

## **VAR Option 3 Documentation Requirements Policy**

(NC WW/GW LCB 06/08/2022)

The VAR: Option 3 method (See Section 8.4 on page 60 and Appendix D, Section 3 on page 130) requires that the sludge be sampled every week for five successive weeks. There are also daily requirements.

### **Initial documentation must include:**

- Dimensions and volume of the digester
- Initial percent solids value; Must be  $\leq 2\%$  at the start of the test
- Method used for Volatile Solids determination
- Confirmation that the oil and particle free air was supplied to the bottom of the digester through a porous stone at a rate sufficient to thoroughly mix the sewage sludge
- Dissolved oxygen reading; Reading must be  $\geq 2$  mg/L to be acceptable. If it is not, increase air flow until it is.

### **Daily documentation must include:**

- Confirmation that water loss from the digester is made up every day with distilled water; That can be documented using a check box
- Confirmation that solids that adhere to the walls above and below the water line are scraped off and dispersed back into the sludge; That can be documented using a check box
- Digestion temperature (i.e., 20 °C). The method also states that if the room temperature is maintained at about 22 °C, that evaporation of the water from the digester will cool the sludge to about 20 °C.

### **Weekly documentation must include:**

- Date and time of sample collection
- Dissolved oxygen reading at the time of collection. Reading must be  $\geq 2$  mg/L to be acceptable. This would also include proper documentation of the meter calibration. If DO is not  $\geq 2$  mg/L, increase air flow until it is and begin daily monitoring of DO until 3 consecutive days of values  $\geq 2$  mg/L are obtained. Weekly measure may resume after that.
- Total Solids value (included along with this would be all required documentation for that test (e.g., oven temperature, time in and out of oven, balance weight-check, etc.))
- Volatile Solids value (included along with this would be all required documentation for that test (e.g., oven temperature, time in and out of oven, balance weight-check, etc.))

### **Final documentation must include:**

- Volatile Solids reduction value and calculation