RECAP: Determination of Fraction of Organic Carbon (foc) by ASTM Method D2974

ASTM Method D2974, Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils, is used to determine the **percent organic matter** within soil and sediment. The ash content is determined by igniting the oven-dried sample in a muffle furnace. The substance remaining after ignition is the ash. Percent organic matter is determined by subtracting percent ash content from one hundred.

It has come to the Department's attention that the results of ASTM Method D2974 are not being reported in a consistent manner by analytical laboratories. This inconsistency is resulting in confusion in the interpretation of the analytical results and the appropriate determination of the site-specific fraction of organic carbon by LDEQ staff and environmental consultants.

It is the Department's preference that the **analytical laboratory** report the results of the analysis as **Organic Matter** in units of **percent (%)** in accordance with ASTM Method D2974.

- The results of the analysis should not be reported as fraction of organic carbon in units of percent.
- The results of the analysis should not be divided by 1.74 or any other value prior to reporting.
- The results of the analysis should be reported on a dry weight basis.
- The Chain of Custody Form submitted to the laboratory should request ASTM D 2974, not foc.

The **user** of the analytical results should divide the percent organic matter as obtained by ASTM D2974 by 174 to convert to fraction of organic carbon for use in site-specific RECAP assessments.

$$foc = \frac{Organic\ \ Matter\ \ (\%)}{174\ .0}$$

RECAP submittals should provide the results of method ASTM D2974 and the conversion of the reported organic matter percent to fraction of organic carbon.