

F1 ret too thick.
F1 ret Haybale off borders.

4-1-05
F2 - puts inhibited grease.
Haybale applied in edge of woods.

10-3-05
Applied on wood line at bottom side of F#2.

Haybale edge of F2
4-20-05
No signs at new entrance.
F2 puts.
F3 puts
F1 puts, haybales on edge.

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

F2 applied off area at front. + entrance side puts. too thick. Grease not collected. Don't spread on bare area until grass. Haybales in edge of woods.

SDF
Sep between tanks looking out of hose on ground. migrate tank looking at bottom tank.

PERMIT TO OPERATE A SEPTAGE LAND APPLICATION SITE

RECEIVED

SEP 28 2004 12-8-05

Robert Ray, Jr.
1158 Miles Road
Dallas, NC 28034

1 J.G. weeds
3 J.G. weeds
2 J.G. weeds, puts

NC DEPT OF ENVIRONMENT AND NATURAL RESOURCES
MOORESVILLE REGIONAL OFFICE

Puts off side bound. on SE side of F2.

6-29-05
prep on tank.
F2 J.G. weeds spread evenly.
F1 weeds J.G.

10-12-06
Need valve caps on all tanks.

1-17-07
Septage on ground around + behind tanks.
On top of tanks. puts F2.

is hereby issued a permit to operate Septage Land Application Site with permit # SLAS-36-09 on SR#1802 in Gaston County in approximate position 35 21 24 latitude and 81 10 42 longitude. The site is to be operated in accordance with 15A NCAC 13B .0800 Septage Management, the information stated in the approved application, and the conditions of this permit. The unauthorized disposal of any liquid or solid wastes other than those specified in the conditions of this permit will be considered a violation of the conditions of this permit. Failure to comply with the conditions of this permit may result in permit suspension, permit revocation, action for injunctive relief, administrative penalties, or other remedies as provided in G.S. 130A, Article 1., Part 2.

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.

Tanks
Overflow from tank from side of tanks.

A cut of bands by SW corner.

Send receipts for fine for past year. Fund will be adjacent to F2. Bands will be adjusted. Borrow pit coincide to F1. Bands will be adjusted.

Date Issued 09/27/04

James C Coffey
James C. Coffey, Chief
Solid Waste Section

Operator: Robert Ray
SLAS #: 36-09
County: Gaston

Page 2 of 3

Permit Conditions:

1. This permit shall become voidable 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 the surface waters and ground waters.
2. This site shall be operated and maintained in accordance with the nutrient management plan submitted by Robert Ray and approved by the Division. The site contains approximately 8.43 acres that is split into three fields: field 1 (2.5 acres), field 2 (3.69 acres) and field 3 (2.24 acres). The mandatory 30-day waiting period between the last application of septage and the harvest of each crop shall be maintained. All discharges shall be at locations on the site consistent with the crop rotation in the approved plan. In the event that weed pressure exceeds 20% on the land application site, appropriate control measures will be implemented based on the recommendation of the Gaston County Cooperative Extension Office, field agronomist or other qualified personnel.
3. This site shall be operated and maintained in accordance with the erosion and runoff control plan submitted by Robert Ray. Any site improvements noted in the plan must be installed within 30 days of plan approval. The site shall be operated and erosion and runoff control measures maintained in such a manner as to prevent migration of wastes off of the designated waste receiving site. The installation of groundwater monitoring wells may be required.
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 government agencies (local, state and federal) which have jurisdiction. It is the responsibility of the permittee to be in compliance with the requirements of 40 CFR 503.
5. This permit may be modified or reissued to incorporate any conditions, limitations and monitoring requirements of the Division of Waste Management deems necessary to adequately protect the environment and public health.
6. **This site is only permitted for the land application of domestic septage and grease septage.** Domestic septage pH shall be raised to 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 pH 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 8.43 acres that are available for septage disposal.** The maximum annual application rate shall be 50,000 gallons per acre per year, for a total, maximum annual application rate of 421,500 gallons. This application rate assumes equal septage distribution, on an annual basis, over the permitted area. Monthly septage applications shall not exceed the monthly relative 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 10,000 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.

Operator: Robert Ray
SLAS: 36-09
County: Gaston

Page 3 of 3

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 as to have no standing water when the discharge is complete. Septage shall not be applied during periods of high soil moisture.
10. 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 shall discharge septage at this site without prior appropriate notification and written approval of the Division of Waste Management.
11. 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.
12. **This permit shall expire on December 31, 2005.** 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 .0822 (e) (1) of the NC Septage Management Rules and 40 CFR Part 503.17(b) of the Federal Register. This permit is non-transferable.
13. Records shall be kept in accordance with 40 CFR 503.17(b). These records shall be made available to a representative of the Division of Waste Management upon request.
14. Any duly authorized officer, employee, or representative of the Division of Waste Management 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 ground water, surface water, or leachate.
15. Field separations in the nutrient management plan and all pertinent setbacks shall be clearly located on the site.
16. 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.
17. Site location: latitude 35 21 24
longitude 81 10 42



North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

September 27, 2004

Mr. Robert Ray, Jr.
1158 Miles Road
Dallas, NC 28034

**RE: SLAS permit renewal
Robert Ray
SLAS-36-09
SR 1802 in Gaston County**

Dear Mr. Ray:

The NC Division of Waste Management has reviewed your application for a septage land application site permit in Gaston County. Your application has been approved and your permit, # SLAS-36-09, is enclosed. If you have any questions about your permit, we'll need the number in order to answer your questions.

Please read all of your permit conditions carefully. Your nutrient management and soil erosion and runoff control plans have been included in your permit's conditions. In particular, review Permit Condition 12, which states you need to submit septage application logs for your site in order to renew your permit. These logs need to cover the entire time your current permit is valid. For details on the information you should include, consult the NC Septage Management Rule 15A NCAC 13B .0822 (e) (1) and the Federal register's 40CFR Part 503.17 (b). This permit condition also states that this permit is valid until December 31, 2005. If you have any questions, please ask for assistance as rule violations could expose you to administrative penalties.

Please note that to land apply industrial or commercial septage at a permitted septage disposal site you must have prior approval from the NC Division of Waste Management. The waste must be sampled prior to being removed from the system. Generally, the Division will request that you have a waste analysis run on septage from each commercial or industrial septage generator before that type of septage is approved for land application.

Use of a land application site or septage detention or treatment facility that is not permitted may result in administrative penalties up to \$5,000 per violation in accordance with NC General Statute 130A-22.

Please call me at (919) 733-0692, ext. 269 if you have any questions or concerns in this matter.

Sincerely,

Connie Wylie, Soil Scientist
Composting & Land Application Branch

Enclosures

cc:

Anthony Foster, Waste Management Specialist

Jill Stillwell

Gaston County Health Department

h:\cla\septage\slasper\3609cl04p.doc

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Phone 919-733-4996 \ FAX 919-715-3605 \ Internet <http://wastenotnc.org>

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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
401 Oberlin Rd., Ste. 150, Raleigh, NC 27605



I. Site and Operator Information

1. Applicant Robert A. Ray, Jr.
Address 1158 Miles Rd.
Dallas, NC 28034
Phone 704-922-5555

2. Contact person for site operation (if different from applicant):
Title or position Owner Phone 704-913-2900
Address _____

3. Landowner Jill Stillwell
Address 341 Colt-Thornburg Rd.
Dallas, NC 28034

4. Site Location: County Gaston State Road Number 1802
Directions to site: Hwy 321-N to Hardin Rd exit take (R) off ramp go 1.5 miles
take (R) on Springs Rd. go 1/4 mi. take (L) Bob Friday Rd. go to stop
take (L) Colt-Thornburg Rd. - property on the right.

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

For a permit renewal or modification, provide the following information:
Existing site permit number: 36-09 permit expiration date: 9/24/04

6. Number of acres meeting the requirements of the NC Septage Management Rules: 13 acres.

7. Substances other than septage or grease trap pumpings previously disposed of on the site:
(a) None , 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.*

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

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

(over)

II. Site Management Information:

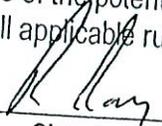
The following information shall be included with the application form:

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): Charlotte-Mecklenburg Wastewater Plant
4. Types of septage proposed to be discharged at the site (check all that apply):
 - (a) Domestic septage pumped from septic tanks
 - (b) Grease trap pumpings
 - (c) Portable toilet waste
 - (d) Commercial / Industrial septage
5. Proposed treatment method of each type of septage to be land applied (use additional paper to explain if necessary): Septage will be lime stabilized to a pH of 12 + held for 30 min. before land application. Grease trap pumpings will be lime stabilized to a pH of 12 and held for 2 hrs. before land application
6. Proposed method of applying septage to land, including septage distribution plan if required * (use additional paper to explain if necessary): Spread from a moving truck & distributed evenly across the site
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): The site is 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.



Signature***
Robert A. Ray, Jr.

Print name

6-16-04

Date
owner

Title

Note: This application will not be reviewed until all parts of the application are complete.

* Refer to Section .0821(e) of the NC Septage Management Rules.

** Refer to Section .0821(g) of the NC Septage Management Rules.

***Signature of company official required.

h:\claseptage\forms\Revised Forms 2002\slas per-2002

Landowner's Authorization to Operate a Septage Land Application Site

North Carolina Department of Environment and Natural Resources
Division of Waste Management - Solid Waste Section
401 Oberlin Rd, Ste. 150, Raleigh, NC 27605

I, Jill Stillwell (name of landowner) hereby certify that I am the owner of
15 acres of land located 341 Coit-Thornburg Rd, Dallas, NC
and identified by BK 3375 Page 523 (book and page of recorded deed
or tax map parcel) and that I agree to allow Robert A. Ray, Jr. (name of site
permit applicant) to use said land for septage land application for a period of 1 year
(length of time), beginning Dec 31, 2004 (month, day and year) and that I have read
the North Carolina Septage Management Rules *, and I understand and agree to maintain the restrictions
on land use after septage land application ends **. I further understand that no septage may be land
applied until the Division of Waste Management has issued a permit for a Septage Land Application Site.

The above described property is owned solely by me or jointly with _____

(names of all co-owners, or
state none).

Signature of landowner: Jill C. Stillwell Date 6/23/04

Sworn to and subscribed before me this 24th day of June, 2004.

Denise Anna Gray
(Notary Public)

My Commission expires: 11/23/2007

(OFFICIAL SEAL)

* 15A N.C. Admin. Code 13B Section .0800

** As required by Rule .0826



Area 1
2.5

Borrow Pit

Area 2
2.5

Area 3
2.5

500

500

500

500

COLT THORNTON RD.

RYNE RD.

1802

100

NUTRIENT MANAGEMENT PLAN FOR SEPTAGE APPLICATIONS TO TALL FESCUE

Background for this plan:

This plan is for Ray's Septic Service. Written authorization is attached from landowners W. W. and Jill Stillwell to apply septage to the permitted land on state road # 1802, Dallas, NC, hereafter referred to as Site BK 3375 Pg. 523 Areas #1, #2 and #3. Pumper user has never exceeded total volume of 100,000 gallons per month. Two or three crops of hay per year will be harvested from the sites. Additional lime and nitrogen should be applied to the sites for maximum hay yields based on results from annual soil samples. Cattle will not be grazed on septage application sites.

A. General information:

1. Septage will be sampled at least 2 times per year for waste analysis. These samples will be used to monitor nutrient loadings. Soil samples will be taken each fall. Templates of forms SLD-1 and SLD-2 will be used to simplify record keeping.
2. Total area permissible for septage applications by Ray's Septic Service is 8.43 acres on Site BK 3375 Pg. 523 Areas #1 (2.5 acres), #2 (3.69 acres), and #3 (2.24 acres). At a rate of 149 lbs N per acre, the maximum amount of N that can be land applied for 8.43 acres is 1,256 lbs. The waste analysis standard is 2.6 lbs of N per 1000 gallons. Therefore, the amount of septage that would be needed to meet N needs at this site is 483,077 gallons annually. Since the cumulative application rate cannot exceed 50,000 gallons per acre per year at any site, the maximum amount of septage that can be applied at this site is 421,500 gallons, and the N shortfall must be met with chemical fertilizer to maintain grass productivity.
3. The dominant soil series at Site BK 3375 Pg. 523 Areas #2, and #3 is Cecil sandy clay loam. The dominant soil series at Site BK 3375 Pg. 523 Area #1 is Chewacla loam.
4. Septage will not be applied where the site is not trafficable. (Not trafficable is defined as soil that will allow a loaded truck to leave a depression in sod greater than 3 inches in depth). In addition, septage will not be applied to frozen, saturated, or flooded ground. At these times septage will be stored in an approved structure or taken to waste treatment facilities in Mecklenburg County (see attached authorization forms.)
5. All nitrogen recommendations for forages will be 100% of the realistic yield expectation nitrogen rate. Crop will be cut for hay and no grazing will occur.
6. Alternative septage disposal or storage shall be provided to account for the average volume of septage pumped per week. Mr. Ray is currently authorized for septage disposal at the Charlotte wastewater treatment plant and will keep the authorization form updated so he can take septage to the waste water treatment plant when the land is not trafficable. A total of 100,000 gallons will be able to be stored in 4 permissible tanks in the future. If volume

exceeds crop nutrient needs and septage storage capacity, disposal at the Charlotte wastewater treatment plant will take place.

B. Crops to be grown and approximate planting times:

1. Site BK 3375 Pg. 523 Areas #1, #2, and #3 are already established in tall fescue. Fescue will be re-seeded as needed in September of each year to maintain at least 90% ground coverage by fescue. The broadcast seeding rate will be 20 lbs/acre.

Nitrogen needs for crops grown:

R.Y.E. = Realistic Yield Expectations

N App. Rate = Suggested N application rate based on R.Y.E. for cecil soil.

Crop (cut for hay)	R.Y.E.	N App. Rate	lbs N/acre
Tall Fescue	3.3 tons/acre x	45 lbs N/dry ton	149

C. Relative application rate for Site BK 3375 Pg. 523 Areas #1, #2, and #3:

Month	Field		
	#1	#2	#3
January	Low	Low	Low
February	Low	Low	Low
March	Medium	Medium	Medium
April	High	High	High
May	Medium	Medium	Medium
June	Low	Low	Low
July	Low	Low	Low
August	Low	Low	Low
September	Medium	Medium	Medium
October	Low	Low	Low
November	Low	Low	Low
December	Low	Low	Low

None = 0 gallons; Low = 5,000 gallons;

Medium = 10,000 gallons; High = 15,000 gallons

NOTE: Cumulative application rate is not to exceed the permitted application rate of 50,000 gallons per acre per year at any site.

D. Application Method:

The preceding information is based on septage distributed evenly over the entire permitted site by a moving pumper truck with a splash plate.

E. Additional Fertility Requirements:

Additional lime and fertilizer will be applied to all fields in February based on annual soil test results. Additional nitrogen may be applied in February or August to promote maximum yields. The amount will be based on the 148 lb requirement

of nitrogen needed minus the 2.6 pounds for each 1,000 gallons of applied septage recorded on the 2003 Waste Analysis Report. NOTE: taking into consideration the phosphorus from the septage analysis can reduce the phosphorus requirement.

F. Harvest of the crops and their use:

1. The fescue will be harvested as hay every 6 weeks or whenever it reaches 12 inches in height. A minimum of 2 harvests will be made each year on each field. Hay will not be harvested for 30 days after last septage application to that field. The septage applications, the waiting period, and harvest dates will be alternated between Fields 1, 2 and 3 on Site BK 3375 Pg. 523.
2. The hay bales will be sold to a local farmer to feed his beef cows.
3. The domestic septage will be lime stabilized to raise the pH of 1000 gallons of septage to 12 or greater for 30 minutes before land application. The lime will be added to the septage at the time it is pumped into the pumper tank. Grease trap pumpings will be lime stabilized to a pH of 12 and held there for a minimum of 2 hours before land application
4. Soil compaction reduces yields which in turn lowers allowable septage application rates. Compaction can be minimized on all sites by maintaining a healthy fescue sod, by avoiding spreading when the ground is soft (see item 4 on page 1), by making as few trips across the application sites as possible, keeping all other vehicles off the sites as much as possible, and using field equipment that minimized soil compaction. Aeration of all fields should be done annually after the last hay harvest to reduce compaction damage.
5. Weeds occur more often in compacted, acid soils with lower cation exchange capacity. Since weeds reduce hay crop yields which in turn lowers allowable septage application rates, weed control is important. Spray fields in late November with 2,4-D amine for winter weed control, and again in late April or early May for summer weed control.
6. Disposal area boundaries shall be clearly marked on the ground with stakes or flags. A "Septage Land Application Site" sign will be prominently displayed at each site.

G. Soil erosion and runoff control plan:

1. Site BK 3375 Pg. 523 Areas #1, #2, and #3 has an adequate stand of vegetation to minimize erosion. Follow soil test recommendations and proper mowing schedule to insure maintenance of a good stand of vegetation. Runoff leaving the field should be diverted from road or right-of-way. Site BK 3375 Pg. 523 Areas #2, and #3 have woodland borders of 200 feet or greater to the property line. This should provide adequate filtration of any run off. The woodland border will remain undisturbed around the perimeter of the site. See attached plan map and soil type map.
2. The closest edge of Site BK 3375 Pg. 523 Area #1 is 100 feet from the edge to the stream. Area 1 will require a 150 foot buffer from the creek. Soil is listed as Chewacla capability subclass Ivw, "frequently flooded" on p. 19 in the "Soil Survey of Gaston County, North Carolina. Therefore, special care will be needed to ensure that drainage is maintained through soil compaction prevention and flood prevention. See attached plan map and soil type map.

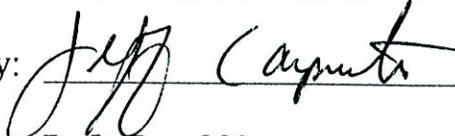
Given that slopes on Area #1 do not exceed eight percent, 150 foot buffers between Area #1 and the stream, planted in tall fescue, suffice to prevent septage waste from migrating off of the field. Buffer will not be harvested but clipping or herbicides as appropriate will control weeds. Leaving the buffer uncut will reduce risk of litter runoff.

3. Slopes on Site BK 3375 Pg. 523 Areas #1, #2, and #3 range from 3 to 15 percent and most of the site is bordered by woodland. The woodland border will remain undisturbed around the perimeter of the site, therefore no field border is necessary on those edges.

Submitted by:  Date: 6/23/04
Site Operator

Address: 1158 Miles Rd.
Dallas, NC 28034

Phone: 704-922-5555

Plan Prepared by:  Date: 6/22/04

Address: P. O. Box 389
Newton, NC 28658

Phone: 828-465-8240