NC DEQ/DWR WASTEWATER/GROUNDWATER LABORATORY CERTIFICATION BRANCH

LABORATORY NAME:		CERT #:	
PRIMARY ANALYST:		DATE:	
NAME OF PERSON COMPLETING CHECKLIST (PRINT):			
SIGNATURE OF PERSON COMPLETING CHECKLIST:			

Parameter: **Residue, Settleable (Aqueous)**
Method: **Standard Methods, 2540 F-2015 (Volumetric)**

Settleable Residue is considered a method-defined parameter per the definition in the Code of Federal Regulations, Part 136.6, Section (a) (5). This means that the method may not be modified per Part 136.6, Section (b) (3).

Equipment:

	Imhoff Cone		Stirring Rod, glass or other inert material (optional)
			Timer (optional)

PLEASE COMPLETE CHECKLIST IN INDELIBLE INK
Please mark Y, N or NA in the column labeled LAB to indicate the common lab practice and in the column labeled SOP to indicate whether it is addressed in the SOP.

	GENERAL	LAB	SOP	EXPLANATION
1	Is the SOP reviewed at least every 2 years? What is the most recent review/revision date of the SOP? [15A NCAC 02H .0805 (a) (7)] [15A NCAC 02H .0805 (g) (4)] **Date:**			Quality assurance, quality control, and Standard Operating Procedure documentation shall indicate the effective date of the document and be reviewed every two years and updated if changes in procedures are made. Verify proper method reference. During review notate deviations from the approved method and SOP.
2	Are all review/revision dates and procedural edits tracked and documented? [15A NCAC 02H .0805 (a) (7)] [15A NCAC 02H .0805 (g) (4)]			Each laboratory shall have a formal process to track and document review dates and any revisions made in all quality assurance, quality control and SOP documents.
3	Is there North Carolina data available for review?			If not, review PT data
4	Are the following items documented with each analysis? [15A NCAC 02H .0805 (a) (7)] [15A NCAC 02H .0805 (g) (2)]			
	The method or SOP reference			
	Laboratory identification			
	Sample collector			
	Signature or initials of the analyst			
	Date of sample collection			
	Time of sample collection			
	Date of sample analysis			
	Starting time of sample analysis [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			The following must be documented in indelible ink whenever sample analysis is performed: Date and time of sample analysis (must document start and end times) to verify the 48-hour holding and the 1-hour settling times are met.
	45-minute stir time [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			The use of a check box is acceptable
	Ending time of sample analysis [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			
	Sample identification			
	Proper units of measure			mL/L
	Final value to be reported			
	Facility name or permit number [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			
	Parameter analyzed [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			

	PRESERVATION and STORAGE	LAB	SOP	EXPLANATION
5	Is the sample analyzed within 48 hours of collection? [40 CFR Part 136.3, Table II]			
6	If not analyzed immediately, is the sample stored above freezing and ≤ 6°C? [40 CFR Part 136.3, Table II]			
	PROCEDURE – Sample Analysis	**LAB**	**SOP**	**EXPLANATION**
7	Is the Imhoff Cone clean and dry prior to analysis? [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			
8	Is exactly 1 liter of well-mixed sample added to the Imhoff cone? [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			
9	What does the laboratory do if it does not receive at least 1 L of sample? [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			If the laboratory does not receive 1 liter of sample and another sample cannot be collected, the results and reporting limit must be calculated based upon the volume analyzed and qualified on the Discharge Monitoring Report (DMR) or client report. Calculate results as follows: (mL residue) X 1000 = Result in mL/L (mL of sample)
10	Is the sample allowed to settle for 45 minutes and then gently agitated near the sides of the cone with a stirring rod, or spun? [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			This is done to move any residue that sticks to the sides of the cone down to the bottom.
11	Is the sample then allowed to settle an additional 15 minutes for a total of exactly1 hour? [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			
12	If the settled matter contains pockets of liquid between large, settled particles, is their volume estimated and subtracted from the volume of settled solids? [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue]			If settleable and floating solids separate, do not estimate the floating material as settleable matter.
13	If the situation in question #12 occurs, is the subtraction documented? [SM 2540 F-2015. (1) (b)]			
14	How are results less than the lowest graduation of the cone reported? [NC WW/GW LCB Approved Procedure for the Analysis of Settleable Residue] **Answer:** **What is the lowest graduation of the cone (reporting limit):**			Results, which fall below the lowest graduation on the Imhoff cone (this is generally in the 0.1 to 1.0 mL/L range), must be reported as less than that value.
15	Are results qualified to indicate sample anomalies when reporting results? [15A NCAC 02H .0805 (e) (5)]			Reported data associated with quality control failures, improper sample collection, holding time exceedances, or improper preservation shall be qualified as such.

Additional Comments:

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Inspector: _____Date:_____