



North Carolina Department of Environment and Natural Resources

Division of Waste Management

Pat McCrory
Governor

Dexter R. Matthews
Director

John E. Skvarla, III
Secretary

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION

PERMIT TO OPERATE A SEPTAGE LAND APPLICATION SITE

C.S. Hines, Inc.
C.S. Hines
1828 Mount Pleasant Rd.
Chesapeake, VA. 23322

is hereby permitted to operate Septage Land and Application Site with permit # **SLAS-15-04** located on SR 1107 in Camden County at approximate position 36.33687° N latitude and -76.05817° W longitude. This site is permitted only for operations that are conducted in accordance with the representations made in the approved application, with all conditions attached to this permit, and with all of the provisions of 15A NCAC 13B.0800 -- Septage Management. Failure to operate as permitted may result in the Department suspending or revoking this permit, initiating action to enjoin the unpermitted operation, imposing administrative penalties, or invoking any other remedy as provided in Chapter 130A, Article 1, Part 2 of the North Carolina General Statutes.

This permit shall be reviewed annually to determine if soil test results and management activities are in compliance with the Septage Management Rules and the conditions of this permit. Modifications, where necessary, shall be made in accordance with rules in effect at the time of review.

Date Issued

5/7/2013

Martin A. Gallagher, Branch Head
Composting & Land Application Branch

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Telephone 919-707-8200 \ Internet <http://portal.ncdenr.org/web/wm/sw>

CONDITIONS OF OPERATING PERMIT

1. This permit shall become void if the soils fail to adequately assimilate the septage and shall be rescinded unless the site is maintained and operated in a manner which will protect the assigned water quality standards of both surface and ground waters.
2. This site shall be operated and maintained in accordance with the nutrient management plan submitted by C.S. Hines and approved by the Division of Waste Management. The 16.9-acre site is established in Wrangler or Cheyenne bermudagrass. Areas that fall below 85% coverage in bermudagrass shall be planted in Wrangler or Cheyenne bermudagrass at a rate of 5 to 7 lbs/ac between April 15 and May 15. The field shall be overseeded annually with wheat during September and October at a rate of 120 lbs/ac (broadcast) or 100 lbs/ac (drilled). The bermudagrass shall be cut as hay and baled whenever it reaches approximately 12 inches in height, or roughly every 4 to 6 weeks beginning in June of each year. At least three bermudagrass harvests shall be made each year. The wheat shall be cut as hay and baled in April of each year. The hay shall not be used for animal feed. All discharges shall be at locations on the site consistent with the crop rotation in the approved plan.
3. This site shall be operated and maintained in accordance with the soil erosion and runoff control plan submitted by C.S. Hines in such a manner as to prevent the migration of wastes off of the designated waste receiving site. A 50-foot vegetative buffer shall be maintained around the perimeter of the site. Any site improvements noted in the plan must be installed within 30 days of plan approval. The installation of groundwater monitoring wells shall be required as deemed necessary by the Division.
4. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other local, state, and federal government agencies which have jurisdiction. It is the responsibility of the Permittee to be in compliance with the Federal Regulations listed in the Code of Federal Regulations, 40 CFR Part 503.
5. This permit may be modified or reissued at any time to incorporate any conditions, limitations, and/or monitoring requirements the Division deems necessary to adequately protect the environment and public health.

6. **This site is only permitted for the land application of domestic septage, grease trap pumpings, and commercial / industrial septage. Commercial / industrial septage shall only be land applied after the waste from each source is tested and the results approved by the Solid Waste Section.** Domestic septage shall be raised to a pH of 12 or higher by alkali addition and, without the addition of additional alkali, shall remain at 12 or higher for 30 minutes prior to land application. Grease septage or grease septage mixed with domestic septage shall be raised to a pH of 12 or higher by alkali addition and, without the addition of additional alkali, shall remain at 12 or higher for 2 hours prior to land application.
7. **This site contains approximately 16.9 acres that are available for the land application of septage. The maximum annual application rate shall be 100,000 gal/ac/yr of which a maximum of 30,000 gal/ac/yr may be applied to the wheat and a maximum of 70,000 gal/ac/yr may be applied to the bermudagrass. The total, maximum annual application amount shall be 1,690,000 gallons. This application rate assumes equal septage distribution, on an annual basis, over the permitted area. Septage applications shall not exceed the maximum annual application rate, crop application rates, or the monthly application rates given in the approved nutrient management plan for the site.**
8. An approved above ground septage detention system with a minimum design capacity of 33,000 gallons shall be available prior to operation of this site unless an approved wastewater treatment plant is available for use during periods of adverse weather. The storage capacity may be adjusted if it is demonstrated during the operation of the site that this volume of storage is inappropriate.
9. Only the area designated on the attached site map(s) shall be utilized for septage disposal. Each load of septage discharged at the site shall be distributed from a moving vehicle in such a manner that there is no standing water when the discharge is complete.
10. Septage shall not be applied during any precipitation event, or if there is standing water on the soil surface, if the soil surface is frozen, or if the soil surface is snow covered. The Permittee shall consider pending weather conditions when making the decision to land apply in order to prevent any discharge of septage outside of the permitted boundary.
11. Septage shall not be applied during periods of high soil moisture. Septage applications that will result in ruts greater than three inches in the soil surface are prohibited.

12. Any discharge of septage outside of the permitted boundaries via runoff, aerial drift, etc. is prohibited.
13. This permit shall become voidable unless the land application activities are carried out in accordance with the conditions of this permit and in the manner approved by this Division. No one other than the Permittee or an employee of the firm named in this permit shall discharge septage at this site without prior appropriate notification and written approval from the Division.
14. Prior to any transfer of this land, a notice shall be given to the new owner that gives full details of the materials applied or incorporated at this site. The Division shall be notified prior to site closure. This permit is non-transferable.
15. **This permit shall expire on January 1, 2017.** Modifications, when necessary, shall be made in accordance with the rules in effect at the time of renewal. An application for permit renewal shall be submitted at least ninety (90) days prior to the permit renewal date. A septage application log for the period of time this permit was valid shall be submitted along with an application for permit renewal or modification. The information required in the log is described in Rule 15A NCAC 13B .0838 (e) (1) of the NC Septage Management Rules and the Code of Federal Regulations, 40 CFR Part 503.17 (b).
16. Records shall be kept in accordance with 40 CFR 503.17(b). These records shall be made available to a representative of the Division upon request.
17. Any duly authorized officer, employee, or representative of the Division may, upon presentation of credentials, enter and inspect any property, premises, or place on or related to the disposal site and facility at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records that must be kept under the conditions of this permit; or may obtain samples of groundwater, surface water, or leachate.
18. Field separations in the nutrient management plan and all pertinent setbacks shall be clearly located on the site. Boundaries of the permitted septage land application fields shall be clearly marked on the ground.
19. The areas that can be used for land application of septage shall be maintained at least 500 feet from any existing wells, residences, places of business, or places of public assembly. Septage shall not be disposed of within 50 feet of any property line or within 100 feet of any ditch.

SLAS-15-04



Source: 2010 NAIP Color Imagery, NCDA; site boundary, NC DENR Division of Waste Management.
Map created by NC DENR Division of Waste Management, Compost and Land Application Branch for permitting purposes only.
crc, Nov. 2011



North Carolina Department of Environment and Natural Resources

Division of Waste Management

Pat McCrory
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Secretary

May 23, 2013

Mr. C. S. Hines
C. S. Hines, Inc.
1828 Mount Pleasant Rd.
Chesapeake, VA. 23322

**RE: SLAS-15-04 Permit Modification
C. S. Hines, Inc.
SR 1107 in Camden County**

Dear Mr. Hines:

The NC Division of Waste Management has reviewed your application for modification of septage land application site permit, **SLAS-15-04**, in Camden County. Your request for an increase in application rate to 100,000 gal/ac/yr has been approved in accordance with NC Septage Management Rules. Your modified permit, **SLAS-15-04**, is enclosed. Please read all permit conditions carefully. The submitted nutrient management and soil erosion and runoff control plans have been incorporated into the permit. **Permit Condition 7 now states that your maximum annual application rate for this site is 100,000 gal/ac/yr. At this rate, the site can receive an annual maximum amount of 1,690,000 gallons.** The permitted amounts along with the monthly rates listed in the nutrient management plan are not to be exceeded.

Again, please pay close attention to all of the conditions within the enclosed permit. **This permit is set to expire on January 1, 2017.** Remember that violations to the NC Septage Management Rules or this permit could subject you to administrative penalties of up to \$15,000 per violation per day. If you have any questions concerning your permits or septage in general, please do not hesitate to contact me at (919) 707-8283. When communicating to the Division about this permit, please refer to it as "**SLAS-15-04.**"

Sincerely,

Chester R. Cobb, Soil Scientist
Composting & Land Application Branch

Enclosures

cc: Central Office
Garland Dunstan Jr., landowner
Camden County Health Department

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C. S. Hines, Inc.

1828 MT PLEASANT ROAD • CHESAPEAKE, VIRGINIA 23322

PHONE (757) 482-7001

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E mail: cshines1828@yahoo.com

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MARCH 25, 2013

NC DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT – SOLID WASTE SECTION
1646 MAIL SERVICE CENTER
RALEIGH, NC 27699-1646

RE: APPLICATION FOR A PERMIT TO OPERATE A SEPTAGE LAND
APPLICATION SITE – MODIFICATION REQUEST – PERMIT SLAS 15-04

II. SITE MANAGEMENT INFORMATION:

3. SEPTAGE DETENTION / TREATMENT FACILITY SDTF 27 20
ELIZABETH CITY WASTEWATER TREATMENT PLANT #000242
HRSD WASTEWATER TREATMENT PLANT #NCS00242

5. HYDRATED LIME WILL BE ADDED TO DOMESTIC SEPTAGE TO
RAISE IT TO A PH OF 12 OR HIGHER FOR 30 MINUTES PRIOR TO LAND
APPLICATION. FOR ANY SEPTAGE CONTAINING A MIXTURE OF GREASE
TRAP PUMPINGS, THE SEPTAGE WILL BE RAISED TO A PH OF 12 OR HIGHER
FOR 2 HOURS PRIOR TO LAND APPLICATION. SEPTAGE TO BE AT A PH OF
12 OR HIGHER WHEN APPLIED. COMMERCIAL / INDUSTRIAL SEPTAGE
SHALL ONLY BE LAND APPLIED AFTER THE WASTE FROM EACH SOURCE
IS TESTED AND THE RESULTS APPROVED BY THE “SOLID WASTE
SECTION”.

C. S. HINES, INC.



C. S. HINES
PRESIDENT

APPLICATION FOR A PERMIT TO OPERATE A SEPTAGE LAND APPLICATION SITE

North Carolina Department of Environment and Natural Resources
Division of Waste Management – Solid Waste Section
1646 Mail Service Center, Raleigh, NC 27699-1646



I. Site and Operator Information

1. Applicant C. S. Hines, Inc.
Address 1828 Mount Pleasant Road
Chesapeake, VA 23322
Phone (757) 482-7001

2. Contact person for site operation (if different from applicant): Glenn Hines
Title or position Vice-President Phone (757) 482-7001
Address 3178 Caratoke Hwy
Currituck, N.C. 27929

3. Landowner Garland Dunston, Jr.
Address P. O. Box 402
Kitty Hawk, N. C. 27949

4. Site Location: County Camden State Road Number 1107
Directions to site: East side of Sandy Hook Rd., Approximately 1,000'
south of corner Ditch Bank Rd. & Sandy Hook Rd.

5. Indicate whether request is: new _____ renewal _____ modification xxx

For a permit renewal or modification, provide the following information:

Existing site permit number: SLAS-15-04 permit expiration date: 01/01/2017

6. Number of acres meeting the requirements of the N.C. Septage Management Rules: 16.9 acres.

7. Substances other than septage or grease trap pumpings previously disposed of on the site:
(a) None xx, or (b) Attach a list indicating other substances, the amounts discharged, and the dates of discharge.

8. Attach written, notarized landowner authorization to operate a septage disposal site signed by the landowner (if the permit applicant does not own the property). ***If a corporation owns the land use a corporate landowner authorization form. If limited liability company owns the land, use a limited liability company landowner authorization form.***

9. Attach site evaluation report, including aerial photograph and soil analysis with metals results, unless the Division prepared the report.

10. Attach a vicinity map (county road map showing site location).

(over)



II. Site Management Information:

The following information shall be included with the application form:

1. Nutrient Management Plan
2. Soil Erosion and Runoff Control Plan
3. Alternative plan for disposal (detention facility permit number or wastewater treatment plant authorization): See Attached Sheet
4. Types of septage proposed to be discharged at the site (check all that apply):
 - (a) Domestic septage pumped from septic tanks 960,455 Gallons
 - (b) Grease trap pumpings 99,065 Gallons
 - (c) Portable toilet waste 0
 - (d) Commercial / Industrial septage 61,620 Gallons
5. Proposed treatment method of each type of septage to be land applied (use additional paper to explain if necessary): See Attached Sheet
6. Proposed method of applying septage to land, including septage distribution plan if required * (use additional paper to explain if necessary): Land apply with vacuum truck 15' spray pattern. No visual staning liquid.
7. Demonstration from the appropriate state or federal government agency that the land application site complies with the Endangered Species Law ** or if any part of the site specified is not agricultural land (use additional paper to explain if necessary): Agricultural land

III. Certification

I hereby certify that:

1. The information provided on this application is true, complete, and correct to the best of my knowledge.
2. I have read and understand the N.C. Septage Management Rules, and
3. I am aware of the potential consequences, including penalties and permit revocation, for failing to follow all applicable rules and the conditions of a Septage Land Application Site permit.

C. S. Hines
Signature***

March 25, 2013
Date

C. S. Hines
Print name

President
Title

Note: This application will not be reviewed until all parts of the application are complete.
 * Refer to Section .0837(e) of the N.C. Septage Management Rules.
 ** Refer to Section .0837(g) of the N.C. Septage Management Rules.
 ***Signature of company official required.

Draft: March 18, 2013

C.S. Hines Inc.

**Nutrient Management Plan for
Septage Application to
Bermudagrass and Wheat**

A. General Information

1. The septage disposal site (SLAS-15-04) is located off of State Road 1107 in Camden County.
2. Out of a total field size of 52.5 acres, 16.9 acres is permitted to receive septage applications. The hay that is harvested from the site will not be used for consumption by any animals.
3. The dominant soil series at this site is Bojac loamy sand with lesser amounts of Tomotley fine sandy loam, Altavista fine sandy loam and Munden loamy sand.
4. Septage will not be applied where the site is untrafficable (untrafficable is defined as a soil that will allow a truck to leave a depression sod greater than 3 inches in depth).
5. Septage storage shall be provided to account for the average volume of septage pumped per week, or an alternative plan, such as disposal at a waste treatment plant, should be in place.
6. Sites utilized for application of septage are managed according to certain laws and regulations (see appendix for current regulations).

B. Crops Being Grown and Approximate Planting Times

1. The field has been established in Wrangler or Cheyenne bermudagrass.

As a winter crop, these fields of bermudagrass will be overseeded annually with wheat. It is seeded at a rate of 120 pounds per acre by broadcasting or 100 pounds per acre by drilling during the months of September and October.
2. If there is not an agronomically acceptable stand of bermudagrass (i.e. ground covered with bermudagrass stolons) on at least 85% of the surface area of the site, then bermudagrass will be sown in those areas in the following spring unless the determination of poor stands is made prior to or at the time of planting for bermudagrass of the current year. The bare areas should be lightly tilled and reseeded at the rate of 5-7 pounds of Wrangler or Cheyenne bermudagrass seed (i.e. 0.2 lbs of seed per 1000 square feet).

C. Nitrogen (N) Needs for Crops Grown:

Table 1. Nitrogen Needs for Crops Grown

Crop (harvested for Hay)	R.Y.E.¹	Nitrogen Application Rate²	Lbs N/Acre/Year
Hybrid Bermudagrass (Hay)	5.0 tons/ac	46 lbs./dry ton	230 lbs./ac/yr.
Small Grains (Hay)	1.5 ton/ac	46 lbs./dry ton	69 lbs./ac/yr.
Total			299 lbs./ac/yr.

1. R.Y.E. = Realistic Yield Expectation (Note: The Hybrid Bermudagrass R.Y.E is slightly less than what is shown for the dominant soil type on this site because this will be overseeded with wheat, which will probably result in less tonnage. Although there are no R.Y.E figures for small grain hays, small grain hays could yield between 2 to 4 tons/acre. Managing it as an overseeded crop on bermudagrass will likely result in somewhat lower yields for small grain hay production.)

2. Nitrogen Application Rate = Suggested nitrogen rate based on R.Y.E. The amount of nitrogen to be supplied by septage is estimated to be 2.6-lbs./1,000 gal. over a three year period (U.S. EPA. 1983. Domestic Septage Regulatory Guidance. EPA/832/B-92/005. Washington, DC.) It is recommended that the septage be analyzed regularly so that the nutrient value can be better estimated. No nitrogen carry over calculations are provided since the estimated amount of 2.6 lbs. N/1,000 gal. is figured for a three year period.”

D. Annual Application Rate

<u>MONTH</u>	<u>RATE</u>
January	Low
February	Low
March	Medium
April	High
May	Medium
June	High
July	High
August	Medium
September	Low
October	Low
November	Low
December	Low

None = 0 gallons; Low = 10,000 gallons; Medium = 20,000 gallons; High = 30,000 gallons

Note: Cumulative application rate is not to exceed the permitted rate of 100,000 gallons.

E. Application Method

The preceding information is based on septage being evenly applied over the entire site with a splash shield or side discharge extension.

F. Crop Management and Additional Fertility Requirements

For the bermudagrass, do not apply lime because of the lime supplied by the stabilized septage (see note below). Apply 100 pounds of 0-20-20 per acre prior to planting to help the crop to establish itself unless the report from the soil sample indicates that nutrient levels are sufficient. The remainder of the nutrients will be supplied by the septage, which will be surface applied to the crop during the growing season. If higher levels of production by the crop are desired or if the bermudagrass is lacking nutrients to maintain adequate growth, then supplemental nutrients may be needed. Incorporation of the fertilizer prior to planting the bermudagrass with a disk and/or chisel-plow will suffice for preparing the seedbed. Seeds will be planted with a drill.

In September/, clip the bermudagrass to a height of 1 inch or less. Prior to seeding the wheat apply 200 pounds of 10-10-10 per acre unless otherwise indicated by the soil test report. This fertilizer is needed as a starter and only 20 pounds of nitrogen per acre is negligible when considering the cumulative net requirement of the two crops. Overseeding may be accomplished by using a sod-seeder or a grain drill. A light disking may be required prior to seeding (especially since septage application equipment may compact the soil) with a grain drill or a broadcast seeder.

Weed control will be part of the management practices for this site. Timing and types of herbicides will be those as dictated by the weeds present. Extension Agents of the NC Cooperative Extension or other qualified individuals will provide weed control recommendations.

Note: Soil samples should be taken annually to monitor the pH of the soils as well as other nutrients in the soil. Since most waste materials do not contain optimum nutrient balance required for each crop and field, it is important to check the soil recommendations and, if necessary, supplement with commercial fertilizer. The pH of the soil at the site will be higher than that required for most crops because of the addition of lime stabilized septage. There should be no need for additional lime to meet the needs of the crop.

G. Harvest of the Crop and Their Use

1. The bermudagrass will be cut as hay and baled whenever it reaches approximately 12 inches in height and will be cut and baled 3 times.
2. The wheat will be cut and baled as hay 1 time in April.

H. Soil Erosion and Runoff Control Plan

Given that slopes on this site do not exceed five percent, a 50-foot buffer should suffice to prevent septage waste from migrating off of the fields. The buffers will be row crops that will not be used for human consumption. (More severe site conditions could require that soil erosion structures be installed before septage can be applied.)

Submitted by: LA Jones Pres Date: 3/25/13

Preparation Assisted by: Alvin S. Wright Date: March 22, 2013

Appendix

Management Requirements

By:

A.R. Rubin, Penny Mascaro, Ted Lyon and Joe Zublena

Septage Defined

The EPA 503 regulation (40 CFRPT 503) was printed in the Federal Register on February 19, 1993. The regulation addresses the management of septage and sludge produced from municipal and domestic sources. Septage is specifically defined as material from domestic sources only. If any commercial or industrial wastes are combined with domestic septage, then the 503 regulations do not apply. In the 503 regulation, septage is defined as liquid, solid, or semi-solid material removed from a septic tank, portable toilet, cesspool, type III marine sanitation or similar facility that receives only non-commercial septage. Some material such as grease trap residues is often referred to as septage but is not included in this definition. The Part 503 regulation offers a simple and manageable regulatory scheme for the land application of septage. This management scheme is applicable only if the septage is applied to "non-public contact sites." These non-public contact sites are defined as those where the potential for public exposure is minimal. An agricultural field, forestland, or a disturbed site in need of reclamation is considered a non-public contact site.

Land Application to Non-Public Sites

The Part 503 regulation mandates that domestic septage applicers be required to:

1. Meet and certify pathogen reduction and vector attraction reduction requirements prior to land application.
2. Follow a prescribed Best Management Practice for septage management
3. Utilize septage application rates based upon the nitrogen requirement of the crop.
4. Ensure that septage is from domestic sources only.
5. Develop and maintain a record-keeping system germane to their land application activities.

Much of this document was adopted from the Residuals Management Workshop 503 regulations handout provided by the EPA, the Water Environmental Federation and the NC Dep. Environ. Mgmt. May 6-7, 1993, Charlotte, NC.

Each of the requirements of the 503 regulations are discussed in this document. Septic tank pumpers who land apply septage are not required to obtain a Federal permit for these activities. However, North Carolina law requires that septic tank pumpers who land-apply obtain two permits; one to transport and haul septage, and second to land apply it. The land application permit is specific to a defined land receiver site.

Pathogen Reduction

The pathogen reduction requirement on the receiver site in the EPA 503 regulation can be achieved through either defined management practices, requirements for soil incorporation or through alkaline stabilization of the septage. The management practices are primarily restrictions on harvesting and requirements for restricting public access to the site. The lime or alkaline stabilization process requires septage haulers to add sufficient lime ($\text{Ca}(\text{OH})_2$) to the septage to achieve a pH of 12 for at least 30 minutes without the addition of more alkaline material.

On those sites, which rely on management practices only, certain crop restrictions must apply. The crop restrictions are:

1. Food crops with harvested parts that touch the soil surface, but are totally above ground, cannot be harvested for 14 months after application.

Examples include: Melons and cucumbers

2. Root crops cannot be harvested for 20 months after application if the septage is not disked in and remains on the soil surface for less than 4 months.

Examples include: Carrots and turnips

3. Root crops cannot be harvested for 38 months after application if the septage remains on the soil surface for less than 4 months.
4. No crop can be harvested for at least 30 days following application of septage.
5. Animals cannot be grazed on a septage receiver site for 30 days following land application.
6. Turf cannot be harvested for one year following application of septage if the turf is to be placed on any sites with high potential for public exposure.

In addition, public access must be restricted for at least 30 days. These restrictions include fencing and posting of signs. Any remotely situated site is considered to have a restricted access by virtue of the location.

When septage is lime stabilized prior to application, the first four restrictions (no food crop harvesting for 14 months, no root crop harvesting for either 20 or 38 months,

and no harvesting for 30 days for all crop revisions) still apply. There are however, no restrictions on animal grazing or use as turf for sites on which stabilized septage are applied and there are no public restrictions to this site.

Vector Attractions and Reduction

There are three vector attraction and reduction alternatives listed in the Part 503 regulation. One of the following of the vector attraction reduction requirements must be employed whenever septage is applied to land.

1. Septage can be injected into the soil surface at the time of application and no significant amount of septage can remain present on the soil surface one hour after application. The regulation does not define a significant amount of septage.
2. Septage must be incorporated into the surface soil within six hours of application.
3. The pH of septage must be elevated to and maintained at a pH of at least 12 for a minimum of 30 minutes without the addition of more alkaline material.

Application Rate Based on Nitrogen Requirements

The maximum volume of domestic septage, which can be applied to any receiver site, will depend upon the amount of nitrogen required by the crop grown on that site and the anticipated crop yield. The equation below is used in the regulation to calculate the annual application rate for septage: The annual application rate yielded will be expressed as gallons per acre year.

$$\text{Annual application rate (gal/ac/yr)} = \frac{\text{crop nitrogen requirement (lb/ac/yr)}}{.0026}$$

In addition to the requirement of the EPA 503 rules, the NC Div. of Solid Waste Management is proposing than no more than 50,000 gallons/acre/year be land applied. When designing application systems for NC, Agronomic N rates would be based on either the EPA formula or the NC 50,000 gal/ac/yr limited whichever is lowest.

Record-Keeping

There are no formal reporting requirements listed in the EPA 503 regulation. The regulation does specify that records must be maintained by individuals who land apply septage. The following information must be recorded and retained by the septage applier for five years following any application event:

1. Site location

2. Number of acres involved in the land application program.
3. Date and time of each application event.
4. The nitrogen requirement of the crop grown on the land receiver site.
5. The gallons of septage applied in each application event, certification that the material is domestic septage only, and that pathogen reduction and vector attraction reduction requirements have been met.
6. A description of the pathogen reduction methods.

North Carolina Requirements

Any individual or firm, who collects, transports, or handles septage in any manner, must obtain at least one, and perhaps two, permits. The septage management firm must obtain a permit to transport septage over state roads. In order to obtain a permit to operate, the owner must submit the following information to the State Solid Waste Management Branch:

1. The owner's name and the business name, address, and phone number.
2. The number and capacity of pump trucks.
3. The type of pumping equipment used on trucks.
4. License and serial numbers of vehicles.
5. A hazardous waste permit number, if appropriate.
6. The county or counties in which the firm operates.
7. The method for ultimate disposal of septage.
8. The location of all septage disposal of septage.
9. The method for managing washings and cleaning generated from the interior of the septage hauling containers and the location of the disposal site for those washings.

In addition, if the septage is applied to agricultural lands, the permittee must also submit information concerning the operation of that site. The information, which must be submitted to the State Solid Waste Management Branch Include:

1. Site location.

2. Name, address, and telephone number of the owner of the site.
3. The number of acres included in the receiver area on the site.
4. The estimated application rate onto this site.
5. The crop to be grown on that site.
6. Method for managing septage during adverse weather.
7. Method for incorporation and pretreatment methods used for septage management.
8. The equipment to be utilized at that site.

The operator of that site must present to the State Solid Waste Management Branch an estimate of the nutrient and metal assimilative capacity of the site, evidence that the hydraulic components contained in septage will be assimilated on that site, and must document the nutrient requirements of the crop growing or to be grown on that site. In all cases, the state and federal regulatory agencies must consider the impact of the septage management program on rare and endangered species.

The state also limits septage application onto sites based on both a hydraulic and a nutrient load. The federal regulations list setback requirements from surface waters, which are less stringent than those utilized by the state. In all cases where state rules are more stringent than federal rules, then owners and operators of septage disposal sites must comply with state regulations. The state septage management rules are listed in Section .0800 of the State Solid Waste Management rules (15ANCAC13B). Copies of these rules can be obtained from the Department of Environment, Health, Natural Resources, Solid Waste Management Section or from local health departments.

Compliance

Any individual who land applies septage must maintain records of their activities after July 19, 1993. If septage hauling is required to construct any major facility to comply with the 503 provisions, then a one-year compliance period is allowed. Full compliance with the provisions of the 503 regulations will be required by February 19, 1995. These EPA rules are self-implementing. That is, anyone who handles, transports or land applies septage is expected to comply with all provisions of the EPA 503 rule.

Horizontal Buffer Requirements for Septage Receiver Sites

<u>Feature</u>	<u>Buffer (ft)</u>
Residence (off site)	500
Residence (on site)	250
Office (for septage mgmt firm)	100
Wells (up slope)	100
Wells (down slope)	250
Wells (community water supply)	500
Springs (up slope)	300
Springs (down slope)	500
Surface Waters (WS II, WS III, WS IV)	300
Surface Waters (class B, nutrient sensitive, or ORW)	300
Surface Waters (class C Swamps)	100 - 200
Waterways (with grass buffers)	25
Waterways (no cover)	100
Intermittent Streams (with vegetative buffers)	50
Intermittent Streams (no cover)	100
Ditches	25
Property Boundaries	50
Road	100
Food Crops	50
Vertical buffer requirements for septage receiver sites	
<u>Feature</u>	<u>Buffer (in)</u>
Seasonal wetness - Group I Soil (sands)	24
Seasonal Wetness - Group II Soil (loams)	18
Seasonal wetness - Group III Soil (clays)	12
Rock - Group I Soil	24
Rock - Group II Soil	18
Rock - Group III Soil	12

*4-2-13
see system*

THE DAILY ADVANCE

215 S. Water Street, Elizabeth City, NC 27909



C.S. HINES, INC.
1828 MOUNT PLEASANT RD.

CHESAPEAKE, VA 23322

CopyLine:	PN--C. S. Hines, Inc.
Lines:	19
Total Price:	\$77.25
This is not a bill	

Account: 2131068 AD ID: 8099655

PUBLISHER'S AFFIDAVIT

AD ID: 8099655

NORTH CAROLINA
PASQUOTANK COUNTY

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified and authorized by law to administer oaths, personally appeared Maureen Brinson who being first duly sworn, deposes and says that she is the Manager of Accounting and Administration of The Daily Advance engaged in the publication of a newspaper known as The Daily Advance, published, issued and entered as second class mail in the City of Elizabeth City in said County and State; is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement entitled PN-C. S. Hines, Inc., was published in The Daily Advance on the following dates:

Thursday, January 31, 2013

Page: B6

and that the said newspaper in which such notice, paper, document, or legal advertisement was published was, at the time of each and every such publication, a newspaper meeting all of the requirements and qualifications of Section 1-597 of the General Statutes of North Carolina and was a qualified newspaper within the meaning of Section 1-597 of the General Statutes of North Carolina.

PUBLIC NOTICE

This notice, as required by 15 NCAC 13b 0835 (c)(23) is to let the interested public know that C. S. Hines, Inc. 3178 Caratoke Highway, Currituck, NC 27929 has requested permission from the NC Division of Solid Waste Management to land apply septage at a rate higher than 50,000 gallons per acre. Rate application will be based on the nutrient uptake potential of the crops on site. From the date of publication of this notice, the public has fifteen (15) days in which to comment about the proposal to: Mr. Martin A. Gallagher, Solid Waste Management, Raleigh NC (919) 707-8280.

1/31

Maureen Brinson

Affirmed and subscribed before me this 31 day

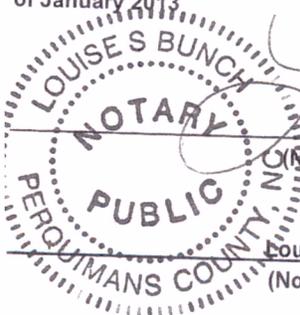
of January 2013

Louise S. Bunch

(Notary Public Signature)

Louise S. Bunch

(Notary Public Typed Name)



My commission expires April 3rd, 2016

N.C. Water Pollution Control System Operators
Certification Commission

Glenn A. Hines

Type	Grade	Cert#
CS	1	13005
LA	-	15698

Type	Grade	Cert#
SS	-	12000
WW	2	10584

is a duly Certified Operator under provisions of Article 3, Chapter 90-A of
the General Statutes of North Carolina

Paul E. Rawls
Chairman

2013