



---

west virginia department of environmental protection

---

Division of Water and Waste Management  
601 57th Street SE  
Charleston, WV 25304-2345  
Phone: (304) 926-0495  
Fax: (304) 926-0497

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

January 29, 2020

Lytia Ostyn  
Quality Assurance Manager  
Air, Water, & Soil Laboratories, Incorporated  
1941 Reymet Rd  
Richmond, VA 23237

Dear Ms. Ostyn,

Please find enclosed an ATTACHMENT I modifying certification of your facility through November 30, 2020.

SW1010A and SW8151A (NPW and SCM) have been added to your scope of accreditation.

If you have any questions or I can be of further assistance, please call (304) 926-0499 ext. 1158 or e-mail at [Justin.D.Carpenter@wv.gov](mailto:Justin.D.Carpenter@wv.gov).

Sincerely,

A handwritten signature in black ink that reads "Justin D. Carpenter". The signature is written in a cursive style with a large initial 'J' and 'C'.

Justin Carpenter  
QA Auditor  
jc

Enclosure:

ATTACHMENT I

WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER AND WASTE MANAGEMENT

List of Certified Parameters  
for

**AIR, WATER, & SOIL LABORATORIES,  
INCORPORATED  
RICHMOND, VIRGINIA**

PARAMETERS CERTIFIED

NONPOTABLE WATER INORGANIC NONMETALS

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Acidity	SM2310 B-11	Titrimetric
Alkalinity	SM2320 B-11	Titrimetric
Ammonia	EPA350.1 Rev 2.0-1993	Spectrophotometric
Bromide	EPA300.0 Rev 2.1-1993	IC
Carbon, Total Organic (TOC)	SM5310 C-11	Oxidation
Carbon, Total Organic (TOC)	SW9060A	Oxidation
Chloride	EPA300.0 Rev 2.1-1993	IC
Chromium VI, Dissolved	SM3500-Cr B-11	Spectrophotometric
Chromium VI, Dissolved	SW7196A	Spectrophotometric
Color	NCASI 71.01	Spectrophotometric
Conductance, Specific	SM2510 B-11	Probe
Cyanide, Total	Lachat 10-204-00-10-X	Spectrophotometric
Cyanide, Total	SM4500-CN E-11	Spectrophotometric
Cyanide, Total	SW9012B	Spectrophotometric
Fluoride	EPA300.0 Rev 2.1-1993	IC
Hardness, Total	SM2340 B-11	Calculation
Nitrate	EPA300.0 Rev 2.1-1993	IC
Nitrate-Nitrite	SM4500-NO3 F-11	Spectrophotometric
Nitrite	EPA300.0 Rev 2.1-1993	IC
Nitrite	SM4500-NO2 B-11	Spectrophotometric
Nitrogen, Total Kjeldahl (TKN)	EPA351.2 Rev 2.0-1993	Colorimetric
Oil & Grease	EPA1664 B	Gravimetric
Oxygen Demand, Biochemical (BOD)	SM5210 B-11	Probe
Oxygen Demand, Chemical (COD)	SM5220 D-11	Spectrophotometric
Phenolics, Total	EPA420.1 Rev 1978	Spectrophotometric
Phenolics, Total	SW9065	Spectrophotometric
Phosphorus, Total	SM4500-P E-11	Spectrophotometric
Solids, Dissolved	SM2540 C-11	Gravimetric
Solids, Suspended	SM2540 D-11	Gravimetric
Sulfate	EPA300.0 Rev 2.1-1993	IC

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Surfactants (MBAS)	SM5540 C-11	Spectrophotometric

NONPOTABLE WATER TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	EPA200.7 Rev 4.4-1994	ICP
Aluminum	SW6010C	ICP
Antimony	EPA200.7 Rev 4.4-1994	ICP
Antimony	EPA200.8 Rev 5.4-1994	ICP-MS
Antimony	SW6010C	ICP
Antimony	SW6020A	ICP-MS
Arsenic	EPA200.7 Rev 4.4-1994	ICP
Arsenic	EPA200.8 Rev 5.4-1994	ICP-MS
Arsenic	SW6010C	ICP
Arsenic	SW6020A	ICP-MS
Barium	EPA200.7 Rev 4.4-1994	ICP
Barium	EPA200.8 Rev 5.4-1994	ICP-MS
Barium	SW6010C	ICP
Barium	SW6020A	ICP-MS
Beryllium	EPA200.7 Rev 4.4-1994	ICP
Beryllium	EPA200.8 Rev 5.4-1994	ICP-MS
Beryllium	SW6010C	ICP
Beryllium	SW6020A	ICP-MS
Boron	EPA200.7 Rev 4.4-1994	ICP
Boron	SW6010C	ICP
Cadmium	EPA200.7 Rev 4.4-1994	ICP
Cadmium	EPA200.8 Rev 5.4-1994	ICP-MS
Cadmium	SW6010C	ICP
Cadmium	SW6020A	ICP-MS
Calcium	EPA200.7 Rev 4.4-1994	ICP
Calcium	SW6010C	ICP
Chromium	EPA200.7 Rev 4.4-1994	ICP
Chromium	EPA200.8 Rev 5.4-1994	ICP-MS
Chromium	SW6010C	ICP
Chromium	SW6020A	ICP-MS
Cobalt	EPA200.7 Rev 4.4-1994	ICP
Cobalt	EPA200.8 Rev 5.4-1994	ICP-MS
Cobalt	SW6010C	ICP
Cobalt	SW6020A	ICP-MS
Copper	EPA200.7 Rev 4.4-1994	ICP
Copper	EPA200.8 Rev 5.4-1994	ICP-MS
Copper	SW6010C	ICP
Copper	SW6020A	ICP-MS
Iron	EPA200.7 Rev 4.4-1994	ICP
Iron	SW6010C	ICP
Lead	EPA200.7 Rev 4.4-1994	ICP
Lead	EPA200.8 Rev 5.4-1994	ICP-MS
Lead	SW6010C	ICP
Lead	SW6020A	ICP-MS
Lithium	SW6010C	ICP
Magnesium	EPA200.7 Rev 4.4-1994	ICP

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Magnesium	SW6010C	ICP
Manganese	EPA200.7 Rev 4.4-1994	ICP
Manganese	EPA200.8 Rev 5.4-1994	ICP-MS
Manganese	SW6010C	ICP
Manganese	SW6020A	ICP-MS
Mercury	EPA245.1 Rev 3.0-1994	CVAA
Mercury	SW7470A	CVAA
Metals	EPA200.2	Digestion
Metals	SW3005A	Digestion
Metals, Total	SW3010A	Digestion
Molybdenum	EPA200.7 Rev 4.4-1994	ICP
Molybdenum	EPA200.8 Rev 5.4-1994	ICP-MS
Molybdenum	SW6010C	ICP
Molybdenum	SW6020A	ICP-MS
Nickel	EPA200.7 Rev 4.4-1994	ICP
Nickel	EPA200.8 Rev 5.4-1994	ICP-MS
Nickel	SW6010C	ICP
Nickel	SW6020A	ICP-MS
Potassium	EPA200.7 Rev 4.4-1994	ICP
Potassium	SW6010C	ICP
Selenium	EPA200.7 Rev 4.4-1994	ICP
Selenium	EPA200.8 Rev 5.4-1994	ICP-MS
Selenium	SW6010C	ICP
Selenium	SW6020A	ICP-MS
Silver	EPA200.7 Rev 4.4-1994	ICP
Silver	EPA200.8 Rev 5.4-1994	ICP-MS
Silver	SW6010C	ICP
Silver	SW6020A	ICP-MS
Sodium	EPA200.7 Rev 4.4-1994	ICP
Sodium	SW6010C	ICP
Thallium	EPA200.7 Rev 4.4-1994	ICP
Thallium	EPA200.8 Rev 5.4-1994	ICP-MS
Thallium	SW6010C	ICP
Thallium	SW6020A	ICP-MS
Tin	EPA200.7 Rev 4.4-1994	ICP
Tin	EPA200.8 Rev 5.4-1994	ICP-MS
Tin	SW6010C	ICP
Tin	SW6020A	ICP-MS
Titanium	EPA200.7 Rev 4.4-1994	ICP
Titanium	SW6010C	ICP
Vanadium	EPA200.7 Rev 4.4-1994	ICP
Vanadium	EPA200.8 Rev 5.4-1994	ICP-MS
Vanadium	SW6010C	ICP
Vanadium	SW6020A	ICP-MS
Zinc	EPA200.7 Rev 4.4-1994	ICP
Zinc	EPA200.8 Rev 5.4-1994	ICP-MS
Zinc	SW6010C	ICP
Zinc	SW6020A	ICP-MS

NONPOTABLE WATER VOLATILE ORGANIC CHEMICALS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Halogenated & Aromatic Volatiles	SW8021B	GC
Purge & Trap For Aqueous Samples	SW5030B	Extraction
Purgeables	EPA624.1	GC/MS
Total Petroleum Hydrocarbons (GRO)	SW8015C	GC/FID
Volatile Organic Compounds	SW8260D	GC/MS

NONPOTABLE WATER EXTRACTABLE AND SEMI-VOLATILE ORGANIC CHEMICALS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Base/Neutrals & Acids	EPA625.1	GC/MS
Chlorinated Herbicides	SW8151A	GC
Organochlorine Pesticides	SW8081B	GC
Organochlorine Pesticides & PCBs	EPA608.3	GC
Polychlorinated Biphenyls	SW8082A	GC
Semivolatile Organic Compounds	SW8270E	GC/MS
Separatory Funnel Liquid-Liquid	SW3510C	Extraction
Total Petroleum Hydrocarbons (DRO)	SW8015C	GC/FID

HAZARDOUS WASTE CHARACTERISTICS

<u>PROCEDURE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Ignitability	SW1010A	Closed Cup
TCLP- Metals & Organics	SW1311	Extraction

SOLID AND CHEMICAL INORGANIC NONMETALS

<u>ANALYTE</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Halides, Extractable Organic (EOX)	SW9023	Titrimetric

SOLID AND CHEMICAL TRACE METALS

<u>METAL</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Aluminum	SW6010C	ICP
Arsenic	SW6010C	ICP
Barium	SW6010C	ICP
Cadmium	SW6010C	ICP
Chromium	SW6010C	ICP
Copper	SW6010C	ICP
Lead	SW6010C	ICP
Mercury	SW7471B	CVAA
Metals, Total	SW3050B	Digestion
Selenium	SW6010C	ICP
Silver	SW6010C	ICP
Zinc	SW6010C	ICP

SOLID AND CHEMICAL VOLATILE ORGANIC CHEMICALS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Closed System Purge & Trap	SW5035	Extraction
Halogenated & Aromatic Volatiles	SW8021B	GC
Total Petroleum Hydrocarbons (GRO)	SW8015C	GC/FID
Volatile Organic Compounds	SW8260D	GC/MS

SOLID AND CHEMICAL EXTRACTABLE AND SEMI-VOLATILE ORGANIC CHEMICALS

<u>GROUP</u>	<u>METHOD</u>	<u>TECHNOLOGY</u>
Chlorinated Herbicides	SW8151A	GC/ECD
Organochlorine Pesticides	SW8081B	GC
Polychlorinated Biphenyls	SW8082A	GC
Semivolatile Organic Compounds	SW8270E	GC/MS
Total Petroleum Hydrocarbons (DRO)	SW8015C	GC/FID
Ultrasonic	SW3550C	Extraction

This laboratory may test **ONLY** for those environmental parameters listed above for compliance reporting purposes. All testing must be by the test method cited in the current application for certification.

This Certification Expires November 30, 2020.

Certificate No 350

 Issued on January 29, 2020

Justin Carpenter  
QA Auditor

*This certified parameter list supersedes all previously issued parameter lists for this certificate number.*