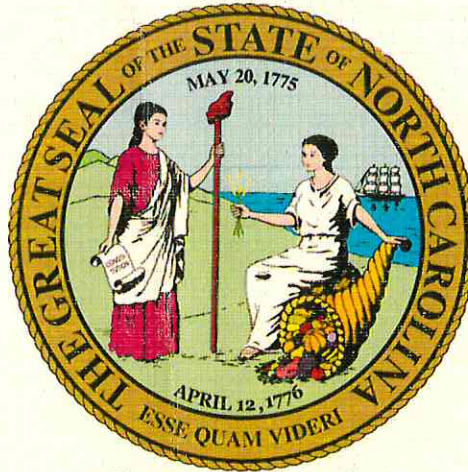


# DIVISION OF WATER RESOURCES LABORATORY CERTIFICATION BRANCH

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



# 2020

## Element One 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* 12/31/2020

Certificate No. 604

A handwritten signature in brown ink, appearing to read "Dana B. Satterwhite", is written over a horizontal line.

Dana B. Satterwhite

# North Carolina Wastewater/Groundwater Laboratory Certification

## Certified Parameters Listing

Lab Name: Element One Inc.  
 Address: 6319-D Carolina Beach Rd  
 Wilmington, NC 28412-

Certificate Number: 604  
 Effective Date: 1/1/2020  
 Expiration Date: 12/31/2020  
 Date of Last Amendment: 12/3/2019

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**

ACIDITY  
 SM 2310 B-2011(Aqueous)

ALKALINITY  
 SM 2320 B-2011 (Aqueous)

BACTERIA - COLIFORM FECAL  
 IDEXX Colilert ®18 (MPN) (Aqueous)

BACTERIA - COLIFORM TOTAL  
 SM 9222 B-2006 (MF) (Aqueous)

BOD  
 SM 5210 B-2011 (Aqueous)

CBOD  
 SM 5210 B-2011 (Aqueous)

CHLORIDE  
 SM 4500 Cl<sup>-</sup> B-2011 (Aqueous)  
 EPA 300.0, Rev. 2.1, 1993 (Aqueous)  
 EPA 300.0, Rev. 2.1, 1993 (Non-Aqueous)

CHLORINE, TOTAL RESIDUAL  
 Hach 8167 HR (Aqueous)

COD  
 Hach 8000 (Aqueous)

COLOR, PC  
 SM 2120 B-2011 (PtCo) (Aqueous)

CONDUCTIVITY  
 SM 2510 B-2011 (Aqueous)

CYANIDE  
 SW-846 9014 (Total) (Colorimetric) (Aqueous)  
 SW-846 9014 (Total) (Colorimetric) (Non-Aqueous)  
 SM 4500 CN<sup>-</sup> E-2011 (Total) (Aqueous)

DISSOLVED OXYGEN  
 SM 4500 O G-2011 (Aqueous)  
 SM 4500 O C-2011 (Aqueous)

FLUORIDE  
 SM 4500 F<sup>-</sup> C-2011 (Aqueous)  
 EPA 300.0, Rev. 2.1, 1993 (Aqueous)

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

HARDNESS TOTAL - METALS  
 SM 2340 B-2011 (Ca EPA 200.8, Rev. 5.4, 1994 + Mg EPA 200.8, Rev. 5.4, 1994) (Aqueous)

HARDNESS TOTAL - WET CHEM  
 SM 2340 C-2011 (Aqueous)

IGNITABILITY  
 SW-846 1030 (Non-Aqueous)

MBAS  
 SM 5540 C-2011 (Aqueous)

NITROGEN, AMMONIA  
 SM 4500 NH3 D-2011 (Aqueous)

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

NITROGEN, NITRITE  
 SM 4500-NO<sub>2</sub><sup>-</sup> B-2011 (Aqueous)  
 EPA 300.0, Rev. 2.1, 1993 (Aqueous)  
 EPA 300.0, Rev. 2.1, 1993 (Non-Aqueous)

NITROGEN, NO<sub>3</sub> + NO<sub>2</sub>  
 SM 4500 NO<sub>3</sub><sup>-</sup> E-2011 (Aqueous)  
 EPA 300.0, Rev. 2.1, 1993 (Aqueous)  
 EPA 300.0, Rev. 2.1, 1993 (Non-Aqueous)

NITROGEN, TOTAL KJELDAHL  
 SM 4500 Norg C-2011 (SM 4500 NH3 D-2011) (Aqueous)  
 SM 4500 Norg C-2011 (SM 4500 NH3 D-2011) (Non-Aqueous)

ORGANIC CARBON, TOTAL  
 SM 5310 B-2011 (Combustion) (Aqueous)  
 SW-846 9060 A (Combustion) (Aqueous)

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

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### CERTIFIED PARAMETERS

EPA 300.0, Rev. 2.1, 1993 (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 - NUTRIENTS  
SM 4500 SiO<sub>2</sub> C-2011 (Aqueous)  
SULFATE  
SM 4500 SO<sub>4</sub><sup>2-</sup> D-2011 (Aqueous)  
EPA 300.0, Rev. 2.1, 1993 (Aqueous)  
EPA 300.0, Rev. 2.1, 1993 (Non-Aqueous)  
SULFIDE  
Hach 8131 (Aqueous)  
SM 4500 S<sup>2-</sup> D-2011 (Aqueous)  
SW-846 9034 (Aqueous)  
TEMPERATURE  
SM 2550 B-2010 (Aqueous)  
TURBIDITY  
SM 2130 B-2011 (Aqueous)  
**METAL**  
ALUMINUM  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
ANTIMONY  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)  
SW-846 6020 B (Aqueous)

SW-846 6020 B (Non-Aqueous)  
ARSENIC  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
BARIUM  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
BERYLLIUM  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
BORON  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
CADMIUM  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
CALCIUM  
EPA 200.8, Rev. 5.4, 1994 (Aqueous)  
EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)  
SW-846 6020 B (Aqueous)  
SW-846 6020 B (Non-Aqueous)  
CHROMIUM HEXAVALENT  
SM 3500-Cr-B-2011 (Aqueous)  
EPA 218.6, Rev. 3.3, 1994 (Aqueous)  
SW-846 7199 (Aqueous)

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### CERTIFIED PARAMETERS

#### CHROMIUM TOTAL

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

#### COBALT

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

#### COPPER

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

#### IRON

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

#### LEAD

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

#### MAGNESIUM

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

#### MANGANESE

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

#### MERCURY

EPA 245.1, Rev. 3.0, 1994 (Aqueous)  
SW-846 7471 B (Non-Aqueous)

#### MOLYBDENUM

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

#### NICKEL

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

#### POTASSIUM

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

#### SELENIUM

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

#### SILVER

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

#### SODIUM

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

#### STRONTIUM

SW-846 6020 B (Aqueous)

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### CERTIFIED PARAMETERS

SW-846 6020 B (Non-Aqueous)

#### THALLIUM

EPA 200.8, Rev. 5.4, 1994 (Aqueous)

EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)

SW-846 6020 B (Aqueous)

SW-846 6020 B (Non-Aqueous)

#### TIN

EPA 200.8, Rev. 5.4, 1994 (Aqueous)

EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)

SW-846 6020 B (Aqueous)

SW-846 6020 B (Non-Aqueous)

#### TITANIUM

EPA 200.8, Rev. 5.4, 1994 (Aqueous)

EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)

SW-846 6020 B (Aqueous)

SW-846 6020 B (Non-Aqueous)

#### VANADIUM

EPA 200.8, Rev. 5.4, 1994 (Aqueous)

EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)

SW-846 6020 B (Aqueous)

SW-846 6020 B (Non-Aqueous)

#### ZINC

EPA 200.8, Rev. 5.4, 1994 (Aqueous)

EPA 200.8, Rev. 5.4, 1994 (Non-Aqueous)

SW-846 6020 B (Aqueous)

SW-846 6020 B (Non-Aqueous)