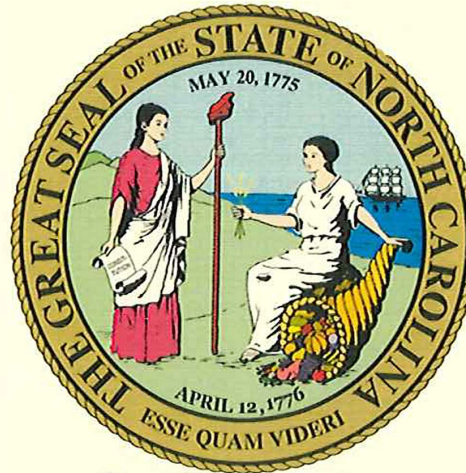


# DIVISION OF WATER RESOURCES LABORATORY CERTIFICATION BRANCH

*In accordance with the provisions of N.C.G.S. 143-215.3 (a) (1), 143-215.3 (a)(10) and NCAC 2H.0800:*



# 2021

## Air Water & Soil an Enthalpy Analytical Laboratory

*Is hereby certified to perform environmental analysis as listed on Attachment I and report monitoring data to DEQ for compliance with NPDES effluent, surface water, groundwater, and pretreatment regulations.*

*By reference 15A NCAC 2H .0800 is made a part of this certificate.*

*This certificate does not guarantee validity of data generated, but indicates the methodology, equipment, quality control procedures, records, and proficiency of the laboratory have been examined and found to be acceptable.*

*This certificate shall be valid until 12/31/2021*

Certificate No. 495

A handwritten signature in black ink that reads "Todd Crawford".

Todd Crawford

# North Carolina Wastewater/Groundwater Laboratory Certification

## Certified Parameters Listing

Lab Name: Air Water & Soil an Enthalpy Analytical Laboratory  
Address: 1941 Reymet Road  
Richmond, VA 23237-

Certificate Number: 495  
Effective Date: 1/1/2021  
Expiration Date: 12/31/2021  
Date of Last Amendment: 1/11/2021

The above named laboratory, having duly met the requirements of 15A NCAC 2H.0800, is hereby certified for the measurement of the parameters listed below.

### CERTIFIED PARAMETERS

#### INORGANIC

##### ALKALINITY

SM 2320 B-2011 (Aqueous)

##### BACTERIA - COLIFORM FECAL

SM 9221C E-2006 (MPN) (Aqueous)

##### BOD

SM 5210 B-2011 (Aqueous)

SM 5210 B-2011 (LDO) (Aqueous)

##### BROMIDE

EPA 300.0, Rev. 2.1, 1993 (Aqueous)

SW-846 9056 A (Aqueous)

##### CBOD

SM 5210 B-2011 (Aqueous)

SM 5210 B-2011 (LDO) (Aqueous)

##### CHLORIDE

EPA 300.0, Rev. 2.1, 1993 (Aqueous)

EPA 300.0, Rev. 2.1, 1993 (Non-Aqueous)

SW-846 9056 A (Aqueous)

SW-846 9056 A (Non-Aqueous)

##### COD

SM 5220 D-2011 (Aqueous)

##### CONDUCTIVITY

EPA 120.1, Rev. 1982 (Aqueous)

SM 2510 B-2011 (Aqueous)

SW-846 9050 A (Aqueous)

##### CYANIDE

Lachat 10-204-00-1-X, Rev. 2.2, 2005 (SM 4500 CN E -2011 Automated) (Total) (Aqueous)

##### FLASH POINT

SW-846 1010 B (D93-80) (Aqueous)

##### FLUORIDE

EPA 300.0, Rev. 2.1, 1993 (Aqueous)

##### HARDNESS TOTAL - METALS

SM 2340 B-2011 (Ca EPA 200.7, Rev. 4.4, 1994 + Mg EPA 200.7, Rev. 4.4, 1994) (Aqueous)

SM 2340 B-2011 (Ca SM 3120B-2011 + Mg SM 3120B-2011) (Aqueous)

#### INORGANIC PHENOLS

EPA 420.1, Rev. 1978 (Aqueous)

#### NITROGEN, AMMONIA

EPA 350.1, Rev. 2.0, 1993 (Aqueous)

#### NITROGEN, NITRATE

EPA 300.0, Rev. 2.1, 1993 (Aqueous)

SW-846 9056 A (Non-Aqueous)

#### NITROGEN, NITRITE

EPA 300.0, Rev. 2.1, 1993 (Aqueous)

EPA 300.0, Rev. 2.1, 1993 (Non-Aqueous)

SW-846 9056 A (Aqueous)

SW-846 9056 A (Non-Aqueous)

#### NITROGEN, TOTAL KJELDAHL

EPA 351.2, Rev. 2.0, 1993 (Aqueous)

#### OIL & GREASE

EPA 1664 Rev. B (Aqueous)

#### ORGANIC CARBON, TOTAL

SM 5310 C-2011 (UV Oxidation) (Aqueous)

SW-846 9060 A (UV Oxidation) (Aqueous)

#### PAINT FILTER LIQUIDS

SW-846 9095B

#### pH

SW-846 9045 D (Non-Aqueous)

#### PHOSPHORUS, TOTAL

SM 4500 P E-2011 (Aqueous)

#### RESIDUE, DISSOLVED 180 C

SM 2540 C-2011 (Aqueous)

#### RESIDUE, SETTLEABLE

SM 2540 F-2011 (Aqueous)

#### RESIDUE, SUSPENDED

SM 2540 D-2011 (Aqueous)

#### RESIDUE, TOTAL

SM 2540 B-2011 (Aqueous)

#### SILICA - METALS

# North Carolina Wastewater/Groundwater Laboratory Certification

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### CERTIFIED PARAMETERS

EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
**SULFATE**  
EPA 300.0, Rev. 2.1, 1993 (Aqueous)  
EPA 300.0, Rev. 2.1, 1993 (Non-Aqueous)  
SW-846 9056 A (Aqueous)  
SW-846 9056 A (Non-Aqueous)  
**SULFIDE**  
SM 4500 S<sup>2-</sup> F-2011 (Aqueous)  
SW-846 9034 (Aqueous)  
**TURBIDITY**  
SM 2130 B-2011 (Aqueous)  
**METAL**  
**ALUMINUM**  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
**ANTIMONY**  
SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
EPA 200.9, Rev. 2.2, 1994 (Aqueous)  
**ARSENIC**  
SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)

SW-846 6020 B (Non-Aqueous)  
EPA 200.9, Rev. 2.2, 1994 (Aqueous)  
**BARIUM**  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
**BERYLLIUM**  
SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
EPA 200.9, Rev. 2.2, 1994 (Aqueous)  
**BORON**  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
**CADMIUM**  
SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
EPA 200.9, Rev. 2.2, 1994 (Aqueous)  
**CALCIUM**  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)

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### CERTIFIED PARAMETERS

SW-846 6010 D (Non-Aqueous)  
CHROMIUM HEXAVALENT  
SM 3500-Cr-B-2011 (Aqueous)  
SW-846 7196 A (Aqueous)  
SW-846 7196 A (Non-Aqueous)  
CHROMIUM TOTAL  
SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
COBALT  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
COPPER  
SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
EPA 200.9, Rev. 2.2, 1994 (Aqueous)  
IRON  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
LEAD

SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
EPA 200.9, Rev. 2.2, 1994 (Aqueous)  
LITHIUM  
SW-846 6010 D (Aqueous)  
SW-846 6020 B (Aqueous)  
MAGNESIUM  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
MANGANESE  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
MERCURY  
EPA 245.1, Rev. 3.0, 1994 (Aqueous)  
SW-846 7470 A (Aqueous)  
SW-846 7471 B (Non-Aqueous)  
MOLYBDENUM  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
NICKEL

# North Carolina Wastewater/Groundwater Laboratory Certification

## Certified Parameters Listing

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### CERTIFIED PARAMETERS

SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
EPA 200.9, Rev. 2.2, 1994 (Aqueous)

#### POTASSIUM

EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)

#### SELENIUM

SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
EPA 200.9, Rev. 2.2, 1994 (Aqueous)

#### SILVER

EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)

#### SODIUM

EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)

#### STRONTIUM

SW-846 6010 D (Aqueous)

SW-846 6010 D (Non-Aqueous)

#### THALLIUM

SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
EPA 200.9, Rev. 2.2, 1994 (Aqueous)

#### TIN

SW-846 7010 (Aqueous)  
EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
EPA 200.9, Rev. 2.2, 1994 (Aqueous)

#### TITANIUM

EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)

#### VANADIUM

EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)

#### ZINC

EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
SW-846 6010 D (Aqueous)  
SW-846 6010 D (Non-Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)

# North Carolina Wastewater/Groundwater Laboratory Certification

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### CERTIFIED PARAMETERS

SW-846 6020 B (Aqueous)

SW-846 6020 B (Non-Aqueous)

SW-846 8015 C (Aqueous)

SW-846 8015 C (Non-Aqueous)

#### ORGANIC

1,2, DIBROMOETHANE (EDB)

SW-846 8011 (Includes DBCP) (Aqueous)

BASE NEUTRAL/ACID, ORGANICS

EPA 625.1 (Aqueous)

SW-846 8270 E (Aqueous)

SW-846 8270 E (Non-Aqueous)

CHLORINATED ACID HERBICIDES

SW-846 8151 A (Aqueous)

SW-846 8151 A (Non-Aqueous)

EXTRACTABLE PETROLEUM HYDROCARBONS

MADEP, December 2019, Rev. 2.1 (Aqueous)

MADEP, December 2019, Rev. 2.1 (Non-Aqueous)

PESTICIDES, ORGANOCHLORINE

EPA 608.3 (Aqueous)

SW-846 8081 B (Aqueous)

SW-846 8081 B (Non-Aqueous)

POLYCHLORINATED BIPHENYLS (PCBs)

EPA 608.3 (Aqueous)

SW-846 8082 A (Aqueous)

SW-846 8082 A (Non-Aqueous)

SW-846 8082 A (Oil)

PURGEABLE, ORGANICS

EPA 624.1 (Aqueous)

SW-846 8260 D (Aqueous)

SW-846 8260 D (Non-Aqueous)

TOTAL ORGANIC HALIDES

SW-846 9020 B (Aqueous)

TPH DIESEL RANGE, ORGANICS

SW-846 8015 C (Aqueous)

SW-846 8015 C (Non-Aqueous)

TPH GASOLINE RANGE, ORGANICS