Engineers and Soil Scientists

Agri-Waste Technology, Inc.
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Septic System Inspection Report

211 Donnibrook Run
Fuquay Varina, NC 27526

Prepared For: Eric Coates, Detailed Home Inspections Inc

Prepared By: Trent Bostic, Assistant Soil Scientist
NCOWCICB Inspector #4957I

Report Date: November 10, 2016

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The septic system serving the home at 211 Donnibrook Run was inspected by Trent Bostic of Agri-Waste Technology, Inc., (AWT) on November 9, 2016. The residence is served by a conventional gravity septic system consisting of a septic tank and drainfield trenches. The system is permitted for a 3-bedroom home. Water is supplied to the home via a public water source. A copy of the septic permit from the Harnett County Health Department is included in Attachment 1. A copy of the septic system inspection checklist, as well as pictures taken during the inspection can be found in Attachment 2. A detailed discussion of the inspection is below.

General septic system information can be found on the North Carolina State University - Soil Science Department website. The address is www.soil.ncsu.edu. Additional routine septic system maintenance information is in Attachment 3 following this report.

Septic Drainfield

The septic drainfield is located in the back yard (see permit sketch). Three gravel trenches (approx. 3 ft. wide by 100 ft. long) are installed along the contour. The drainfield is gravity fed via distribution box. The area is well-maintained. There was no evidence of surfacing effluent within the drainfield at the time of inspection. Surface water does not appear to collect in the drainfield area. Water was flushed to the drainfield during the inspection with no back-up or oversaturation observed.

Septic Tank

The septic tank is located near the rear of the house. The liquid level in the septic tank was found to be at the appropriate height and leakage is not suspected. The top of the tank is buried approximately 12 inches deep. A total of 8-10 inches of residuals were measured in the septic tank; therefore, pumping is not necessary at this time. Two large cracks were observed in the outlet area of the septic tank. The effluent filter was cleaned during the inspection.

Attachment 3 contains a table entitled *Estimated Septic Tank Inspection and Pumping Frequency in Years* that indicates the recommended pumping frequency based on the number of occupants in the house and the septic tank size. The size of the septic tank serving this residence is 1,000-gallons.

Conclusions

- The tank is buried beneath the gravel area.
- Several cracks were observed in the outlet area of the septic tank, recommend continued monitoring of cracks.
- The distribution box contains scum and is slightly deteriorated. Recommend cleaning scum from distribution box.
- This system utilizes an effluent filter that will require routine cleaning for proper operation.

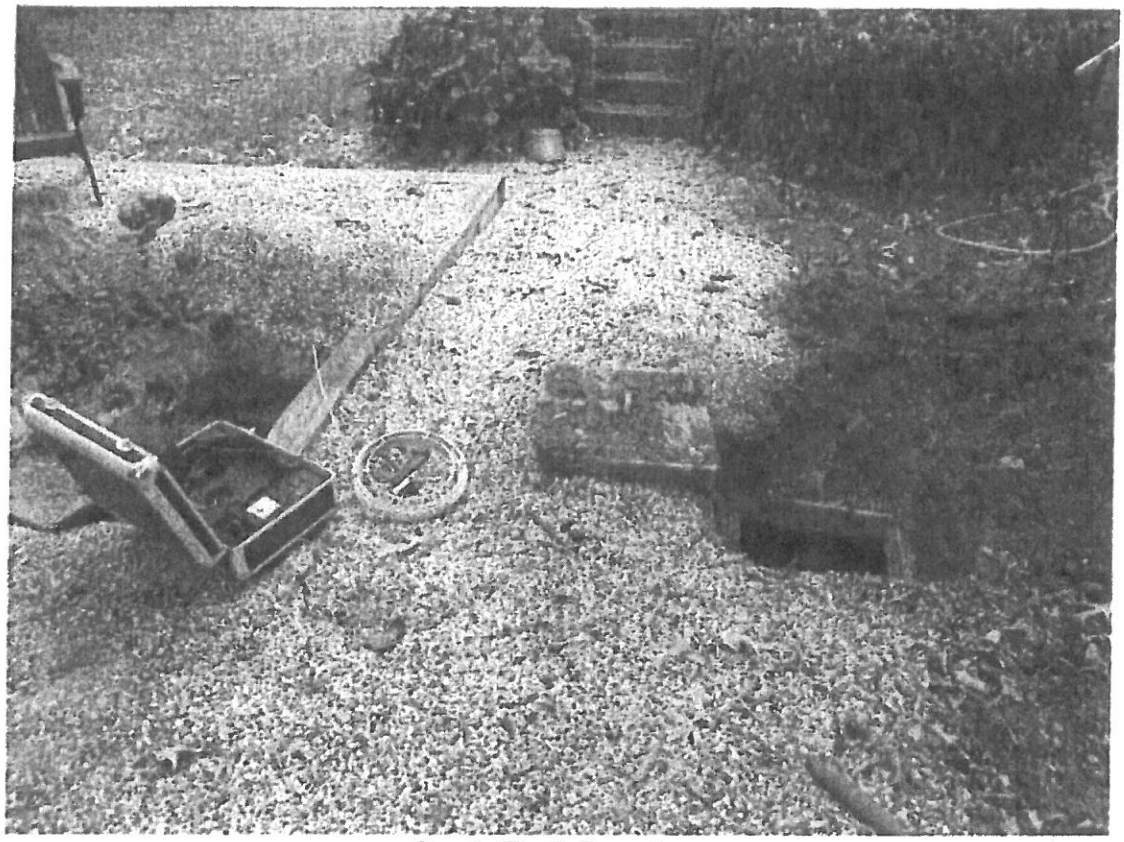
We appreciate the opportunity to assist you. Please contact us with any questions, concerns, or comments.

Sincerely,

Trent Bostic

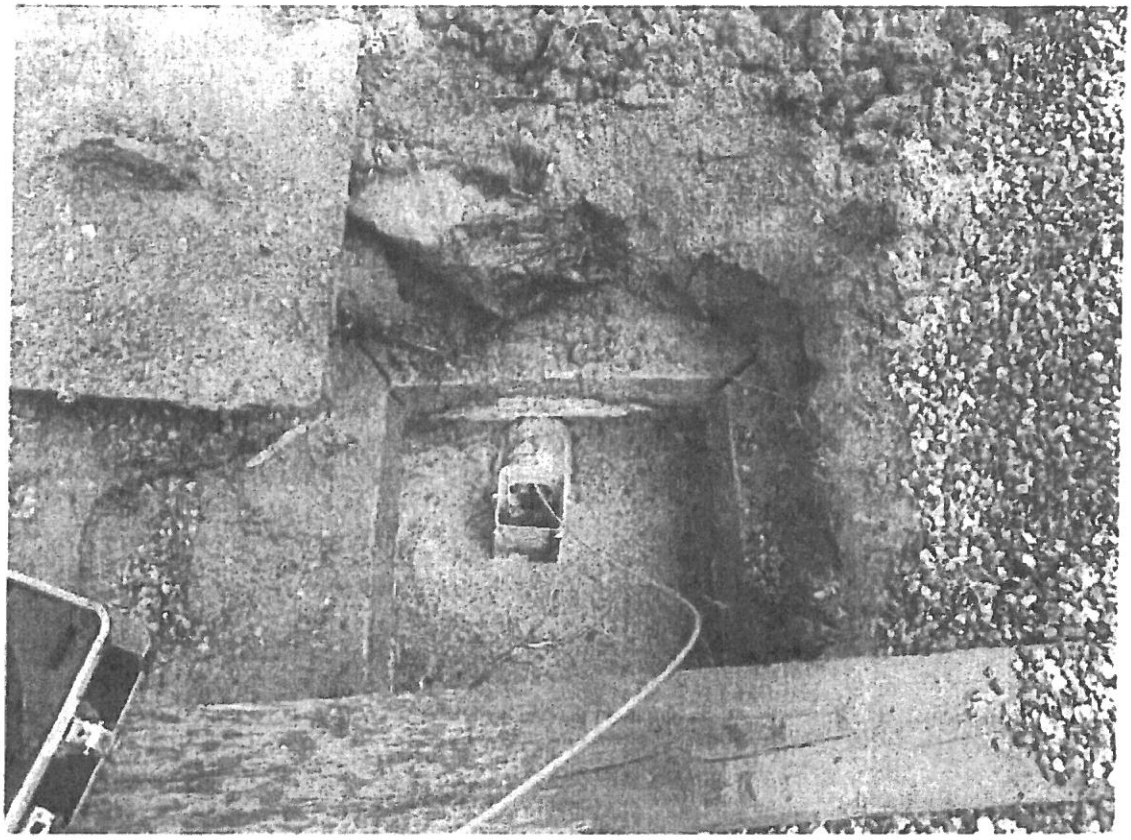
Trent Bostic

Cracks in Septic Tank



Septic Tank Location

Inlet Compartment



Outlet Compartment

Drainfield Area

SUBSURFACE WASTEWATER SYSTEM INSPECTION REPORT

11/9/2016		Trent Bostic		49571
Date of Inspection		Inspector's Name		Certification Number
17952		6/4/2001		4
Permit Number		Date of Operation Permit		Advertised # of Bedrooms
		221 Donnibrook Run		
Buyer		Address of Property		Current Owner Public
			0770158985	
Tax Map	Parcel	Lot #	PIN	Water Source

INSPECTION RESULTS:

COLLECTION/TANK SYSTEM:	YES	NO	NA	REMARKS
Evidence of leaks ?	☐	☑	☐	
Water level in tank: ok				Cracks in outlet side of tank
Tank risers accessible, free of infiltration and surface water diverted ?				
Inlet riser?	☐	☐	☑	
Type: Not Required				
Outlet riser?	☐	☐	☑	
Type: Not Required				
Estimated distance from soil surface to Top of tank: 12 inches				
Tank has baffle wall?	☑	☐	☐	
Outlet T is present/intact?	☑	☐	☐	
Roots present in tank?	☐	☑	☐	
Inlet pipe clear/unobstructed?	☑	☐	☐	
Outlet pipe clear/unobstructed?	☑	☐	☐	
Septic tank needs pumping?	☐	☑	☐	
Inches of solids: 8-10				
Date of last tank pumping known?	☐	☑	☐	
If known, when: / /				
Estimated Distance From:				
House/Structure: 5+ ft				
Well: - ft				
Water Line: - ft				
Property Line: - ft				
Septic tank filter cleaned?	☑	☐	☐	

PRETREATMENT SYSTEM: (Sand Filter or Peat Biofilter)				
Certified operator required?	☐	☐	☑	
Filter surface maintained ?	☐	☐	☑	
Evidence of ponding ?	☐	☐	☑	
Filter effluent free of excess solids ?	☐	☐	☑	
Peat modules free of damage, accessible, properly ventilated & free of insects ?	☐	☐	☑	
Samples collected at this inspection ?	☐	☐	☑	

EFFLUENT DOSING SYSTEM:				
Required pumps present & functional ?	☐	☐	☑	
High water alarm operating properly ?	☐	☐	☑	
Floats, valves, etc. in good condition ?	☐	☐	☑	
Control panel & components in good condition ?	☐	☐	☑	
Evidence of leaks ?	☐	☐	☑	
Water level in tank:				
Tank riser accessible, free of infiltration and surface water diverted ?	☐	☐	☑	
Type				
Roots present in tank?	☐	☐	☑	
Estimated distance from soil surface to Top of tank: inches				

Date of last tank pumping known? ☐ / ☐ / ☑
If known, when: ___/___/___
Estimated Distance From:
House/Structure: ____ ft
Well: ____ ft
Water Line: ____ ft
Property Line: ____ ft
Septic Tank: ____ ft
Effluent free of excess solids ? ☐ / ☐ / ☑
Inches of solids(pump/dose tank): ____
Elapsed time readings ? ____
Counter readings ? ____

DISPOSAL FIELD:

Evidence of effluent surfacing ?	☐	☑	☐	Distribution box full of scum, slightly deteriorated
Evidence of effluent ponding in trenches?	☐	☑	☐	
Surface water effectively diverted ?	☑	☐	☐	
Diversions/swales properly maintained ?	☐	☐	☑	
Vegetative cover maintained ?	☑	☐	☐	
Protected from traffic/unauthorized uses ?	☑	☐	☐	
Distribution devices in good condition ?	☐	☑	☐	
Field free of settled or low areas ?	☑	☐	☐	

Estimated Distance From:
House/Structure: 10+ ft
Well: - ft
Water Line: - ft
Property Line: - ft
Septic Tank: 2+ ft

PRESSURE DISTRIBUTION SYSTEM:

Certified operator required?	☐	☐	☑	
Turnups/cleanouts/valves intact & accessible ?	☐	☐	☑	
Laterals free of excess solids ?	☐	☐	☑	
Laterals flushed this inspection ?	☐	☐	☑	
Pressure heads properly adjusted ?	☐	☐	☑	

SYSTEM PERFORMANCE:
Design Pressure Head (ft): NA Adjusted Pressure Head (ft): NA
Design Delivery Rate (gpm): NA Measured Delivery Rate (gpm): NA % of Design: NA
Dosing Volume (gal.): NA
Note: Delivery Rate(gpm) = (NA inches drawdown NA gallons/in) NA minutes of run time
Dose Volume(gal.) = NA inches between float on & float off ____ gallons/in.

"Client requesting this inspection has been advised that for a complete inspection to be performed, the tank needs to be pumped. Client has declined to have the tank pumped at inspection and hereby acknowledges they have so declined."

See Electronic Form
Signature

ADDITIONAL COMMENTS: ____

HOMEOWNER GUIDE FOR UTILIZATION AND MAINTENANCE OF ON-SITE WASTEWATER DISPOSAL SYSTEMS

What is an On-site Wastewater Disposal System?

There are a number of different types of on-site wastewater disposal systems each designed for a specific set of site conditions. However, there are several system components that are common to most systems. These include the following:

1. A septic tank - a concrete tank that is designed to receive wastewater from the house and to provide a degree of pretreatment for the waste, chiefly through removal of some of the solids in the waste. Note that these solids accumulate over time and necessitate periodic pumping of the septic tank. Currently septic tanks are equipped with two access risers (normally constructed of concrete) which are designed to be at least 6 inches above the ground surface to prevent surface and shallow groundwater from entering the septic tank and to provide access for maintenance. **Care must be taken not to damage or cover these risers so that water inflow / infiltration can be prevented and the tank can be accessed for maintenance.**

2. In some installations, a pump tank - a concrete tank, very similar to the septic tank, which contains a pump along with the associated controls / componentry. The pump tank and pump is designed to receive effluent from the septic tank, and pump the effluent to a disposal field located at a higher elevation and/or to a pressurized distribution network in the disposal field. **The pump tank also has an access riser which must be protected in a similar manner to that indicated for the septic tank.** Servicing of the pump tank components often necessitates the assistance of a professional such as a septic tank installer or Certified Subsurface System Operator. The latter is required for operation and maintenance of certain types of systems.

3. A disposal field - a series of subsurface trenches and lines that are designed to distribute the effluent into the soil and provide for the ultimate treatment and disposal of the effluent. There are numerous variations on the design of the disposal field, related chiefly to the type of system chosen, site constraints, etc. Dependent on the type of disposal system, you may have to maintain a contract with a Certified Subsurface System Operator for operation and maintenance of your wastewater disposal system.

Utilization of Your Wastewater Disposal System

In order to obtain the maximum efficiency and life expectancy from your system, the following simple procedures must be adhered to:

1. **Practice water conservation.** This can include many practical considerations such as not leaving the water running while you brush your teeth, not overfilling the tub, limiting time in the shower, not replacing low flow fixtures with those of higher flows, over rinsing dishes (allow the dishwasher to do its job), immediate repair of any leaking fixtures, running washing machines and dishwashers only when full, etc.

NOTE: Washing machines generate significant volumes of wastewater. As a result, laundry activities should be spread over the week as opposed to accumulating all of laundry until the weekend.

2. **Do not utilize your wastewater disposal system as a trash can by dumping nondegradables down your drains or toilet.** These include cigarette butts, sanitary products, grease, plastics, disposable diapers, etc. Avoid use of garbage disposals. Do not retrofit garbage disposals unless the system is specifically permitted for their use. Also, do not dump harmful chemicals down the drain. These include petroleum products, paint, paint thinner, pesticides, antifreeze, etc.

Maintenance of Your Wastewater Disposal System

Every wastewater disposal system requires maintenance in order to function properly. The specific maintenance required is related to the type of system. The following are general considerations that apply to all systems.

1. **Protect your wastewater disposal system components including the tanks, access risers, disposal field and associated components.** Do not drive or park on any portion of the system. The area over the disposal field should be left undisturbed with the grass cover being maintained as you would your lawn. Location of trees and shrubs on or in close proximity to the disposal field is not recommended since roots may clog or damage your drain lines. Additionally, great care must be exercised when considering the addition of any structure(s) to the site. The location of any appurtenances cannot encroach on the installation or repair areas for your system. It is not recommended that irrigation systems be located in proximity to the disposal system since their construction can cause system damage and/or result in additional hydraulic load on the disposal field.

2. **Protect the system from excess surface and shallow groundwater.** The land surface on and around the wastewater disposal system should be landscaped to shed rainfall and runoff and prevent ponding. Be sure that foundation drains, runoff from roofs and drives, etc. are diverted away from the disposal system.

3. **Regularly have the septic tank / pump tank pumped and cleaned by a permitted septage hauler.** Although the necessary frequency of pumping varies with the household and system, most tanks need **pumping at a frequency of 3-5 years** and at any time solids occupy one-fourth to one-third of the septic tank liquid depth.