrocarbons for the type of petroleum released.

(b) Groundwater samples, including the most contaminated sample, shall be analyzed as follows in order to determine the risks of the constituents of contamination:

- (1) groundwater samples collected from a discharge or release of low boiling point fuels, including gasoline, aviation gasoline, and gasohol, shall be analyzed for volatile organic compounds, including xylenes, isopropyl ether, and methyl tertiary butyl ether, using Standard Method 6200B or EPA Methods 601 and 602. Samples shall also be analyzed for ethylene dibromide using EPA Method 504.1 and lead using Standard Method 3030C preparation. 3030C metals preparation, using a 0.45 micron filter, shall be completed within 72 hours of sample collection;
- (2) groundwater samples collected from a discharge or release of high boiling point fuels, including kerosene, diesel, varsol, mineral spirits, naphtha, jet fuels, and fuel oil no. 2, shall be analyzed for volatile organic compounds using EPA Method 602 and semivolatile organic compounds plus the 10 largest non-target peaks identified using EPA Method 625;
- (3) groundwater samples collected from a discharge or release of heavy fuels shall be analyzed for semivolatile organic compounds plus the 10 largest non-target peaks identified using EPA Method 625;
- (4) groundwater samples collected from a discharge or release of used or waste oil shall be analyzed for volatile organic compounds using Standard Method 6200B, semivolatile organic compounds plus the 10 largest non-target peaks identified using EPA Method 625, and chromium and lead using Standard Method 3030C preparation. 3030C metals preparation, using a 0.45 micron filter, shall be completed within 72 hours of sample collection;
- (5) groundwater samples collected from a discharge or release subject to this Section shall be analyzed for alkane and aromatic carbon fraction classes using methods approved by the Director under 15A NCAC 02H .0805(a)(1);
- (6) analytical methods specified in Subparagraphs (1), (2), (3) and (4) of this Paragraph shall be performed as specified in the following references or the most recent version of these references:
 - (A) Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act, 40 CFR Part 136, is incorporated by reference and may be obtained electronically free of charge from the United States Environmental Protection Agency website at <https://www.epa.gov/cwa-methods>;
 - (B) Standard Methods for the Examination of Water and Wastewater, published jointly by American Public Health Association, American Water Works Association and Water Pollution Control Federation, is incorporated by reference and is available for purchase from the American Water Works Association (AWWA), 6666 West Quincy Avenue, Denver, CO 80235 for a charge of one hundred sixty dollars (\$160.00) for the 18th Edition, one hundred eighty dollars (\$180.00) for the 19th Edition, and two hundred dollars (\$200.00) for the 20th Edition; or
 - (C) in accordance with methods or procedures approved by the Director under 15A NCAC 02H .0805(a)(1);
- (7) other EPA-approved analytical methods may be used if the methods include the same constituents as the analytical methods specified in Subparagraphs (1), (2), (3), and (4) of this Paragraph and meet the detection limits of the analytical methods specified in Subparagraphs (1), (2), (3), and (4) of this Paragraph; and
- (8) metals and acid extractable organic compounds shall be eliminated from analyses of groundwater samples collected pursuant to this Section if these compounds are not detected in the groundwater sample collected from the source area monitoring well installed pursuant to Rule .0405 of this Section.

History Note: Authority G.S. 143-215.2; 143-215.3(a)(1); 143-215.94A; 143-215.94E; 143-215.94T; 143-215.94V; 143B-282; 1995 (Reg. Sess. 1996) c. 648, s. 1; Recodified from 15A NCAC 02L .0115(o); Amended Eff. December 1, 2005; Readopted Eff. June 1, 2019.

