STATE OF NORTH CAROLINA ***Application for Initial Environmental Laboratory Certification***
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES
WASTEWATER/GROUNDWATER LABORATORY CERTIFICATION BRANCH
Form #100-app

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:
Telephone: 919-733-3908
Website: https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch

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: _____

* Reciprocity will be granted for initial Certification only. Maintenance inspections may be performed by the NC WW/GW LC 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#:

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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.)	Lower Reporting Limit Conc. (Include Units)
Acidity	Titration		2310 B-2011			
Alkalinity	Titration		2320 B-2011			
	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	

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Bromide	Ion Chromatography	300.1, Rev. 1.0 (1997)	4110 B-2011			
		300.0, Rev. 2.1 (1993)	4110 C-2011	9056A		
			4110 D-2011			
	Electrode				ASTM D1246-16	
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 (A)	
	Spectrophotometric	410.4, Rev. 2.0 (1993)	5220 D-2011		ASTM D1252-06 (B)	
					Hach 8000 (1974)	
Chloride	Titrimetric ($AgNO_3$)		4500-Cl^- B-2011	9253		
	Titrimetric ($HgNO_3$)		4500-Cl^- C-2011			
	Automated Continuous Flow		4500-Cl^- E-2011	9251	SEAL 124-A Rev. 6	
	IC	300.1-1, Rev. 1.0 (1997)	4110 B-2011		USGS I-2057-90	
		300.0, Rev. 2.1 (1993)	4110 C-2011	9056A		
	Electrode				ASTM D512-04 (C)	

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Chlorine, Free Available	Amperometric		4500-Cl D-2011			
	DPD-FAS		4500-Cl F-2011			
	Spectrophotometric, DPD		4500-Cl G-2011			
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-2011		NCASI 71.01 (PtCo) (10/1999)	
					NCASI 253 (PtCo) (12/1971)	
	ADMI - Tristimulus		2120 E-1993 #			
	ADMI – Weighted-Ordinate		2120 F-2011			
Conductivity at 25ºC	Wheatstone Bridge	120.1, Rev. 1982	2510 B-2011	9050A		

Requires site-specific ATP approval

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Cyanide, Total	Titrimetric		4500-CN^- D-2016	9014		
	Spectrophotometric, Manual		4500-CN^- E-2016	9014		
	Ion Selective Electrode		4500-CN^- F-2016			
	Manual or Semi-automated prep with (**circle one**): FI/Gas Diffusion Amp, Titrimetric, Spectrophotometric	335.4, Rev 1.0 (1993)		9012B	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, Amenable	Titrimetric		4500-CN^- G D-2016	9012B		
				9014		
	Spectrophotometric		4500-CN^- G E-2016	9012B		
				9014		
Cyanide, Available	FIA/Ligand Exchange				OIA-1677-09	
	Automated Distillation and Colorimetry				Kelada-01	

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
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-2016			
	Electrode		4500-O G-2016		ASTM D888-12 (B)	
	Luminescence Based Sensor		4500-O H-2016		ASTM D888-12 (C)	
					Hach 10360	
					In-Situ 1002-8-2009	
Flash Point	Pensky-Martens Closed-Cup Tester			1010B (D93-79)		
				1010B (D93-80)		
				1010B (D8175-18)		
	Setaflash (Small Scale) Closed-Cup Tester			1020C (D3278-78)		
				1020C (D8174-18)		
Fluoride	Electrode		4500-F^- C-2011	9214		
	Manual Colorimetric		4500-F^- D-2011			
	Automated		4500-F^- E-2011			
	IC	300.1-1, Rev. 1.0 (1997)	4110 B-2011	9056A		
		300.0, Rev. 2.1(1993)				

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Hardness, Total	Automated	130.1 (1971)				
	Titrimetric (EDTA)		2340 C-2011			
Ignitability	Powder Train			1030		
MBAS as Surfactants	Manual Colorimetric		5540 C-2011			
Nitrogen, Ammonia	Titration		4500-NH3 C-2011			
	Electrode		4500-NH_3 D-2011			
			4500-NH_3 E-2011			
	Ion Chromatography				ASTM D 6919-09	
	Automated Phenate, salicylate, or other substituted phenols in Berthelot reaction-based methods	350.1, Rev. 2.0 (1993)	4500-NH_3 G-2011			
			4500-NH_3 H-2011			
	Continuous Gas Diffusion/ Conductivity Cell Analysis				Timberline Ammonia-001, June 2011	

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Nitrogen, Total Kjeldahl (**please indicate the determinative method with the preparation method**)	Prep		4500-N_{org} B-2011			
			4500-N_{org} C-2011			
	Titration		4500-NH_3 C-2011			
	Electrode		4500-NH_3 D-2011			
	Electrode		4500-NH_3 E-2011			
	Manual Phenate, salicylate, or other substituted phenols in Berthelot reaction-based methods		4500-NH_3 F-2011			
	Semi-Automated Phenate	350.1, Rev. 2.0 (1993)	4500-NH_3 G-2011			
	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-2011		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	

(1) Animal Waste Nutrient Management (AWNM).

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Nitrogen, Nitrate+Nitrite	Cadmium Reduction, Manual		4500-NO_3^- E-2016			
	Cadmium Reduction, Automated	353.2, Rev. 2.0 (1993)	4500-NO_3^- F-2016 4500-NO_3^- I-2016		EPA 353.2, Rev. 2.0, 1993 [SEAL 126-A]	
	Automated Hydrazine		4500-NO_3^- H-2016			
	Enzymatic reduction, followed by manual colorimetric determination		4500-NO_3^- J-2018			
	IC	300.1-1, Rev. 1.0 (1997) 300.0, Rev. 2.1 (1993)	4110 B-2011	9056A		
	Spectrophotometric (2,6-dimethyl phenol)				Hach 10206	
Nitrogen, Nitrate	Colorimetric (Brucine Sulfate)	352.1 (1971)				
	Electrode		4500-NO_3^- D-2016			
	IC	300.1-1, Rev. 1.0 (1997) 300.0, Rev. 2.1 (1993)	4110 B-2011	9056A		
	Spectrophotometric (2,6-dimethylphenol)				Hach 10206	
	Calculation		Nitrate-nitrite N minus Nitrite N **Note determinative methods here:** NO3+NO2: NO2:			

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Nitrogen, Nitrite	Automated Bypass Cadmium Reduction	353.2, Rev. 2.0 (1993)	4500-NO_3^- F-2016		ASTM D3867-04 (A)	
			4500-NO_3^- I-2016			
	Spectrophotometric: Manual		4500-NO_2^- B-2011		Hach 8507	
	Manual Bypass Cadmium Reduction		4500-NO_3^-E-2016		ASTM D3867-04 (B)	
	Enzymatic reduction, followed by manual colorimetric determination		4500-NO_3^-J-2018			
	IC	300.1-1, Rev. 1.0 (1997)	4110 B-2011	9056A		
		300.0, Rev. 2.1 (1993)				
Oil & Grease, HEM	Gravimetric	1664 Rev. B	5520 B-2011	9070A		
				9071B		
Ortho-phosphate	Manual Colorimetric	365.3 (1978)	4500-P E-2011			
	Automated	365.1, Rev. 2.0 (1993)	4500-P F-2011			
	IC	300.1-1, Rev. 1.0 (1997)	4110 B-2011	9056A		
		300.0, Rev. 2.1 (1993)				
Paint Filter Liquids	Gravimetric			9095B		
pH	Electrode		4500-H^+ B-2011	9040C	USGS I-1586-85	
				9045D		
	Automated Electrode	150.2 (1982)				

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
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-2011			
	Automated	365.1, Rev. 2.0 (1993)	4500-P F-2011 4500-P G-2011			
		365.4 (1974)				
	ICP-AES	200.7, Rev. 4.4 (1994)		6010D		
	Mehlich 3 Extraction (1) (**please note determinative method here**):					
Residue, Settleable	Volumetric		2540 F-2015			
Residue, Total	Gravimetric		2540 B-2015			
Residue, Total Dissolved	Gravimetric		2540 C-2015			
Residue, Total Suspended	Gravimetric		2540 D-2015			
Residue, Volatile	Gravimetric	160.4 (1971)	2540 E-2015			
Salinity	Electrical Conductivity		2520 B-2011			

(1) Animal Waste Nutrient Management (AWNM).

Inorganic Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Sulfate	Automated	375.2, Rev. 2.0 (1993)				
	Gravimetric		4500-SO_4^{2-} C-2011			
			4500-SO_4^{2-} D-2011			
	Turbidimetric		4500-SO_4^{2-} E-2011	9038	ASTM D516-16	
	IC	300.1-1, Rev. 1.0 (1997)	4110 B-2011	9056A		
		300.0, Rev. 2.1 (1993)				
Sulfide	Titrimetric		4500-S^{2-} F-2011	9034		
				9031		
	Manual Colorimetric		4500-S^{2-} D-2011			
Sulfite	Titrimetric		4500 SO_3^{2-} B-2011			
Temperature	Thermometric		2550 B-2010		USGS Method 1975	
Total Organic Carbon, (TOC)	Combustion		5310 B-2014	9060A		
	Heated Persulfate or UV Oxidation		5310 C-2014	9060A		
			5310 D-2011			
Turbidity	Nephelometric	180.1, Rev. 2.0 (1993)	2130 B -2011		Mitchell M2571, Rev. 1.0 (2008)	
					Mitchell M2571, Rev. 1.0 (2008) (inline)	

(1) Animal Waste Nutrient Management (AWNM).

Biological Analytical Parameters	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Chlorophyll *a*	Fluorometric	445.0, Rev. 1.2	10200 H-2011			
	Spectrophotometric	446.0, Rev. 1.2	10200 H-2011			
Coliform, Fecal (MF)	MF	p.124(2), 1978	9222 D-2015			
	MF		9222 D-2015 **(Biosolids)**			
Coliform, Fecal (MPN)	MPN	p.132(2), 1978	9221 E-2014		Colilert ®18	
		1680 **(Biosolids)**	9221 E-2014 **(Biosolids)**			
		1681 **(Biosolids)**				
Coliform, Total (MF)	MF	p.108(2)	9222 B-2015			
Coliform, Total (MPN)	MPN	p.114(2)	9221 B-2014			
Enterococci	MPN		9230 B-2013		ASTM D6503-99	
	MPN		9230 D-2013		Enterolert® (IDEXX)	
	MF	1600	9230 C-2013			
Escherichia Coliform (E. coli)	MPN		9223 B-2016		Colilert® (24 hr) Colilert-18®	
	MF	1603			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://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/rules-regulations-0.

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.)	Lower Reporting Limit Conc. (Include Units)
Aluminum	FAA		3111 D-2011	7000 B		
			3111 E-2011			
	GFAA		3113 B-2010			
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Manual Colorimetric		3500-Al B-2011			
Antimony	FAA		3111 B-2011	7000 B		
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
Arsenic	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	FAA		3114 B-2011	7061 A		
			3114 C-2011	7062		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Manual Colorimetric		3500-As B-2011			
Barium	FAA		3111 D-2011	7000 B		
	GFAA		3113 B-2010	7010		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	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.)	Lower Reporting Limit Conc. (Include Units)
Beryllium	FAA		3111 D-2011	7000 B		
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
Boron	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
Cadmium	FAA		3111 B-2011	7000 B		
			3111 C-2011			
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Manual Colorimetric		3500-Cd D-1990			
Calcium	FAA		3111 B-2011	7000 B		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Titrimetric (EDTA)		3500-Ca B-2011			
	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.)	Lower Reporting Limit Conc. (Include Units)
Chromium, Total	FAA		3111 B-2011	7000 B		
			3111 C-2011			
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Manual Colorimetric		3500-Cr B-2011			
Chromium VI	FAA		3111 C-1999			
	Ion Chromatography	218.6, Rev. 3.3 (1994)	3500-Cr C-2011	7199*		
	Manual Colorimetric		3500-Cr B-2011	7196 A		
Cobalt	FAA		3111 B-2011	7000 B		
			3111 C-2011			
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		

*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.)	Lower Reporting Limit Conc. (Include Units)
Copper	FAA		3111 B-2011	7000 B		
			3111 C-2011			
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Manual Colorimetric		3500-Cu B-2011			
	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-2011			
Iron	FAA		3111 B-2011 3111 C-2011	7000 B		
	GFAA		3113 B-2010	7010		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Manual Colorimetric		3500-Fe B-2011			

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Lead	FAA		3111 B-2011	7000 B		
			3111 C-2011			
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Manual Colorimetric		3500-Pb B-2011			
Lithium	FAA		3111 B-2011	7000 B		
	ICP/AES	200.7, Rev. 4.4 (1994)		6010 D		
Magnesium	FAA		3111 B-2011	7000 B		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	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-2011	7000 B		
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Manual Colorimetric		3500-Mn B-2011			
	Mehlich 3 Extraction (1)	200.7, Rev. 4.4 (1994)		6010 D		

(1) Animal Waste Nutrient Management (AWNM).

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Mercury	CVAA, Manual	245.1, Rev. 3.0 (1994)	3112 B-2011	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	1631E				
	Thermal Decomposition/AA			7473		
Molybdenum	FAA		3111 D-2011	7000 B		
	GFAA		3113 B-2010	7010		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
Nickel	FAA		3111 B-2011 3111 C-2011	7000 B		
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		

(1) Animal Waste Nutrient Management (AWNM).

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Potassium	FAA		3111 B-2011	7000 B		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Mehlich 3 Extraction (1)			6010 D		
Selenium	FAA		3114 B-2011	7741A		
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
Silica	Manual Colorimetric		4500-SiO_2 C-2011			
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
Silver	FAA		3111 B-2011	7000 B		
			3111 C-2011			
	GFAA		3113 B-2010	7010		
	STGFAA	200.9, Rev. 2.2 (1994)				
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		

(1) Animal Waste Nutrient Management (AWNM).

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Sodium	FAA		3111 B-2011	7000 B		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Mehlich 3 Extraction (1)				6010 D	
Strontium	FAA		3111 B-2011	7000 B		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS			6020 B		
Thallium	FAA		3111 B-2011	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-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
Tin	FAA		3111 B-2011	7000 B		
	GFAA		3113 B-2010			
	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		

(1) Animal Waste Nutrient Management (AWNM).

Metals	Technology	EPA Methods	Standard Methods	EPA SW-846	Other (Include Reference and Method No.)	Lower Reporting Limit Conc. (Include Units)
Titanium	FAA		3111 D-2011			
	ICP/AES	200.7, Rev. 4.4 (1994)		6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
Vanadium	FAA		3111 D-2011	7000 B		
	GFAA			7010		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D		
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Manual Colorimetric		3500-V B-2011			
Zinc	FAA		3111 B-2011	7000 B		
			3111 C-2011			
	GFAA			7010		
	ICP/AES	200.7, Rev. 4.4 (1994)	3120 B-2011	6010 D	USGS I-4471-97	
	ICP/MS	200.8, Rev. 5.4 (1994)		6020 B		
	Manual Colorimetric		3500 Zn B-2011			
	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-2011	8021B		
Purgeable Aromatics	GC	602 (1984)	6200 C-2011	8021B		
Acrolein & Acrylonitrile,	GC	603 (1984)		8031(Acrylonitrile)		
	GC/MS	624.1 (12/2016)				
Acetonitrile	GC			8033		
Organic Phenols	GC	604 (1984)	6420 B-2000	8041A		
Benzidines	HPLC	605 (1984)				
Phthalate Esters	GC	606 (1984)		8061A		
	GC/MS		6410 B-2000			
Explosives	HPLC			8332		
Nitrosamines	GC	607 (1984)		8070A		
Organochlorine Pesticides	GC	608.3 (12/2016)	6630 B-2007 6630 C-2007	8081B		
	GC/MS			8270E		
Polychlorinated Biphenyls (PCBs)	GC	608.3 (12/2016)		8082A		
	GC/MS	625.1 (12/2016)	6410 B-2000			
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			8330A		
Polynuclear Aromatic Hydrocarbons (PAHs)	HPLC	610 (1984)	6440 B-2005	8310		
	GC	610 (1984)		8100		
	GC/MS			8270E		
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) 1624B 1666A	6200 B-2011	8260D		ASTM D3695	
Base/Neutral & Acid Organics	GC/MS	625.1 (12/2016) 1625B	6410 B-2000	8270E			
Chlorinated Acid Herbicides	GC	615 (1992)	6640 B-2005	8151A			
Organophosphorus Pesticides	GC GC/MS	614 (1992)		8141B 8270E			
Nonhalogenated Volatile Organics	GC			8015C			
N-Methylcarbamates	HPLC	632 (1992)		8318A			
1,2 - Dibromoethane (EDB)	GC	504.1 (Rev. 1.1, 1995)		8011			
Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics	GC			8015C			
Total Petroleum Hydrocarbons (TPH) Diesel Range Organics	GC			8015C			
Extractable Petroleum Hydrocarbons (EPH)	GC					Massachusetts Method, May 2004, rev. 1.1	
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			

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)**