

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

Rogers & Callcott Engineers Inc.

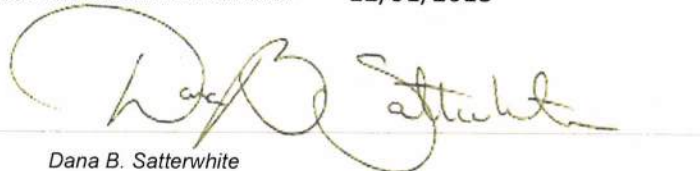
Is hereby certified to perform environmental analysis as listed on Attachment I and report monitoring data to DEQ for compliance with NPDES effluent, surface water, groundwater, and pretreatment regulations.

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. 27



Dana B. Satterwhite

North Carolina Wastewater/Groundwater Laboratory Certification

Certified Parameters Listing

Lab Name: Rogers & Callcott Engineers Inc.
 Address: P.O. Box 5655
 Greenville, SC 29606-

Certificate Number: 27
 Effective Date: 1/1/2018
 Expiration Date: 12/31/2018
 Date of Last Amendment: 11/13/2017

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

<p>INORGANIC</p> <p>ALKALINITY SM 2320 B-2011 (Aqueous)</p> <p>BACTERIA - COLIFORM FECAL IDEXX Colilert®18 (MPN) (Aqueous) SM 9221C E-2006 (MPN) (Aqueous) SM 9221C E-2006 (MPN) 24hr 503 (Non-Aqueous)</p> <p>BACTERIA - E. coli IDEXX Colilert® (24 hr) (MPN) (Aqueous)</p> <p>BOD SM 5210 B-2011 (Aqueous)</p> <p>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)</p> <p>CHLORINE, TOTAL RESIDUAL SM 4500 Cl G-2011 (Aqueous)</p> <p>COD EPA 410.4, Rev. 2.0, 1993 (Aqueous)</p> <p>COLOR, ADMI SM 2120 E-1993 (ADMI) (Aqueous)</p> <p>COLOR, PC SM 2120 B-2011 (PtCo) (Aqueous)</p> <p>CONDUCTIVITY SM 2510 B-2011 (Aqueous) SW-846 9050 A (Aqueous)</p> <p>CYANIDE SW-846 9014 (Total) (Colorimetric) (Aqueous) SW-846 9014 (Total) (Colorimetric) (Non-Aqueous) SM 4500 CN⁻ E-2011 (Total) (Aqueous)</p> <p>DISSOLVED OXYGEN SM 4500 O G-2011 (Aqueous)</p> <p>FLUORIDE EPA 300.0, Rev. 2.1, 1993 (Aqueous)</p>	<p>EPA 300.0, Rev. 2.1, 1993 (Non-Aqueous) SW-846 9056 A (Aqueous) SW-846 9056 A (Non-Aqueous)</p> <p>HARDNESS TOTAL SM 2340 B-2011 (Ca EPA 200.7, Rev. 4.4, 1994 + Mg EPA 200.7, Rev. 4.4, 1994) (Aqueous)</p> <p>IGNITABILITY SW-846 1010 A (Pensky-Martens) (Aqueous)</p> <p>INORGANIC PHENOLS EPA 420.1, Rev. 1978 (Aqueous) SW-846 9065 (Aqueous)</p> <p>MBAS SM 5540 C-2011 (Aqueous)</p> <p>NITROGEN, AMMONIA EPA 350.1, Rev. 2.0, 1993 (Aqueous)</p> <p>NITROGEN, NITRATE 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)</p> <p>NITROGEN, NITRITE SM 4500-NO₂⁻ B-2011 (Automated) (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)</p> <p>NITROGEN, NO₃ + NO₂ SM 4500 NO₃⁻ H-2011 (Aqueous)</p> <p>NITROGEN, TOTAL KJELDAHL EPA 351.2, Rev. 2.0, 1993 (Aqueous)</p> <p>OIL & GREASE EPA 1664 Rev. B (Aqueous)</p> <p>ORGANIC CARBON, TOTAL SM 5310 B-2011 (Combustion) (Aqueous) SW-846 9060 A (Combustion) (Aqueous)</p> <p>PAINT FILTER LIQUIDS</p>
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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

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 SM 4500 P E-2011 (Aqueous) EPA 200.7, Rev. 4.4 (1994) (Aqueous) SW-846 6010 D (Aqueous) SW-846 6010 D (Non-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) RESIDUE, TOTAL VOLATILE SM 2540 G-2011 (Non-Aqueous) SILICA SM 4500 SiO2 C-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 SM 4500 S ²⁻ F-2011 (Aqueous) TEMPERATURE SM 2550 B-2010 (Aqueous) TURBIDITY EPA 180.1, Rev. 2.0, 1993 (Aqueous)	VECTOR ATTRACTION REDUCTION Option 1: Reduction in Volatile Solids Option 4: Specific Oxygen Uptake Rate METAL TCLP METALS SW-846 1311 (Aqueous) SW-846 1311 (Non-Aqueous) ALUMINUM EPA 200.7, Rev. 4.4, 1994 (Aqueous) SW-846 6010 D (Aqueous) SW-846 6010 D (Non-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) 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) BARIUM EPA 200.7, Rev. 4.4, 1994 (Aqueous) SW-846 6010 D (Aqueous) SW-846 6010 D (Non-Aqueous) SW-846 6020 B (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) BORON
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EPA 200.7, Rev. 4.4, 1994 (Aqueous)	IRON
SW-846 6010 D (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SW-846 6010 D (Non-Aqueous)	SW-846 6010 D (Aqueous)
CADMIUM	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)	LEAD
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)
CALCIUM	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)	LITHIUM
CHROMIUM HEXAVALENT	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
SM 3500-Cr-B-2011 (Aqueous)	SW-846 6010 D (Aqueous)
SW-846 7196 A (Aqueous)	SW-846 6010 D (Non-Aqueous)
SW-846 7196 A (Non-Aqueous)	MAGNESIUM
CHROMIUM TOTAL	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)	EPA 200.8, Rev. 5.4, 1994 (Aqueous)
EPA 200.8, Rev. 5.4, 1994 (Aqueous)	MANGANESE
SW-846 6020 B (Aqueous)	EPA 200.7, Rev. 4.4, 1994 (Aqueous)
COBALT	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)	MERCURY
SW-846 6020 B (Aqueous)	EPA 245.1, Rev. 3.0, 1994 (Aqueous)
COPPER	SW-846 7470 A (Aqueous)
EPA 200.7, Rev. 4.4, 1994 (Aqueous)	SW-846 7471 B (Non-Aqueous)
SW-846 6010 D (Aqueous)	MOLYBDENUM
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)

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EPA 200.8, Rev. 5.4, 1994 (Aqueous) SW-846 6020 B (Aqueous)	THALLIUM 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)
NICKEL 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)	TIN 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)
POTASSIUM 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)	TITANIUM 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)
SELENIUM 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)	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)
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)	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) SW-846 6020 B (Aqueous)
SODIUM EPA 200.7, Rev. 4.4, 1994 (Aqueous) SW-846 6010 D (Aqueous) SW-846 6010 D (Non-Aqueous) SW-846 6020 B (Aqueous)	ORGANIC TCLP ORGANICS SW-846 1311 (Aqueous) SW-846 1311 (Non-Aqueous) BASE NEUTRAL/ACID, ORGANICS EPA 625 (Aqueous) SW-846 8270 D (Aqueous)
STRONTIUM EPA 200.7, Rev. 4.4, 1994 (Aqueous) SW-846 6010 D (Aqueous) SW-846 6010 D (Non-Aqueous)	

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SW-846 8270 D (Non-Aqueous)
PESTICIDES, ORGANOCHLORINE
EPA 608 (Aqueous)
EPA 608.2 (Aqueous)
SW-846 8081 B (Aqueous)
SW-846 8081 B (Non-Aqueous)
POLYCHLORINATED BIPHENYLS (PCBs)
EPA 608 (Aqueous)
SW-846 8082 A (Aqueous)
SW-846 8082 A (Non-Aqueous)
PURGEABLE, ORGANICS
EPA 624 (Aqueous)
EPA 624.1 (Aqueous)
SM 6200 B-1997, Rev. 2011 (Aqueous)
SW-846 8260 B (Aqueous)
SW-846 8260 B (Non-Aqueous)