

# 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

## Enthalpy Analytical LLC

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

Certificate Number: 495  
Effective Date: 1/1/2021  
Expiration Date: 12/31/2021  
Date of Last Amendment: 9/1/2021

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

<b>INORGANIC</b>	SM 2340 B-2011 (Ca EPA 200.7, Rev. 4.4, 1994 + Mg EPA 200.7, Rev. 4.4, 1994) (Aqueous)
ALKALINITY	SM 2340 B-2011 (Ca SM 3120B-2011 + Mg SM 3120B-2011) (Aqueous)
SM 2320 B-2011 (Aqueous)	
BACTERIA - COLIFORM FECAL	INORGANIC PHENOLS
SM 9221 E-2014 (MPN) (Aqueous)	EPA 420.1, Rev. 1978 (Aqueous)
BOD	NITROGEN, AMMONIA
SM 5210 B-2016 (Aqueous)	EPA 350.1, Rev. 2.0, 1993 (Aqueous)
BROMIDE	NITROGEN, NITRATE
EPA 300.0, Rev. 2.1, 1993 (Aqueous)	EPA 300.0, Rev. 2.1, 1993 (Aqueous)
SW-846 9056 A (Aqueous)	SW-846 9056 A (Non-Aqueous)
CBOD	NITROGEN, NITRITE
SM 5210 B-2016 (Aqueous)	EPA 300.0, Rev. 2.1, 1993 (Aqueous)
CHLORIDE	EPA 300.0, Rev. 2.1, 1993 (Non-Aqueous)
EPA 300.0, Rev. 2.1, 1993 (Aqueous)	SW-846 9056 A (Aqueous)
EPA 300.0, Rev. 2.1, 1993 (Non-Aqueous)	SW-846 9056 A (Non-Aqueous)
SW-846 9056 A (Aqueous)	NITROGEN, NO <sub>3</sub> + NO <sub>2</sub>
SW-846 9056 A (Non-Aqueous)	SM 4500 NO <sub>3</sub> <sup>-</sup> F-2016 (Aqueous)
COD	NITROGEN, TOTAL KJELDAHL
SM 5220 D-2011 (Aqueous)	EPA 351.2, Rev. 2.0, 1993 (Aqueous)
CONDUCTIVITY	OIL & GREASE
EPA 120.1, Rev. 1982 (Aqueous)	EPA 1664 Rev. B (Aqueous)
SM 2510 B-2011 (Aqueous)	ORGANIC CARBON, TOTAL
SW-846 9050 A (Aqueous)	SM 5310 C-2014 (UV Oxidation) (Aqueous)
CYANIDE	SW-846 9060 A (UV Oxidation) (Aqueous)
SM 4500 CN <sup>-</sup> E-2016 (Total) (Non-Aqueous)	PAINT FILTER LIQUIDS
Lachat 10-204-00-1-X, Rev. 2.2, 2005 (SM 4500 CN E -2016 Automated) (Total) (Aqueous)	SW-846 9095B
SW-846 9012 B (Total) (Aqueous)	pH
SW-846 9012 B (Total) (Non-Aqueous)	SW-846 9045 D (Non-Aqueous)
FLASH POINT	PHOSPHORUS, TOTAL
SW-846 1010 B (D93-80) (Aqueous)	SM 4500 P E-2011 (Aqueous)
FLUORIDE	RESIDUE, DISSOLVED 180 C
EPA 300.0, Rev. 2.1, 1993 (Aqueous)	SM 2540 C-2015 (Aqueous)
SW-846 9056 A (Non-Aqueous)	RESIDUE, SETTLEABLE
HARDNESS TOTAL - METALS	SM 2540 F-2015 (Aqueous)
	RESIDUE, SUSPENDED

This certification requires maintenance of an acceptable quality assurance program, use of approved methodology, and satisfactory performance on evaluation samples. Laboratories are subject to civil penalties and/or decertification for infractions as set forth in 15A NCAC 2H.0807.

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### CERTIFIED PARAMETERS

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 S<sup>2-</sup> 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)

##### 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)

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### CERTIFIED PARAMETERS

EPA 200.9, Rev. 2.2, 1994 (Aqueous)

#### CALCIUM

EPA 200.7, Rev. 4.4, 1994 (Aqueous)

SW-846 6010 D (Aqueous)

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)

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### CERTIFIED PARAMETERS

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

#### NICKEL

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

EPA 200.7, Rev. 4.4, 1994 (Aqueous)  
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)

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### CERTIFIED PARAMETERS

ZINC	SW-846 9020 B (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	TPH DIESEL RANGE, ORGANICS
SW-846 6010 D (Aqueous)	SW-846 8015 C (Aqueous)
SW-846 6010 D (Non-Aqueous)	SW-846 8015 C (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	TPH GASOLINE RANGE, ORGANICS
SW-846 6020 B (Aqueous)	SW-846 8015 C (Aqueous)
SW-846 6020 B (Non-Aqueous)	SW-846 8015 C (Non-Aqueous)
<b>ORGANIC</b>	
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	

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