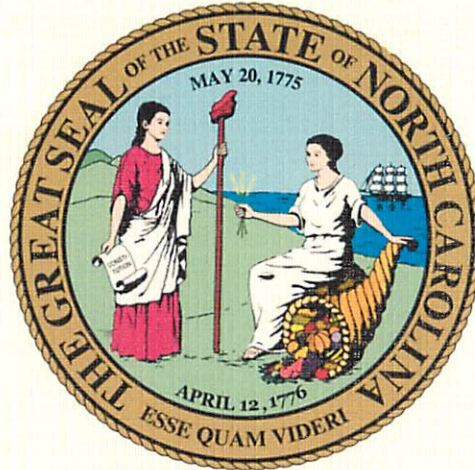


DIVISION OF WATER RESOURCES LABORATORY CERTIFICATION BRANCH

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



2023

Enthalpy Analytical LLC

Is hereby certified to perform environmental analysis as listed on the Laboratory's Certified Parameter List and report monitoring data to DEQ for compliance with NPDES effluent, surface water, groundwater, soil 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 12/31/2023

Certificate No. 495

Todd Crawford

North Carolina Wastewater/Groundwater Laboratory Certification

Certified Parameters Listing

Lab Name: Enthalpy Analytical LLC
Address: 1941 Reymet Road
Richmond, VA 23237-

Certificate Number: 495
Effective Date: 1/1/2023
Expiration Date: 12/31/2023
Date of Last Amendment: 1/30/2023

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

EPA 310.2, Rev. 1974 (Aqueous)

SM 2320 B-2011 (Aqueous)

BACTERIA - COLIFORM FECAL

SM 9221 E-2014 (MPN) (Aqueous)

BOD

SM 5210 B-2016 (Aqueous)

BROMIDE

EPA 300.0, Rev. 2.1, 1993 (Aqueous)

SW-846 9056 A (Aqueous)

CBOD

SM 5210 B-2016 (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

SM 2510 B-2011 (Aqueous)

SW-846 9050 A (Aqueous)

CYANIDE

SM 4500 CN⁻ E-2016 (Total) (Non-Aqueous)

Lachat 10-204-00-1-X, Rev. 2.2, 2005 (SM 4500 CN E -2016 Automated) (Total) (Aqueous)

SW-846 9012 B (Total) (Aqueous)

SW-846 9012 B (Total) (Non-Aqueous)

FLASH POINT

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

FLUORIDE

EPA 300.0, Rev. 2.1, 1993 (Aqueous)

SW-846 9056 A (Non-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)

SM 4500 NH₃ H-2011 (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, NO₃ + NO₂

SM 4500 NO₃⁻ F-2016 (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-2014 (Aqueous)

SW-846 9060 A (Aqueous)

PAINT FILTER LIQUIDS

SW-846 9095B

pH

SW-846 9045 D (Non-Aqueous)

PHOSPHATE, ORTHO

SM 4500 P E-2011 (Aqueous)

PHOSPHORUS, TOTAL

SM 4500 P E-2011 (Aqueous)

RESIDUE, DISSOLVED 180 C

SM 2540 C-2015 (Aqueous)

North Carolina Wastewater/Groundwater Laboratory Certification

Certified Parameters Listing

Lab Name: Enthalpy Analytical LLC
Address: 1941 Reymet Road
Richmond, VA 23237-

Certificate Number: 495
Effective Date: 1/1/2023
Expiration Date: 12/31/2023
Date of Last Amendment: 1/30/2023

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

RESIDUE, SETTLEABLE

SM 2540 F-2015 (Aqueous)

RESIDUE, SUSPENDED

SM 2540 D-2015 (Aqueous)

RESIDUE, TOTAL

SM 2540 B-2015 (Aqueous)

SM 2540 G-2015 (Non-Aqueous)

SILICA - METALS

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 S²⁻ F-2011 (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)

EPA 200.8, Rev. 5.4, 1994 (Aqueous)

SW-846 6020 B (Aqueous)

ANTIMONY

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)

ARSENIC

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)

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

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)

BORON

EPA 200.7, Rev. 4.4, 1994 (Aqueous)

SW-846 6010 D (Aqueous)

SW-846 6010 D (Non-Aqueous)

CADMIUM

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)

CALCIUM

EPA 200.7, Rev. 4.4, 1994 (Aqueous)

North Carolina Wastewater/Groundwater Laboratory Certification

Certified Parameters Listing

Lab Name: Enthalpy Analytical LLC
Address: 1941 Reymet Road
Richmond, VA 23237-

Certificate Number: 495
Effective Date: 1/1/2023
Expiration Date: 12/31/2023
Date of Last Amendment: 1/30/2023

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

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

North Carolina Wastewater/Groundwater Laboratory Certification

Certified Parameters Listing

Lab Name: Enthalpy Analytical LLC
Address: 1941 Reymet Road
Richmond, VA 23237-

Certificate Number: 495
Effective Date: 1/1/2023
Expiration Date: 12/31/2023
Date of Last Amendment: 1/30/2023

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

SW-846 6020 B (Aqueous)	SW-846 6020 B (Aqueous)
SW-846 6020 B (Non-Aqueous)	STRONTIUM
NICKEL	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	SW-846 6010 D (Aqueous)
SW-846 6010 D (Aqueous)	SW-846 6010 D (Non-Aqueous)
SW-846 6010 D (Non-Aqueous)	SW-846 6020 B (Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	THALLIUM
SW-846 6020 B (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SW-846 6020 B (Non-Aqueous)	SW-846 6010 D (Aqueous)
POTASSIUM	SW-846 6010 D (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
SW-846 6010 D (Aqueous)	SW-846 6020 B (Aqueous)
SW-846 6010 D (Non-Aqueous)	SW-846 6020 B (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	TIN
SW-846 6020 B (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SELENIUM	SW-846 6010 D (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	SW-846 6010 D (Non-Aqueous)
SW-846 6010 D (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
SW-846 6010 D (Non-Aqueous)	SW-846 6020 B (Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	TITANIUM
SW-846 6020 B (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SW-846 6020 B (Non-Aqueous)	SW-846 6010 D (Aqueous)
SILVER	SW-846 6010 D (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
SW-846 6010 D (Aqueous)	SW-846 6020 B (Aqueous)
SW-846 6010 D (Non-Aqueous)	VANADIUM
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SW-846 6020 B (Aqueous)	SW-846 6010 D (Aqueous)
SW-846 6020 B (Non-Aqueous)	SW-846 6010 D (Non-Aqueous)
SODIUM	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	SW-846 6020 B (Aqueous)
SW-846 6010 D (Aqueous)	SW-846 6020 B (Non-Aqueous)
SW-846 6010 D (Non-Aqueous)	ZINC
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)

North Carolina Wastewater/Groundwater Laboratory Certification

Certified Parameters Listing

Lab Name: Enthalpy Analytical LLC
Address: 1941 Reymet Road
Richmond, VA 23237-

Certificate Number: 495
Effective Date: 1/1/2023
Expiration Date: 12/31/2023
Date of Last Amendment: 1/30/2023

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

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)

ORGANIC

1,2, DIBROMOETHANE (EDB)

SW-846 8011 (Includes DBCP) (Aqueous)

BASE NEUTRAL/ACID, ORGANICS

EPA 625.1, Dec 2016 (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, Dec 2016 (Aqueous)

SW-846 8081 B (Aqueous)

SW-846 8081 B (Non-Aqueous)

POLYCHLORINATED BIPHENYLS (PCBs)

EPA 608.3, Dec 2016 (Aqueous)

SW-846 8082 A (Aqueous)

SW-846 8082 A (Non-Aqueous)

SW-846 8082 A (Oil)

PURGEABLE, ORGANICS

EPA 624.1, Dec 2016 (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

SW-846 8015 C (Aqueous)

SW-846 8015 C (Non-Aqueous)

VOLATILE PETROLEUM HYDROCARBONS

MADEP, Feb 2018, Rev. 2.1 (Aqueous)

MADEP, Feb 2018, Rev. 2.1 (Non-Aqueous)