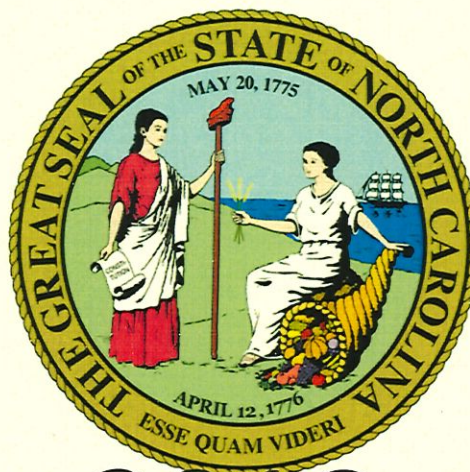


# DIVISION OF WATER RESOURCES LABORATORY CERTIFICATION BRANCH

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



# 2018

## Microbac Laboratories Inc. Ohio Valley Division

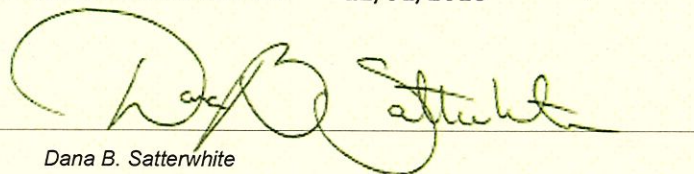
*Is hereby certified to perform environmental analysis as listed on Attachment I and report monitoring data to DEQ for compliance with NPDES effluent, surface water, groundwater, and pretreatment regulations.*

*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* 12/31/2018

Certificate No. 583

  
Dana B. Satterwhite

# North Carolina Wastewater/Groundwater Laboratory Certification

## Certified Parameters Listing

Lab Name: Microbac Laboratories Inc. Ohio Valley Division  
 Address: 158 Starlite Drive  
 Marietta, OH 45750-

Certificate Number: 583  
 Effective Date: 1/1/2018  
 Expiration Date: 12/31/2018  
 Date of Last Amendment: 3/15/2018

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.

<b>CERTIFIED PARAMETERS</b>
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**INORGANIC**

ALKALINITY

SM 2320 B-2011 (Aqueous)

BROMIDE

EPA 300.0, Rev. 2.1, 1993 (Aqueous)

CHLORIDE

SM 4500 Cl<sup>-</sup> E-2011 (Aqueous)

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

EPA 410.4, Rev. 2.0, 1993 (Aqueous)

Hach 8000 (Aqueous)

CYANIDE

SW-846 9014 (Amenable) (Colorimetric) (Aqueous)

SW-846 9014 (Amenable) (Colorimetric) (Non-Aqueous)

SW-846 9014 (Total) (Colorimetric) (Aqueous)

SW-846 9014 (Total) (Colorimetric) (Non-Aqueous)

SM 4500 CN<sup>-</sup> E-2011 (Total) (Aqueous)

FLUORIDE

EPA 300.0, Rev. 2.1, 1993 (Aqueous)

SW-846 9056 A (Aqueous)

HARDNESS TOTAL

SM 2340 C-2011 (Aqueous)

IGNITABILITY

SW-846 1010 A (Pensky-Martens) (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 (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, NO<sub>3</sub> + NO<sub>2</sub>

EPA 353.2, Rev. 2.0, 1993 (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)

PAINT FILTER LIQUIDS

SW-846 9095B

pH

SM 4500 H+B-2011 (Aqueous)

SW-846 9040 C (Aqueous)

SW-846 9045 D (Non-Aqueous)

PHOSPHATE, ORTHO

SM 4500 P E-2011 (Aqueous)

PHOSPHORUS, TOTAL

EPA 365.4, 1974 (Aqueous)

RESIDUE, DISSOLVED 180 C

SM 2540 C-2011 (Aqueous)

RESIDUE, SUSPENDED

SM 2540 D-2011 (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

SW-846 9034 (Non-Aqueous)

**METAL**

SPLP METALS

# North Carolina Wastewater/Groundwater Laboratory Certification

## Certified Parameters Listing

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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 1312 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SW-846 1312 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
TCLP METALS	CHROMIUM HEXAVALENT
SW-846 1311 (Aqueous)	SM 3500-Cr-B-2011 (Aqueous)
SW-846 1311 (Non-Aqueous)	SW-846 7196 A (Aqueous)
ALUMINUM	SW-846 7196 A (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	CHROMIUM TOTAL
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
ANTIMONY	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	COBALT
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
ARSENIC	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	COPPER
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
BARIUM	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	IRON
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
BERYLLIUM	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	LEAD
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
BORON	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)
CADMIUM	MAGNESIUM
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	MANGANESE
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
CALCIUM	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)

# North Carolina Wastewater/Groundwater Laboratory Certification

## Certified Parameters Listing

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### CERTIFIED PARAMETERS

EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
<b>MERCURY</b>	EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)
EPA 245.1, Rev. 3.0, 1994 (Aqueous)	<b>TIN</b>
SW-846 7470 A (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SW-846 7471 B (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
<b>MOLYBDENUM</b>	<b>TITANIUM</b>
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
<b>NICKEL</b>	<b>VANADIUM</b>
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)
<b>POTASSIUM</b>	<b>ZINC</b>
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)
<b>SELENIUM</b>	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	<b>ORGANIC</b>
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	<b>SPLP ORGANICS</b>
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)	SW-846 1312 (Aqueous)
<b>SILVER</b>	SW-846 1312 (Non-Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	<b>TCLP ORGANICS</b>
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	SW-846 1311 (Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	SW-846 1311 (Non-Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)	<b>BASE NEUTRAL/ACID, ORGANICS</b>
<b>SODIUM</b>	EPA 625.1 (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	SW-846 8270 D (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	SW-846 8270 D (Non-Aqueous)
<b>STRONTIUM</b>	<b>CHLORINATED ACID HERBICIDES</b>
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	SW-846 8151 A (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Non-Aqueous)	SW-846 8151 A (Non-Aqueous)
<b>THALLIUM</b>	<b>NITROAROMATICS &amp; NITRAMINES</b>
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	SW-846 8330 A (Aqueous)

North Carolina Wastewater/Groundwater Laboratory Certification

Certified Parameters Listing

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**CERTIFIED PARAMETERS**

SW-846 8330 A (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)

PURGEABLE, ORGANICS

EPA 624.1 (Aqueous)

SW-846 8260 B (Aqueous)

SW-846 8260 B (Non-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)