

NATURAL RESOURCES CONSERVATION SERVICE

VIRGINIA

OPERATION AND MAINTENANCE REQUIREMENTS

ANAEROBIC DIGESTER

CODE 366

Land Owner/Operator _____

County _____ SWCD _____ Farm/Tract No. _____

Prepared By _____ Date _____

OPERATION AND MAINTENANCE ITEMS

A properly operated and maintained anaerobic digester is an asset to the farm. This practice was designed and installed to biologically treat animal waste. Estimated life span of this installation is at least 25 years. The life of the practice can be assured and usually increased by developing and carrying out a systematic operation and maintenance program.

This practice will require periodic maintenance and may also require operational items to maintain satisfactory performance. Your operation and maintenance program requirements include:

- Proper loading rate of the digester and total solids content of the influent.
- Accounting for the nutrient impact of all feedstock in the farm's nutrient management plan.
- Proper operating procedures for the digester.
- Estimates of biogas production, methane content, and potential energy recovery.
- Description of the planned startup procedures, normal operation, safety issues, and normal maintenance items.
- Alternative operation procedures in the event of equipment failure.
- Instructions for safe use or flaring of biogas.
- Digester and other component maintenance.
- Troubleshooting guide.
- Monitoring plan with frequency of measuring and recording digester inflow, operating temperatures, biogas yield, and/or other information as appropriate.
- Accounting for the nutrient impact of all feedstock in the farm's nutrient management plan.
- Controlled temperature digesters shall be maintained at internal temperatures appropriate to the digester type and design. Mesophilic digesters shall be maintained between 35 °C and 40 °C (95 °F-104 °F) with an optimum of 37.5 °C (100 °F) and daily fluctuation of digester temperature limited to less than 0.55 °C (1 °F).

