STATE OF NORTH CAROLINA ***Application for Initial Environmental Laboratory Certification***
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES
WASTEWATER/GROUNDWATER LABORATORY CERTIFICATION BRANCH

INSTRUCTIONS: This application is only one part of the Certification process; completing and submitting an application does not constitute Certification. Upon review of the completed application, additional clarifications and documentation may be required. Clarifications and additional requested information received in a timely manner will expedite your application process. Please complete all applicable parts of this form using a computer or print legibly in ink.

To apply for Certification, return a single electronic copy of this form to your assigned auditor or, a single hard copy may be mailed to:

DEQ/DWR Water Sciences Section
Laboratory Certification Branch
1623 Mail Service Center
Raleigh, NC 27699-1623

For additional information, contact the Laboratory Certification program office:
Website: https://www.deq.nc.gov/about/divisions/water-resources/water-sciences/chemistry-laboratory/laboratory-certification-branch/laboratory-certification-contact-information

APPLICATION FEES: An applicant for *Initial Certification* must submit to the Department of Environmental Quality, Water Sciences Section, a non-refundable fee of three hundred dollars ($300.00) for the evaluation and processing of each application**. Do not submit the application fee until you are issued an invoice.**

ANNUAL FEES: Annual Certification Fees will be calculated in accordance with 15A NCAC 2H .0800. An annual minimum fee of $2000.00 will be assessed to all Municipal, Industrial, and Other laboratories. In-state Commercial laboratories must pay an annual minimum fee of $6500.00. Out-of-state Commercial laboratories must pay an annual minimum fee of $9750.00. Initial certification fees shall be prorated on a quarterly basis. ***Do not submit annual fees until you are issued an invoice. Invoices will be issued after completion of the application process.***

RECIPROCITY: For reciprocal Certification, submit a copy of the current certificate, a list of accredited Fields of Testing, proficiency testing results for samples analyzed within the six months prior to this application, the most recent on-site inspection report and accepted corrective action responses from your home-state Accrediting Body. Reciprocity is not guaranteed. In some cases, submitted documentation may be insufficient to grant Certification by reciprocity and an on-site inspection will be performed.

Section A: Facility and Contact Information

Facility Name:

EPA Lab Code:

Contact Person*: Mr. Ms. Dr. (circle one) Telephone #, ext.

Contact Person E-Mail Address:

Laboratory Manager **: Mr. Ms. Dr. (circle one) Telephone #, ext.

Laboratory Manager E-Mail Address:

Laboratory Supervisor: Mr. Ms. Dr. (circle one) Telephone #, ext.

Laboratory Supervisor E-Mail Address:

Quality Assurance Officer (if applicable): Mr. Ms. Dr. (circle one) Telephone #, ext.

Quality Assurance Officer E-Mail address:

Facility Address: City State Zip

Mailing Address: City State Zip

County (NC applicant only): Fax Number:

Billing Address: City State Zip

Billing Contact Person*: Mr. Ms. Dr. (circle one) Telephone #, ext.

Billing Contact Person E-Mail Address:

* For North Carolina Wastewater/Groundwater Laboratory Certification Branch (NC WW/GW LCB) purposes, the Contact Person may also be either the Laboratory Supervisor or the Laboratory Manager.

** For NC WW/GW LCB purposes, the Laboratory Manager shall be administratively above the Laboratory Supervisor (they cannot be the same person except at commercial laboratories where the owner is the laboratory supervisor and there is no one administratively above the laboratory supervisor).

Section B: Laboratory Supervisor Information **NOTE**: An attached resume may be substituted for this section.

1. Education: List the College(s), University(ies), or Technical Institute(s) attended, dates of attendance and degree received.

2. Experience: List work-related experience, indicating the employer, years of employment, and basic job description. Also list pertinent licenses, Operator Certification and grade, etc.

3. References: List three people familiar with your professional competency, provide contact information for each in the form of a telephone number or e-mail address.

Section C: Laboratory Information

1. Application Type

☐ Initial Certification ☐ Initial Certification by Reciprocity* Reciprocal State or Accrediting Body (AB): _____

* Reciprocity may be granted for initial Certification and only exempts the laboratory from an initial inspection. The most recent inspection report from the primary AB and the corrective action responses must be submitted with the application . Maintenance inspections may be performed by the NC WW/GW LCB program.

2. Description of Laboratory (check all that apply)

MUNICIPAL, INDUSTRIAL, OTHER		COMMERCIAL LABORATORY (fees charged for analytical services)		TYPES OF SAMPLES PROCESSED	
Municipal Wastewater Laboratory		Commercial Laboratory		Wastewater Effluent	
State/County Health Laboratory		Commercial Mobile Laboratory		Industrial	
Other State Laboratory				Pretreatment	
University/Academic Laboratory				Groundwater	
Municipal Public Water Supply				Surface Waters	
Industrial Laboratory				UST (Underground Storage Tanks)	
				Hazardous Waste	
				Soils/Sediment/Sludge	
				Reclaimed Water	
				Other (specify) _____	

Please list all applicable permit number(s) [e.g., NC0001215, NCG680012, WQ0057791] permit type (e.g., ground water, spray irrigation, non-discharge, etc.) and county location below. Additional sheets may be attached if necessary.
This section may not be applicable to Commercial Laboratories.

PERMIT # PERMIT TYPE: COUNTY:

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If applicable, please list all laboratories that perform analyses for which you have a monitoring requirement but do not perform the analyses in your own laboratory.
This section may not be applicable to Commercial Laboratories.

LABORATORY NAME _____ NC WW/GW LABORATORY CERT#: _____

LABORATORY NAME _____ NC WW/GW LABORATORY CERT#: _____

LABORATORY NAME _____ NC WW/GW LABORATORY CERT#: _____

Section D: Quality Assurance

Proficiency Testing (PT) - Prior to issuance of Certification, this office ***must receive acceptable PT sample results*** from a NELAC approved provider for each of the requested parameter methods and matrices for which Certification is requested and for which PT samples are available (refer to the NC WW/GW LCB website for required PTs). All testing rounds must have occurred within the six months of the application date. For multi-analyte parameters (e.g., Purgeable Organics), results for all spiked components from the primary list of the target group must be reported. Alternatively, the laboratory may appeal to report an abbreviated list if they can demonstrate that the abbreviated list will be a routine reporting scheme for North Carolina client data reporting.

Are PT Sample results for each of the requested analytical parameter methods being sent to the NC WW/GW Laboratory Certification Branch?

Yes ____ No ____ If not supplied, are they on order? Yes ____ No ____ Anticipated Completion Date _____

Results are not supplied for the following parameter methods: _____

Submit *one* copy of the Laboratory's Quality Assurance Manual, which must include the following: Established quality control limits (where appropriate to the method) for all requested parameter methods; Standard Operating Procedures (SOPs) for each parameter method for which Certification is requested; A listing of major equipment used in the analytical testing processes; A description of how a documented training program is administered, with completed documentation for all analysts who will be performing compliance testing; A description of how Proficiency Testing is administered.

If the laboratory does not have a single Quality Assurance Manual containing all of the above elements, individual SOPs containing the required information pertinent to each parameter method may be submitted.

When applicable, submit calculated Minimum Detection Limits (MDLs) and Initial Demonstration of Capability (IDOCs) studies along with the associated raw data. MDL studies must be performed as specified by 40 CFR Part 136, Appendix B.

Section E: Analytical Methods

Parameter methods for which Certification may be requested are listed below. **This list is not all inclusive but represents the parameter methods most often requested. Submit a request for additional parameter methods by writing the reference and method number in the "Other" column next to the appropriate parameter.**

Method Selection: Please circle each method for which you are requesting Certification and specify the lower reporting limit. If the method does not appear, you may write it in the "Other" column. Be sure to include the complete method reference and specify the desired matrix as described below. Note: For all organic analytical categories, please attach a typed list of analyte-specific lower reporting limits. Note: DO NOT provide us with the laboratory method detection limit, unless the lower reporting limit and method detection limit are the same.

Matrix Specification: Methods highlighted in **blue are only applicable to aqueous** samples. Methods highlighted in **brown are only applicable to non-aqueous** samples. Simply circling the appropriate method will specify the matrix. Methods highlighted in **green are applicable to both aqueous and non-aqueous samples**.

NOTE: POLYCHLORINATED BIPHENYLS (PCBs) by SW-846 8082 A is also available in an OIL matrix. If you want that, write "Oil" next to the matrix selection number.

When selecting green highlighted methods, **indicate the desired matrix in the space to the right using the following number scheme;**

1 = Aqueous 2 = Non-Aqueous 3 = Both Aqueous and Non-Aqueous

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Acidity	Titration		2310 B-2020		
Alkalinity	Titration		2320 B-2021		
	Automated	310.2, Rev. 1974			
Biochemical Oxygen Demand (BOD_5)	D.O. Depletion		5210 B-2016		
	Luminescence Based Sensor		5210 B-2016		In-Situ 1003-8-2009
Bromide	Ion Chromatography	300.1, Rev. 1.0 (1997)	4110 B-2020		
		300.0, Rev. 2.1 (1993)	4110 C-2020 4110 D-2020	9056 A	
	Electrode				ASTM D1246-16

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Carbonaceous BOD, ($CBOD_5$)	D.O. Depletion with Nitrification Inhibitor		5210 B-2016		
	Luminescence Based Sensor		5210 B-2016		In-Situ 1004-8-2009
Chemical Oxygen Demand, (COD)	Titrimetric	410.3, Rev.1978	5220 C-2011		ASTM D1252-06 (12) (A)
	Spectrophotometric	410.4, Rev. 2.0 (1993)	5220 D-2011		ASTM D1252-06 (12) (B)
					Hach 8000 (1974)
Chloride	Titrimetric (AgN_3)		4500-Cl^- B-2021	9253	
	Titrimetric ($HgNO_3$)		4500-Cl^- C-2021		
	Automated Continuous Flow		4500-Cl^- E-2021	9251	SEAL 124-A Rev. 6
	IC	300.1, Rev. 1.0 (1997)	4110 B-2020		USGS I-2057-90
		300.0, Rev. 2.1 (1993)	4110 C-2020	9056 A	
	Electrode				ASTM D512-12 (C)
Chlorine, Free Available	Amperometric		4500-Cl D-2011		
	DPD-FAS		4500-Cl F-2011		
	Spectrophotometric, DPD		4500-Cl G-2011		

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Chlorine, Total Residual	Iodometric Titration I		4500-Cl B-2011		
	Back Titration (either end-point)		4500-Cl C-2011		Hach 10025 ULR
	Amperometric Titration		4500-Cl D-2011		Hach 10026 ULR
	Low-Level Amperometric Titration		4500-Cl E-2011		
	DPD Colorimetric		4500-Cl G-2011		Hach 10014 ULR
					Hach 8167 HR
					Hach 10070 HR
	DPD-FAS		4500-Cl F-2011		
	Electrode				Orion Electrode, 1977
Color	PtCo – Visual Comparison		2120 B-2021		NCASI 71.01 (PtCo) (10/1999)
					NCASI 253 (PtCo) (12/1971)
	ADMI - Tristimulus		2120 E-1993 #		
	ADMI – Weighted-Ordinate		2120 F-2021		
Conductivity at 25ºC	Wheatstone Bridge	120.1, Rev. 1982	2510 B-2021	9050 A	

Requires site-specific ATP approval

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Cyanide, Total	Titrimetric		4500-CN⁻ D-2021	9014	
	Spectrophotometric, Manual		4500-CN⁻ E-2021	9014	
	Ion Selective Electrode		4500-CN⁻ F-2021		
	Manual or Semi-automated prep with (**circle one**): FI/Gas Diffusion Amp, Titrimetric, Spectrophotometric	335.4, Rev 1.0 (1993)		9012 B	Lachat 10-204-00-1-X
	Automated UV digestion/distillation and Colorimetric				Kelada-01
	Segmented Flow Injection Analysis, In-Line Ultraviolet Digestion and Amperometric Detection				ASTM D7511-12 (17)
Cyanide, Available	Titrimetric		4500-CN⁻ G D-2021	9012 B 9014	
	Spectrophotometric		4500-CN⁻ G E-2021	9012 B 9014	
	FIA/Ligand Exchange				OIA-1677-09
	Automated Distillation and Colorimetry				Kelada-01
Dissolved Organic Carbon (DOC)	Combustion		5310 B-2014		
	Heated Persulfate or UV Oxidation		5310 C-2014		
			5310 D-2011		
Dissolved Oxygen (DO)	Winkler		4500-O C-2021		
	Electrode		4500-O G-2021		ASTM D888-18 (B)
	Luminescence Based Sensor		4500-O H-2021		ASTM D888-18 (C)
					Hach 10360
					In-Situ 1002-8-2009

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Flash Point	Pensky-Martens Closed-Cup Tester			1010 B (D93-79) 1010 B (D93-80) 1010 B (D8175-18)	
	Setaflash (Small Scale) Closed-Cup Tester			1020 C (D3278-78) 1020 C (D8174-18)	
Fluoride	Electrode		4500-F^- C-2021	9214	
	Manual Colorimetric		4500-F^- D-2021		
	Automated		4500-F^- E-2021		
	IC	300.1, Rev. 1.0 (1997) 300.0, Rev. 2.1 (1993)	4110 B-2020	9056 A	
Hardness, Total	Automated	130.1 (1971)			
	Titrimetric (EDTA)		2340 C-2021		
Ignitability	Powder Train			1030	
MBAS as Surfactants	Manual Colorimetric		5540 C-2021		

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Nitrogen, Ammonia	Titration		4500-NH_3 C-2021		
	Electrode		4500-NH_3 D-2021		
			4500-NH_3 E-2021		
	Ion Chromatography				ASTM D 6919-17
	Nesslerization				ASTM 1426-15 (A)
					USGS I-3520-85
	Manual Phenate, salicylate, or other substituted phenols in Berthelot reaction-based methods	350.1, Rev. 2.0 (1993) (TNT)*	4500-NH_3 F-2021		
	Automated Phenate, salicylate, or other substituted phenols in Berthelot reaction-based methods	350.1, Rev. 2.0 (1993)	4500-NH_3 G-2021		
			4500-NH_3 H-2021		
	Continuous Gas Diffusion/ Conductivity Cell Analysis				Timberline Ammonia-001, June 2011
Nitrogen, Total Kjeldahl (**please indicate the determinative method with the preparation method**)	Prep		4500-N_{org} B-2021		
			4500-N_{org} C-2021		
	Titration		4500-NH_3 C-2021		
	Electrode		4500-NH_3 D-2021		
			4500-NH_3 E-2021		
	Manual Phenate, salicylate, or other substituted phenols in Berthelot reaction-based methods		4500-NH_3 F-2021		
	Semi-Automated Phenate	350.1, Rev. 2.0 (1993)	4500-NH_3 G-2021		
	Automated Phenate (No Separate Prep Method)	351.1 (1978)			
	Semi-automated block digester colorimetric (distillation not required)	351.2, Rev. 2.0 (1993)	4500 N_{org} D-2021		Devarda's Alloy EPA 351.2, Rev. 2.0, (1993) (1)
	Digestion with peroxodisulfate, followed by Spectrophotometric (2,6-dimethyl phenol)				Hach 10242, Rev. 1.2

* TNT = Hach prepackaged test kits

(1) Animal Waste Nutrient Management (AWNM).

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Nitrogen, Nitrate+Nitrite	Cadmium Reduction, Manual		4500-NO_3^- E-2019		
	Cadmium Reduction, Automated	353.2, Rev. 2.0 (1993)	4500-NO_3^- F-2019 4500-NO_3^- I-2019		EPA 353.2, Rev. 2.0, 1993
	Automated Hydrazine		4500-NO_3^- H-2019		
	Enzymatic reduction, followed by manual colorimetric determination		4500-NO_3^- J-2018		
	IC	300.1, Rev. 1.0 (1997) 300.0, Rev. 2.1 (1993)	4110 B-2020	9056 A	
	Spectrophotometric (2,6-dimethyl phenol)				Hach 10206
Nitrogen, Nitrate	Colorimetric (Brucine Sulfate)	352.1 (1971)			
	Electrode		4500-NO_3^- D-2019		
	IC	300.1, Rev. 1.0 (1997) 300.0, Rev. 2.1 (1993)	4110 B-2020	9056 A	
	Spectrophotometric (2,6-dimethylphenol)				Hach 10206
	Calculation		Nitrate-nitrite N minus Nitrite N **Note determinative methods here:** NO3+NO2: NO2:		
Nitrogen, Nitrite	Automated Bypass Cadmium Reduction	353.2, Rev. 2.0 (1993)	4500-NO_3^- F-2019 4500-NO_3^- I-2019		ASTM D3867-16 (A)
	Spectrophotometric: Manual		4500-NO_2^- B-2021		Hach 8507
	Manual Bypass Cadmium Reduction		4500-NO_3^- E-2019		ASTM D3867-16 (B)
	Enzymatic reduction, followed by manual colorimetric determination		4500-NO_3^- J-2018		
	IC	300.1, Rev. 1.0 (1997) 300.0, Rev. 2.1 (1993)	4110 B-2020	9056 A	

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Oil & Grease, HEM	Gravimetric	1664 Rev. B	5520 B-2021	9070 A	
				9071 B	
Ortho-phosphate	Manual Colorimetric	365.3 (1978)	4500-P E-2021		
	Automated	365.1, Rev. 2.0 (1993)	4500-P F-2021		
	IC	300.1, Rev. 1.0 (1997)	4110 B-2020	9056 A	
		300.0, Rev. 2.1 (1993)			
Paint Filter Liquids	Gravimetric			9095 B	
pH	Electrode		4500-H^+ B-2021	9040 C	USGS I-1586-85
				9045 D	
	Automated Electrode	150.2 (1982)			
Phenols, Inorganic	Manual Colorimetric	420.1 (1978)		9065	
	Automated Colorimetric	420.4, Rev. 1.0 (1993)		9066	
Phosphorus, Total	Manual Colorimetric	365.3 (1978)	4500-P E-2021		Hach 8190
					Hach 10210
	Automated	365.1, Rev. 2.0 (1993)	4500-P F-2021		
		365.4 (1974)	4500-P G-2021		
			4500-P H-2021		
	ICP-AES	200.7, Rev. 4.4 (1994)		6010 D	
	Mehlich 3 Extraction [1] (**please note determinative method here**):				
Residue, Settleable	Volumetric		2540 F-2020		

(1) Animal Waste Nutrient Management (AWNM).

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Residue, Total	Gravimetric		2540 B-2020 2540 G-2020		
Residue, Total Dissolved	Gravimetric		2540 C-2020		
Residue, Total Suspended	Gravimetric		2540 D-2020		
Residue, Volatile	Gravimetric	160.4 (1971)	2540 E-2020 2540 G-2020		
Salinity	Electrical Conductivity		2520 B-2021		
Sulfate	Automated Colorimetric	375.2, Rev. 2.0 (1993)			
	Gravimetric		$4500\text{-}SO_4^{2-}$ C-2021 $4500\text{-}SO_4^{2-}$ D-2021		
	Turbidimetric		$4500\text{-}SO_4^{2-}$ E-2021	9038	ASTM D516-16 Hach 8051
	IC	300.1, Rev. 1.0 (1997) 300.0, Rev. 2.1 (1993)	4110 B-2020	9056A	
Sulfide	Titrimetric		$4500\text{-}S^{2-}$ F-2021	9034 9031	
	Manual Colorimetric		$4500\text{-}S^{2-}$ D-2021		
	Electrode		$4500\text{-}S^{2-}$ G-2021		
Sulfite	Titrimetric		$4500\ SO_3^{2-}$ B-2021		Hach 8071
Temperature	Thermometric		2550 B-2010		USGS Method 1975
Total Organic Carbon, (TOC)	Combustion		5310 B-2014	9060 A	
	Heated Persulfate or UV Oxidation		5310 C-2014 5310 D-2011		
Turbidity	Nephelometric	180.1, Rev. 2.0 (1993)	2130 B-2020		Mitchell M2571, Rev. 1.0 (2008) Mitchell M2571, Rev. 1.0 (2008) (continuous)

Biological Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Chlorophyll *a*	Fluorometric	445.0, Rev. 1.2	10150 C-2022		
	Spectrophotometric	446.0, Rev. 1.2	10150 B-2022		
Coliform, Fecal	MF	p.124(2), 1978	9222 D-2015		
			9222 D-2015 (**Biosolids**)		
	MPN	p.132(2), 1978	9221 E-2014		Colilert ®18
		1680 (**Biosolids**)	9221 E-2014 (**Biosolids**)		
		1681 (**Biosolids**)			
Coliform, Total	MF	p.108(2)	9222 B-2015		
	MPN	p.114(2)	9221 B-2014		
Enterococci	MPN		9230 B-2013		ASTM D6503-99
	MPN		9230 D-2013		Enterolert® (IDEXX)
	MF	1600.1	9230 C-2013		
Escherichia Coliform (E. coli)	MPN				Colilert® (24 hr)
					Colilert-18®
	MF	1603.1			mColiBlue-24®
Salmonella	MPN	1682			
	MF				Kenner & Clark, 1974

(2) Microbiological Methods for Monitoring the Environment, Water, and Wastes, EPA/600/8-78/017. 1978. US EPA.

Vector Attraction Reduction (VAR)

Note: Vector Attraction Reduction requirements are now covered under 15A NCAC 02T Permit Rules. The Rule pertaining to Vector Attraction Reduction requirements can be found on the Laboratory Certification website at https://www.deq.nc.gov/about/divisions/water-resources/water-sciences/chemistry-laboratory/laboratory-certification-branch/certification-rules-and-regulations

VAR Options Available Method Reference for each: "Control of Pathogens and Vector Attraction in Sewage Sludge" - EPA/600/R-22/194 revised January 2023	Indicate with a check mark *all* options used by your facility.
Option 1: Reduction in Volatile Solids Content	
Option 2: Additional Digestion of Anaerobically Digested Sewage Sludge	
Option 3: Additional Digestion of Aerobically Digested Sewage Sludge	
Option 4: Specific Oxygen Uptake Rate (SOUR) for Aerobically Digested Sewage Sludge	
Option 5: Aerobic Processes, Greater Than 40°C	
Option 6: Addition of Alkali	
Option 7: Moisture Reduction of Sewage Sludge Containing No Unstabilized Solids	
Option 8: Moisture Reduction of Sewage Sludge Containing Unstabilized Solids	
Option 12: Raising the pH of Domestic Septage	

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Aluminum	FAA		3111 D-2019	7000 B	
			3111 E-2019		
	GFAA		3113 B-2020		
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Manual Colorimetric		3500-Al B-2020		
Antimony	FAA		3111 B-2019	7000 B	
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Arsenic	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	FAA		3114 B-2020	7061 A	
			3114 C-2020	7062	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Manual Colorimetric		3500-As B-2020		
Barium	FAA		3111 D-2019	7000 B	
	GFAA		3113 B-2020	7010	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Beryllium	FAA		3111 D-2019	7000 B	
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Boron	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Cadmium	FAA		3111 B-2019 3111 C-2019	7000 B	
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Manual Colorimetric		3500-Cd D-1990		
Calcium	FAA		3111 B-2019	7000 B	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Titrimetric (EDTA)		3500-Ca B-2020		
	Mehlich 3 Extraction (1)			6010 D	
Chromium, Total	FAA		3111 B-2019 3111 C-2019	7000 B	
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Manual Colorimetric		3500-Cr B-2020		
Chromium VI	FAA		3111 C-2019		
	Ion Chromatography	218.6, Rev. 3.3 (1994)	3500-Cr C-2020	7199*	
	Manual Colorimetric		3500-Cr B-2020	7196 A	

(1) Animal Waste Nutrient Management (AWNM).

*SW-846 7199 (Non-Aqueous) requires digestion by SW-846 3060 A.

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Cobalt	FAA		3111 B-2019	7000 B	
			3111 C-2019		
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Copper	FAA		3111 B-2019	7000 B	
			3111 C-2019		
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Manual Colorimetric		3500-Cu B-2020		
			3500-Cu C-2020		
	Mehlich 3 Extraction (1)	200.7, Rev. 4.4 (1994)		6010 D	
Hardness (Ca + Mg)	Calculation, Ca plus Mg as their carbonates - **Note determinative method(s) here:** Ca – Mg –		2340 B-2021		
Iron	FAA		3111 B-2019	7000 B	
			3111 C-2019		
	GFAA		3113 B-2020	7010	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Manual Colorimetric		3500-Fe B-2011		

(1) Animal Waste Nutrient Management (AWNM).

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Lead	FAA		3111 B-2019	7000 B	
			3111 C-2019		
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Manual Colorimetric		3500-Pb B-2020		
Lithium	FAA		3111 B-2019	7000 B	
	ICP/AES	200.7, Rev. 4.4 (1994)		6010 D	
Magnesium	FAA		3111 B-2019	7000 B	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Mehlich 3 Extraction (1)	200.7, Rev. 4.4 (1994)		6010 D	
Manganese	FAA		3111 B-2019	7000 B	
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Manual Colorimetric		3500-Mn B-2020		
	Mehlich 3 Extraction (1)	200.7, Rev. 4.4 (1994)		6010 D	
Mercury	CVAA, Manual	245.1, Rev. 3.0 (1994)	3112 B-2020	7471 B	
				7470 A	
	CVAA, Automated	245.2 (Issued 1974)			
	CVAFS	245.7, Rev. 2.0 (2005)			
	ICP/AES			6010 D	
	ICP/MS			6020 B	
	P&T/CVF	1631 E			
	Thermal Decomposition/AA			7473	

(1) Animal Waste Nutrient Management (AWNM).

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Molybdenum	FAA		3111 D-2019	7000 B	
	GFAA		3113 B-2020	7010	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Nickel	FAA		3111 B-2019	7000 B	
			3111 C-2019		
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Potassium	FAA		3111 B-2019	7000 B	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Mehlich 3 Extraction (1)			6010 D	
Selenium	FAA		3114 B-2020	7741 A	
			3114 C-2020		
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Silica	Manual Colorimetric		4500-SiO_2 C-2021		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
Silver	FAA		3111 B-2019	7000 B	
			3111 C-2019		
	GFAA		3113 B-2020	7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Sodium	FAA		3111 B-2019	7000 B	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Mehlich 3 Extraction (1)			6010 D	

(1) Animal Waste Nutrient Management (AWNM).

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Strontium	FAA		3111 B-2019	7000 B	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS			6020 B	
Thallium	FAA		3111 B-2019	7000 B	
	GFAA	279.2 (Issued 1978)		7010	
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Tin	FAA		3111 B-2019	7000 B	
	GFAA		3113 B-2020		
	STGFAA	200.9, Rev. 2.2 (1994)			
	ICP/AES	200.7, Rev. 4.4 (1994)		6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Titanium	FAA		3111 D-2019		
	ICP/AES	200.7, Rev. 4.4 (1994)		6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
Vanadium	FAA		3111 D-2019	7000 B	
	GFAA			7010	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Manual Colorimetric		3500-V B-2011		
Zinc	FAA		3111 B-2019 3111 C-2019	7000 B	
	GFAA			7010	
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2020	6010 D	USGS I-4471-97
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B	
	Manual Colorimetric		3500 Zn B-2020		
	Mehlich 3 Extraction (1)	200.7, Rev. 4.4 (1994)		6010 D	

(1) Animal Waste Nutrient Management (AWNM).

Organic Parameters Categories	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)
Purgeable Halocarbons	GC	601 (1984)	6200 C-2020	8021 B	
Purgeable Aromatics	GC	602 (1984)	6200 C-2020	8021 B	
Acrolein & Acrylonitrile,	GC	603 (1984)		8031 (Acrylonitrile)	
	GC/MS	624.1 (12/2016)			
Acetonitrile	GC			8033	
Organic Phenols	GC	604 (1984)	6420 B-2020	8041 A	
Benzidines	HPLC	605 (1984)			
Phthalate Esters	GC	606 (1984)		8061 A	
	GC/MS		6410 B-2020		
Explosives	HPLC			8332	
Nitrosamines	GC	607 (1984)		8070 A	
Organochlorine Pesticides	GC	608.3 (12/2016)	6630 B-2021 6630 C-2021	8081 B	
	GC/MS			8270 E	
Polychlorinated Biphenyls (PCBs)	GC	608.3 (12/2016)		8082 A	
	GC/MS	625.1 (12/2016)	6410 B-2020		
NOTE: POLYCHLORINATED BIPHENYLS (PCBs) by SW-846 8082 A is also available in an OIL matrix. If you want that, write "Oil" next to the matrix selection number.					
Nitroaromatics & Isophorone	GC	609 (1984)			
Nitroaromatics & Nitramines	HPLC			8330 A	
Polynuclear Aromatic Hydrocarbons (PAHs)	HPLC	610 (1984)	6440 B-2021	8310	
	GC	610 (1984)		8100	
	GC/MS			8270 E	
Haloethers	GC	611 (1984)		8111	
Chlorinated Hydrocarbons	GC	612 (1984)		8121	

Organic Parameters Categories	Technology	EPA Methods	Standard Methods	EPA SW-846		Other (Include Reference and Method No.)	
Purgeable Organics	GC/MS	624.1 (12/2016) 1624 B 1666 A	6200 B-2020	8260 D		ASTM D3695	
Base/Neutral & Acid Organics	GC/MS	625.1 (12/2016) 1625 B	6410 B-2020	8270 E			
Chlorinated Acid Herbicides	GC	615 (1992)	6640 B-2021	8151 A			
Organophosphorus Pesticides	GC	614 (1992)		8141 B			
	GC/MS			8270 E			
Nonhalogenated Volatile Organics	GC			8015 C			
N-Methylcarbamates	HPLC	632 (1992)		8318 A			
1,2 - Dibromoethane (EDB)	GC	504.1 (Rev. 1.1, 1995)		8011			
Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics	GC			8015 C			
Total Petroleum Hydrocarbons (TPH) Diesel Range Organics	GC			8015 C			
Extractable Petroleum Hydrocarbons (EPH)	GC					Massachusetts Method, December 2019, Rev. 2.1	
Volatile Petroleum Hydrocarbons (VPH)	GC					Massachusetts Method, Feb 2018, Rev. 2.1	
Chlorinated Phenolics	GC/MS	1653, Rev A					
Adsorbable Organic Halides	Adsorption/ Titration	1650, Rev C					
Total Organic Halides (TOX)	Microcoulometer/ Titration Detector			9020B			
Per- and Polyfluoroalkyl Substances (PFAS)	LC/MS/MS			8327			

Section F: Authorized Signature(s)

This statement certifies that the information in this application is truthful and accurate, and that the applicant is aware of all regulations regarding the requirements of NC WW/GW Laboratory Certification, 15A NCAC 2H .0800.

Signature of Laboratory Manager **Date**

Print Name

(First) **(M.I.)** **(Last)**

Signature of Laboratory Supervisor: **Date**

Print Name

(First) **(M.I.)** **(Last)**