

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

PERMIT TO OPERATE A SEPTAGE DISPOSAL SITE

Daniel Gray
Arrow Septic
P.O. Box 1575
Newport, NC 28570

is hereby issued a permit to operate Septage Disposal Site #SLAS-16-03 on SR 1124 in Carteret County. 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 affect at the time of review.

Date Issued

8-19-96



Dexter R. Matthews, Chief
Solid Waste Section

Operator: Daniel Gray
SDS # 16-03
County: Carteret

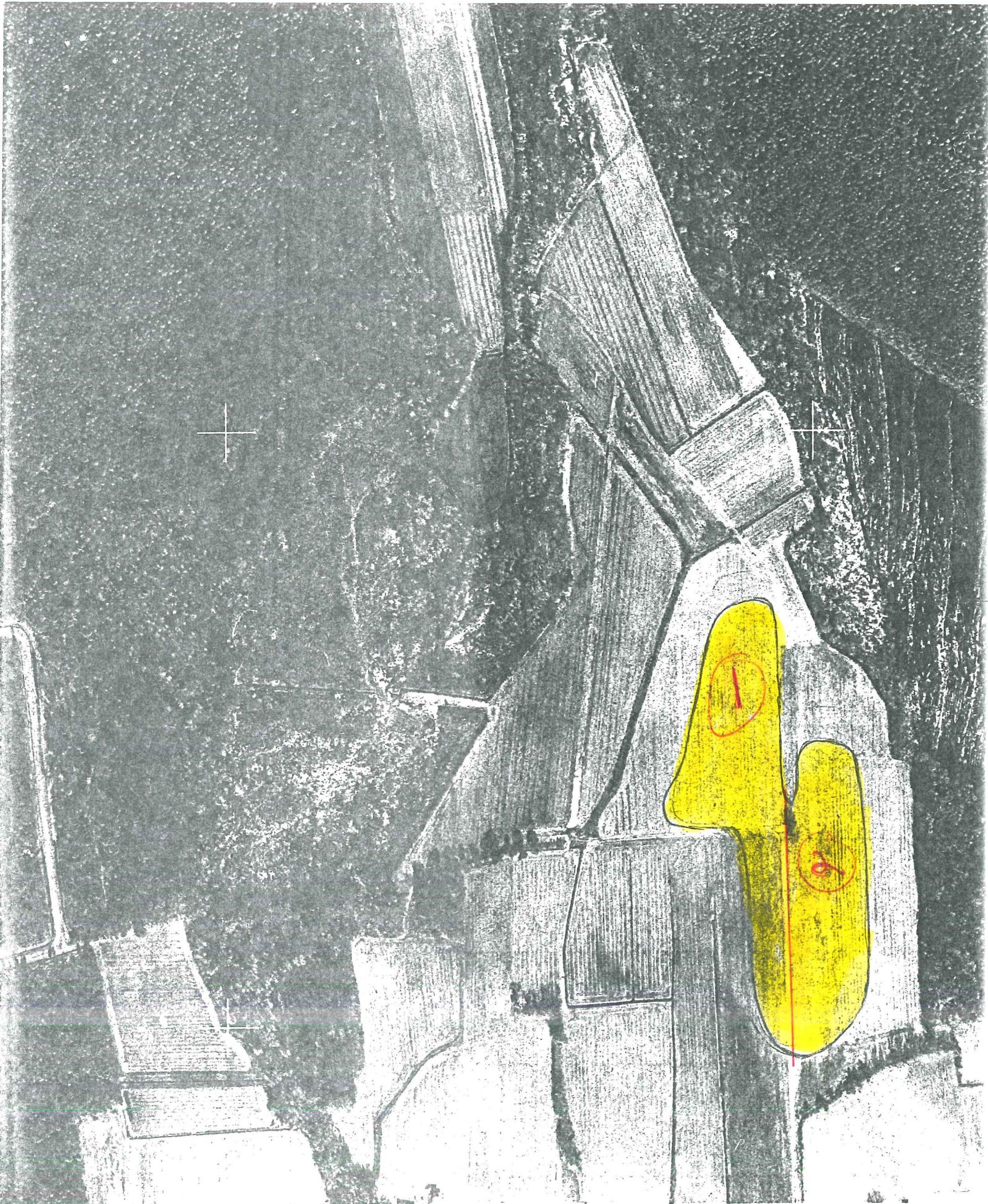
Page 2 of 3

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 This permit shall become voidable if the soils fail to adequately assimilate the septage and shall be rescinded unless the site is maintained and operated in a manner which will protect the assigned water quality standards of the surface waters and ground waters.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 Daniel Gray and approved by the Division. All discharges shall be at locations on the site consistent with the crop rotation in the approved plan. Annual rye grass cover crop shall be planted within 30 days of putting each field into use.
3. The site shall be operated in accordance with the erosion and runoff control plan submitted by Daniel Grey and approved by the Division. Any site improvements noted in the plan must be installed within 30 days of plan approval. Erosion and runoff control measures shall be 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 which 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 the Division of Solid Waste Management deems necessary to adequately protect the environment and public health.
6. 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 12 acres that are available for septage disposal. The maximum annual application rate shall be 20,000 gallons per acre for the remainder of 1996 and 50,000 gallons per acre per year for 1997.. This application rate assumes equal septage distribution, on an annual basis, over the permitted area.
8. An approved above ground septage detention system with a minimum design capacity of 8,000 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 as to have no standing water when the discharge is complete. Septage shall not be applied during periods of high soil moisture.

Operator: Daniel Gray
SDS # 16-03
County: Carteret

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 Solid Waste.
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 August 19, 1997.** 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. 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 Solid Waste Management upon request. Records shall be submitted annually to the Division.
14. Any duly authorized officer, employee, or representative of the Division of Solid 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 groundwater, 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 which 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. This site shall not be put into use until a site inspection has been conducted by the Division to determine compliance with the Septage Management Rules and the conditions of this permit.
18. Site location: latitude 34 48 18
longitude 76 54 04



1" = 400'



Grid Based On North Carolina State Plane Coordinate System
1967 North American Datum

State of North Carolina
Department of Environment, Health and Natural Resources
Division of Waste Management
P.O. Box 27687, Raleigh, NC 27687-7611

Application for a Septage Land Application Permit

I. Site and Operator Information

1. Operator Daniel Gray
Address PO Box 1575 Newport NC
28570
Phone 919-223-2984
2. Owner Wayne See
Address Gloria Don Rd
Morehead City NC 28557
3. Site Location: County Carteret State Road Number 1124
Directions to site: Hwy 70 to Nine Foot Rd First Dirt Rd
past Miss Lizzy's store (Amoco)
4. Indicate whether request is: new _____ renewal modification _____
For a permit renewal or modification indicate the existing permit number
16-03 and date issued Aug 15-96
5. Number of acres meeting the requirements of the N.C. Septage Management
Rules: 12 acres.
6. Substances other than septage or grease trap pumpings previously disposed of at
this location. None . Attach a list indicating other substances, the
amounts discharged, and the dates of discharge.
7. Attach written, notarized landowner authorization to operate a septage disposal
site (if the property is not owned by the applicant).
8. Attach site evaluation report, including aerial photograph and soil analysis
results, unless prepared by the Division.
9. Vicinity map (county road map showing site location).

5. Waste water from septage pumping will be lime stabilized to a ph of 12 and held for thirty minutes before Land applying

Grease trap pumpings will be lime stabilized to a ph of 12 and held for 2 hrs. Then mix w/ septage pumpings before Land applying.

Daniel Gray
8-13-97



North Carolina Department of Environment, Health, and
Natural Resources

Landowner's Authorization to Operate a Septage Land Application Site

I, Wayne See (print name of site owner) hereby certify that I
am the owner of 12 acres of land located off State Rd
1124 on the Rt. Hand side "DD Drag Strip Rd",
and identified by (book and page of recorded deed or tax map parcel) _____
Tax # 63200910567 and that I agree to allow
Arrow Septic Tank Cleaning & Maintenance (name) to use said land for septage
land application for a period of 12 months, beginning
8-19-97; and that I have read the North Carolina Septage Management Rules,
15A N.C. Admin. Code 13B Section .0800, and I understand and agree to maintain the
restrictions on land use after cessation of septage land application as required by Rule
.0826. I further understand that no septage may be land applied until the Division of
Solid Waste Management has issued a permit for a septage land application site. The
above described property is owned solely by me or jointly with (name all co-owners, or
state none) _____.

Billy W. See
signature(s)

Sworn to and subscribed before me

this 10 day of August, 1997

Haley W. Mills
(Notary Public)

(OFFICIAL SEAL)

My Commission expires: 8-2-98

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Waste Management

James B. Hunt, Jr., Governor
Wayne McDevitt, Secretary
William L. Meyer, Director



October 23, 1997

Mr. Daniel Gray
Arrow Septic
P.O. Box 1575
Newport, NC 28570

Dear Mr. Gray,

On October 7, John Crowder and I visited your septage land application site in Carteret County. The crops growing on the suitable areas were not the crops indicated in the nutrient management plan submitted to the Division. The plan submitted was complete and contained the information required by the Division. In order for a permit to be issued, an acceptable plan must be submitted to the Division and the crops listed in the plan must be present on the site or recommendations must be in the plan concerning the planting date, seeding rate and guidelines for crop establishment.

The plan submitted indicated that field 2 was established in Coastal Bermuda. While some Bermuda grass was present in Field 2, the stand was inadequate for land application. Field 1 contained tobacco stubble instead of Bermuda as indicated by the information submitted. Grasses on both fields were taller than 12 inches. The plan submitted indicated that hay would be harvested when a height of 12 inches.

Your nutrient management plan will need to outline what steps will be taken to plant and harvest a crop on field 2 as well as the section of field 1 that was planted to tobacco. If recommendations are not made, these sections will be removed from the permit.

Your permit will not be processed until a nutrient management plan has been received and approved by the Division. If you have any questions please contact me at 919-733-0692, extension 265 or Ted Lyon extension 253.

Sincerely,

A handwritten signature in cursive script that reads "Steven Dillon".

Steven Dillon, Soil Scientist
Composting & Land Application Branch

cc: John Crowder, Waste Management Specialist

h:\cl\septage\slaspr\16-carteret\gray\visit.97r

Cooperative Extension Service

Courthouse Square
Beaufort, NC 28516
919-728-8421
Fax: 919-728-2092

FAX TRANSMISSION COVER SHEET

Date: August 1, 1997
To: Daniel Gray
Fax: 919-223-5802
Re: Nutrient Management Plan for Septic Disposal
Sender: Shelia Kelly

YOU SHOULD RECEIVE 5 PAGE(S), INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL 919-728-8421.

Thanks

***** << FILM/PAPER SAVE >> TO EXTEND INTO ORIGINAL SIZE, PLEASE USE EXTENSION COPY *****
AUG-01-97 08:54 FROM: ID: 19197282092 PAGE 2/5

ARROW SEPTIC SYSTEM CLEANING AND MAINTENANCE

DANIEL GRAY
PO BOX 1575
NEWPORT NC 28770
(919) 223-2984

SEPTAGE APPLICATION TO BERMUDAGRASS AND RYEGRASS

A. Best Management Practices:

The undersign parties agree to manage the septage disposal site (SLAS - 16 - 03) off state road 1124 in Carteret County according to the following best management practices. The list of practices have been specifically designed to land application of septage by Arrow Septic System Cleaning and Maintenance company.

B. General information:

NOTE: RECOMMEND THAT THIS SITE FOR LAND APPLICATION OF SEPTAGE BE DIVIDED INTO TWO AREAS, ONE AREA CONTAINING APPROXIMATELY 8 (FIELD # 2)ACRES AND THE OTHER APPROXIMATELY 4 ACRES (FIELD #1). RECOMMEND THAT LAND APPLICATION OF SEPTAGE BE APPLIED TO FIELD # 2 WHILE FIELD #1 IS BEING SEEDED WITH ANNUAL RYEGRASS. ONCE THE RYEGRASS IS ESTABLISHED, ROTATE THE LAND APPLICATION TO FIELD #1 AND SEED FIELD #2 WITH ANNUAL RYEGRASS. IN EARLY SPRING- KEEP LAND APPLICATION IN FIELD #1 WHILE FIELD #2 IS BEING ESTABLISHED WITH COASTAL BERMUDA GRASS. ONCE FIELD #2 HAS BEEN ESTABLISHED, ROTATE LAND APPLICATION TO FIELD #2 AND THEN ESTABLISH FIELD #1 WITH BERMUDAGRASS.

1. Waste analysis will be conducted at least once per year.
2. Application fields contain approximately 12 acres.

3. The dominant soil series at this site is Goldsboro loamy fine sand.
4. Septage will not be applied where the site is untrafficable. Untrafficable is defined as soil that will allow a loaded truck to leave a depression in sod greater than 3 inches in depth.
5. Septage storage shall be provided to account for the average volume of septage pumped per week.

C. Crops to be grown and approximate planting times:

1. Application field, including buffer zones, was sprigged in coastal bermudagrass at the rate of 35 bu./ac (broadcast) or 15 bu./ac (sprigged in 30 inch rows) during the months of March through June in order to establish a permanent stand of grass. The field was be over-seeded with annual ryegrass at approximately 30 pounds/acre.
2. Recommend that annual ryegrass be seeded on Field # 2 during the period of Sept 15- Nov 15, once established, the seed Field #1 for year 1997 then follow planting plan as stated in No. 1 above.

D. Nitrogen Needs For Crop Grown:

R.Y.E. = Realistic Yield Expectation
 N App. Rate = Suggested N application rate based on R.Y.E. for soil type.

Crop (cut for hay)	R.Y.E.	N App. Rate	Lbs. N/ac
Coastal Bermudagrass	6.0 tons/ac	X 45 lbs N/dry ton =	270.0
Annual Ryegrass	2.5 ton/ac	X 25 lbs N/dry ton =	62.5
			Total = 332.5

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E. Relative Application Rate for Fields:

Month	Field	
	FIELD #1	FIELD #2
Jan	Low	Low
Feb	Low	Low
March	Low	Low
April	Med	Med
May	Med	Med
June	High	High
July	High	High
Aug	High	High
Sept	Med	Med
Oct	Med	Med
Nov	Low	Low
Dec	Low	Low

Low = 5,000 gallons; Med = 10,000 gallons; High = 15,000 gallons

NOTE: CUMULATIVE APPLICATION RATE IS NOT TO EXCEED THE PERMITTED APPLICATION RATE.

F. Application Method:

The preceding information is based on septage being evenly applied over the entire permitted site or field.

G. Additional Fertility Requirements:

N-P-K will be added to the land application area to maintain fertility levels which will be based on the soil test results from NCDA. The buffer area should be fertilized based on the soil test results from the NCDA to maintain a good stand of grass.

H. Harvest of the Crop:

1. The bermudagrass will be cut as hay, baled, and removed whenever it reaches approximately 12 inches in height, or roughly every 4 to 6 weeks. Approximately three or four harvests can be expected.
2. May not harvest the hay the first year to allow for a good stand to become established. This will depend on weather conditions the first year of production.
3. The ryegrass will be cut as hay, baled and removed from the field.
4. Hay will not be harvested within 30 days of septage application.

SOIL EROSION AND RUNOFF CONTROL PLAN

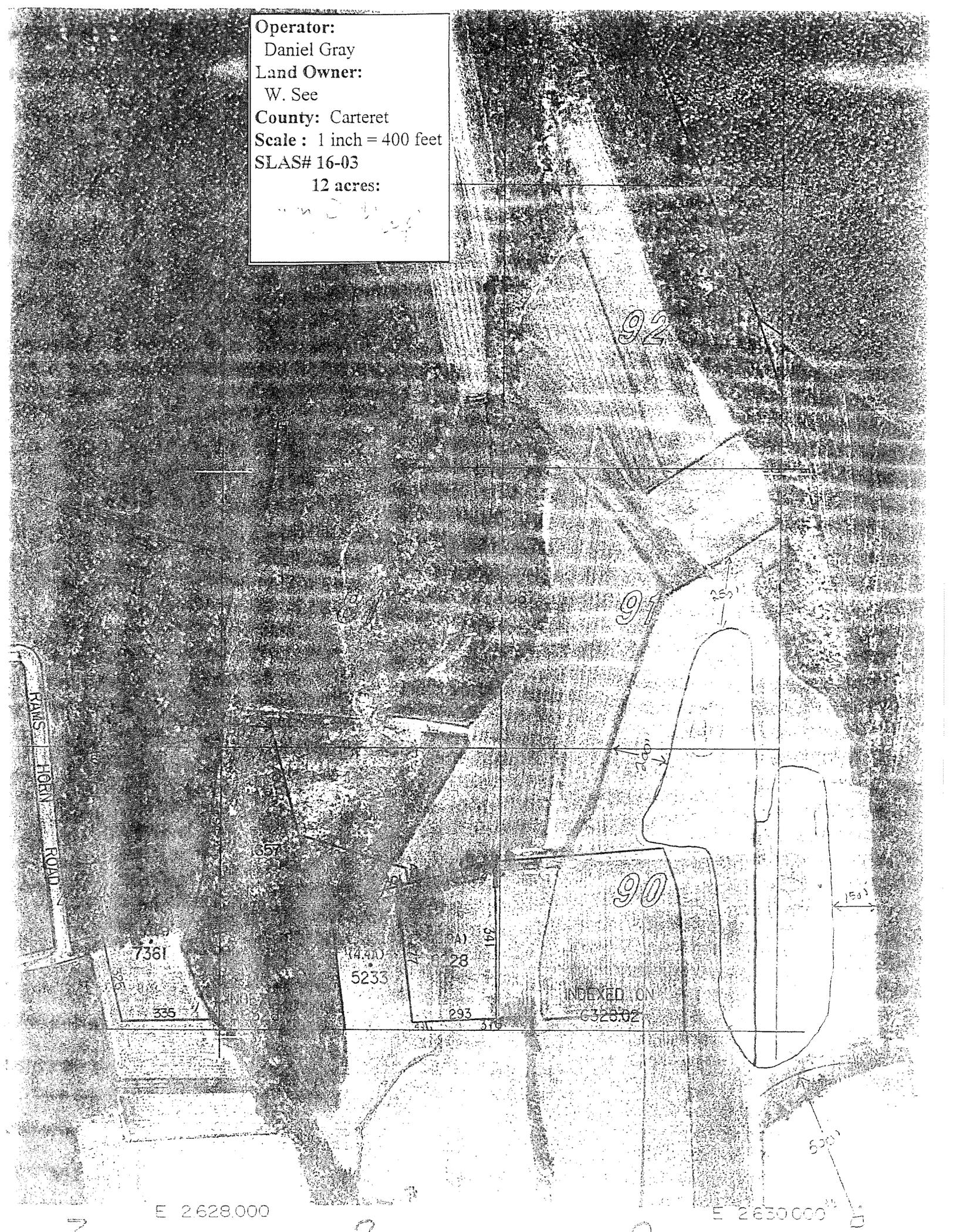
Given that the slopes on this site does not exceed three percent, a 50 foot buffer, planted in bermudagrass/ ryegrass, should suffice to prevent septage waste from migrating off the fields.

Submitted by: David King Date 8-1-97
 (site operator)

Prepared by: Alan Han Date 8-1-97
 Office Cooperative Extension
 Address: 1000 Lakeside Square
Champaign, NC 29514
 Phone 919-728-5421

***** << FILM/PAPER SAVE >> TO EXTEND INTO ORIGINAL SIZE, PLEASE USE EXTENSION COPY *****

Operator:
Daniel Gray
Land Owner:
W. See
County: Carteret
Scale : 1 inch = 400 feet
SLAS# 16-03
12 acres:



E 2.628.000

E 2.650.000

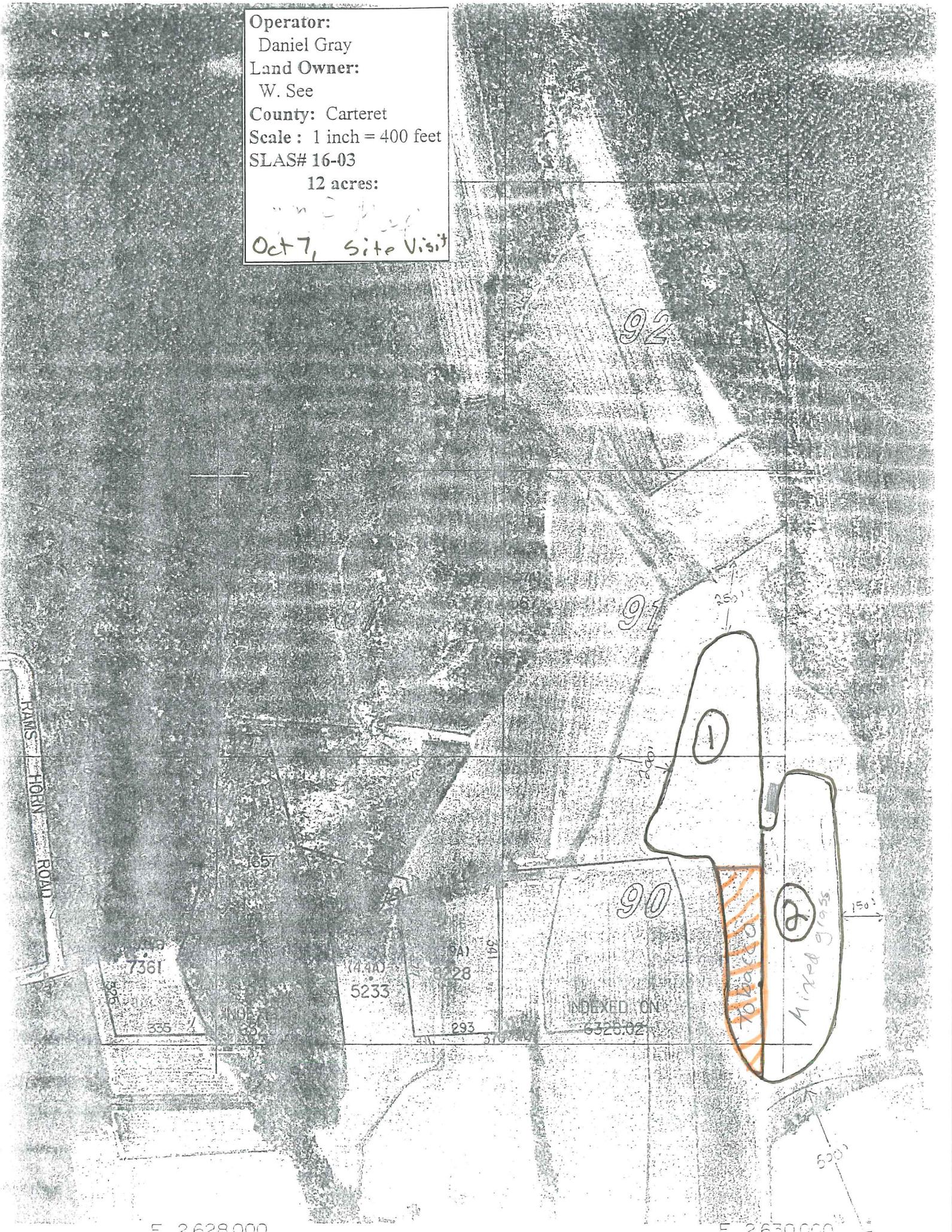
From: Self <NRONA01/SDILLON>
To: aharris@carteret.ces.ncsu.edu
Subject: Mr. Gray - FYI
Date sent: Tue, 28 Oct 1997 08:59:30 EST

Mr. Harris,

I received a call from Mr. Gray this morning. He stated that he had never used the area in tobacco for septage application. He also stated that he had not sprigged field #2 because it was such a dry summer. I explained to him that the fields had to match the nutrient management plan. So either the fields or the plan must be changed. He indicated to me that the Bermuda had not been harvested because he was waiting for proper coverage since this was the first year of growth. (He stated that the weeds were > 12 inches tall but the Bermuda was not) I told Mr. Gray that he would need to submit an updated nutrient management plan that detailed what crop or crops would be grown on field 2 and that the area planted to tobacco would be removed from his permit.

Steve Dillon

Operator:
Daniel Gray
Land Owner:
W. See
County: Carteret
Scale: 1 inch = 400 feet
SLAS# 16-03
12 acres:
Oct 7, Site Visit



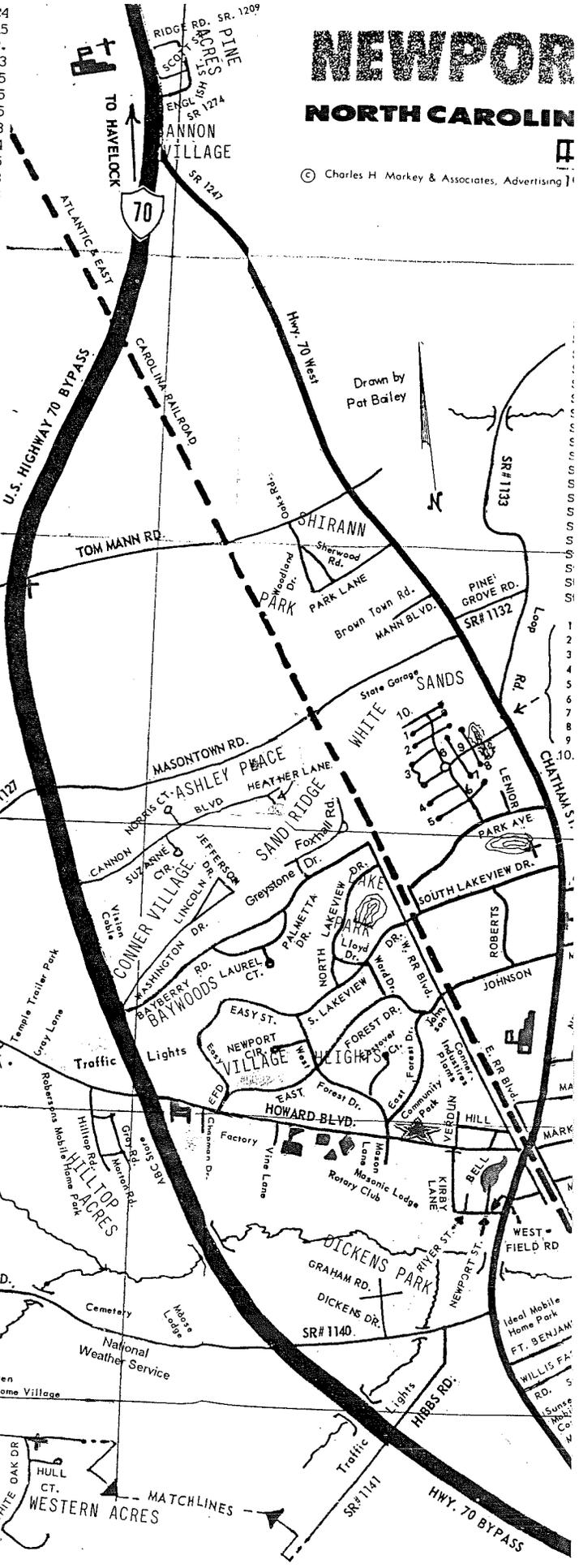
NEWPORT

NORTH CAROLINA

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- * Church Street
- B4 CITY LIMITS
- A3 BAR & GRILL
- C4/5 CLIFTON MANAGEMENT & RENTALS, INC.
- C4 COLDWELL BANKER
- C3 Crestwood Drive
- C5 CRYSTAL COAST KENNELS
- B4 Country Side Court
- A3 Cyrus Pollard Road
- A3 Danny Garner Road
- A3 Deep Creek Road
- A5 Dickens Drive
- C3 Eagle Road
- C4&D5 Eagles Nest
- C5 Trailer Park
- C5 EAST CAROLINA BUILDERS
- C4 East Forest Drive
- C4&C3/4 East Terra MH Park
- D6 Eastover Court
- C/D4 Easy Street
- B5 English Street
- B5 Fannie Elliott Rd.
- B5 Fawn View Court
- FIRST CITIZENS BANK & TRUST COMPANY
- /Lake Rd. FLOYD'S AUTO BODY SHOP
- ELOCK FOREHAND, GINA
- COLDWELL BANKER
- Ft. Benjamin Road
- Foxhall Road
- GARNER CONSTRUCTION CO. D6
- Garner Street
- Graham Road
- Gray Fox Run
- Gray Lane
- Gray Road
- Green Tree Lane
- Greystone Dr.
- HAGAN'S AUTO SALVAGE & REPAIR

- C3/5 HIBBS FURNITURE & CAPRET WORLD
- C5 Hibbs Road
- C5 HILL, C. M. HARDWARE
- HVLK. Hill Street
- HVLK. Hilltop Road
- A5 Holly Springs Road
- A5 Hounds Quarry
- O3 Howard Blvd.
- A5 Hull Court
- D3 Hunting Estates
- D1 Ideal MH Park
- D1/2 IMPRESSIONS
- C5 James Drive
- B5/6 Jefferson Drive
- B4 Johnson Street
- B4 JOHNSTON & JOHNSTON
- C2 Kelly Street
- C4 Kevin's Court
- B5 Kings Chase
- C4 Kings Way
- C4 KING, JOYCE
- B1 CENT. 21 HOME
- B3 L & E MH Park
- A3 Lake Rd./Mundine Rd.
- C4 Lakeview Drive
- C4 Lakewood Dr.
- D6 LARRY HOWARD INSURANCE AGENCY
- HVLK. Laurel Court
- C5 Lenoir Street
- C3/4 Lincoln Drive
- C6 Lion Village Road
- D4 Little Deep Creek Rd.
- C5 Lloyd Drive
- A4 Loop Road
- B4 Main Street
- B5 Mann Blvd.
- B3/4 MANN REALTY & RENTALS
- C4 Mann Village
- C6 MH Community
- D6 McCain Street
- A5 Meadow Lane
- A5 MERCER BUILDING CO.
- C3 Merrywoods Drive
- D5 Mill Creek Road
- A5 Mills Road
- B5 Morton Road
- C3 Mourning Drive
- A1/4 Mundine Rd./Lake Rd.
- B5 Murdock Road
- D3 Nellie St.
- C4,D3 New Bern Street
- C5 NEWPORT ANIMAL CLINIC
- C5 NEWPORT BAPTIST CHURCH
- C4 Newport Circle
- C5 NEWPORT INSURANCE AGCY.
- C4 NEWPORT REALTY
- C4 NEWPORT RED AND WHITE
- C5 FOOD STORE
- C5 Newport Street
- A3/4,B4 Nine Foot Road
- C3 Norris Court
- C4 North Lakeview Dr.
- D3 North New Bern St.
- A4/5 Oak Grove Road
- A4/5 Oaks Road
- A5 Oak Lane
- C/D5 Orange Street
- C4 Palmetta Drive
- C3/4 Park Avenue
- B5 Paul Road
- K3 PENDER PARK HARDWARE
- C3 Pine Grove Road
- A/B5 Pond Drive
- A5 Powell Road
- HVLK. PROPERTY SHOPPE



Drawn by Pat Bailey

tractor & Equip. Co., Inc.

PHONE
223 - 4344

Blvd. Newport, NC 28570

THIS MAP IS FURNISHED FREE BY ADVERTISERS HEREIN SEE ANY OF THEM FOR EXTRA COPIES.

TRAIN



Soil Test Report

Grower: **Ballon, Jolton**

1611 N Morris Rd.

Morehead City, NC 28557

Copies to: County Extension Director

NC Division of Solid Waste

Crowder, John D.

3/18/96

SERVING N.C. CITIZENS FOR OVER 50 YEARS

Carteret County

NC Division of Solid Waste

Attn: Ted Lyon

PO Box 27687

Raleigh, NC 27611

Agronomist Comments:

Soil pH is generally adequate while magnesium levels are limiting. Phosphorus levels are very high while potassium levels are low. Use potassium magnesium sulfate as a potassium and magnesium source. Soybeans may have severe manganese problems since the pH is higher than desired in sample C11. Failure to supply needed potassium may result in crop failure.

J. Kent Messick

Field Information		Applied Lime		Recommendations																	
Sample No.	Last Crop	Mo Yr	T/A	Crop or Year	Lime	N	P2O5	K2O	Mg	Cu	Zn	B	Mn	See Note							
C11	Corn, Grain			1st Crop: Soybeans	0	0	0	80-100	\$	0	0		\$pH	3							
16-03	(East)			2nd Crop: Corn, Grain	0	120-160	0	80-100	\$	0	0		\$pH	3							
Test Results																					
Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI (1)	Mn-AI (2)	Zn-I	Zn-AI	Cu-I	Zn	B	Mn	See Note	
MIN	0.97	1.18	5.3	94.0	0.3	6.4	301	24	85.0	7.0	24	18	25	562	562	437	46	14		0.1	
Field Information																					
Sample No.	Last Crop	Mo Yr	T/A	Recommendations																	
C12	Corn, Grain			1st Crop: Soybeans																	
16-03	(West)			2nd Crop: Corn, Grain																	
Test Results																					
Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI (1)	Mn-AI (2)	Zn-I	Zn-AI	Cu-I	Zn	B	Mn	See Note	
MIN	0.97	1.15	5.0	90.0	0.5	6.0	242	34	81.0	7.0	27	26	33	790	790	439	147	27		0.3	

Heavy Metal Soil Test Report

MEHLICH-3 EXTRACTION

Ballon, Jolton
 1611 N. Morris Rd.
 Morehead City, NC 28557

Report #: 23939

Carteret County

Questions concerning these analyses should be referred to the Agronomic Division, Soil Testing Section

Sample ID	Cd Cadmium	Ni Nickel	Pb Lead	Se Selenium mg/dm ³	Cr Chromium	Al Aluminum	As Arsenic
C11	.2	.5	3.8	0	.5		8
C12	.2	.5	2.1	0	.3		7.4

ARROW SEPTIC SYSTEM CLEANING AND MAINTENANCE

DANIEL GRAY
PO BOX 1575
NEWPORT NC 28770
(919) 223- 2984

**SEPTAGE APPLICATION TO BERMUDAGRASS
AND RYEGRASS**

A. Best Management Practices:

The undersign parties agree to manage the septage disposal site (SLAS - 16 - 03) off state road 1124 in Carteret County according to the following best management practices. The list of practices have been specifically designed to land application of septage by Arrow Septic System Cleaning and Maintenance company.

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1. Waste analysis will be conducted at least once per year.
2. Application fields contain approximately 12 acres.

3. The dominant soil series at this site is Goldsboro loamy fine sand.
4. Septage will not be applied where the site is untrafficable.
Untrafficable is defined as soil that will allow a loaded truck to leave a depression in sod greater than 3 inches in depth.
5. Septage storage shall be provided to account for the average volume of septage pumped per week.

C. Crops to be grown and approximate planting times:

1. Application field, including buffer zones, will be sprigged in coastal bermudagrass at the rate of 35 bu./ac (broadcast) or 15 bu./ac (sprigged in 30 inch rows) during the months of March through June in order to establish a permanent stand of grass. Each year thereafter, the field will be over-seeded with annual ryegrass at the rate of approximately 30 pounds/ acre (broadcast) during the time period of Sept 15 - Nov 15.
2. Recommend that annual ryegrass be seeded on Field # 2 during the period of Sept 15- Nov 15, once established, the seed Field #1 for year 1996 then follow planting plan as stated in No.1 above.

D. Nitrogen Needs For Crop Grown:

R.Y.E. = Realistic Yield Expectation

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

Crop (cut for hay)	R.Y.E.	N App. Rate	lbs. N/ ac
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			Total = 332.5

E. Relative Application Rate for Fields:

Month	Field	
	FIELD #1	FIELD #2
Jan	Low	Low
Feb	Low	Low
March	Low	Low
April	Med	Med
May	Med	Med
June	High	High
July	High	High
Aug	High	High
Sept	Med	Med
Oct	Med	Med
Nov	Low	Low
Dec	Low	Low

Low= 5,000 gallons; Med = 10,000 gallons; High = 15,000 gallons

NOTE: CUMULATIVE APPLICATION RATE IS NOT TO EXCEED THE PERMITTED APPLICATION RATE.

F. Application Method:

The preceding information is based on septage being evenly applied over the entire permitted site or field.

G. Additional Fertility Requirements:

N-P-K will be added to the land application area to maintain fertility levels which will be based on the soil test results from NCDA. The buffer area should be fertilized based on the soil test results from the NCDA to maintain a good stand of grass.

H. Harvest of the Crop:

1. The bermudagrass will be cut as hay, baled, and removed whenever it reaches approximately 12 inches in height, or roughly every 4 to 6 weeks. Approximately three or four harvests can be expected.
2. May not harvest the hay the first year to allow for a good stand to become established. This will depend on weather conditions the first year of production.
3. The ryegrass will be cut as hay, baled and removed from the field.
4. Hay will not be harvested within 30 days of septage application.

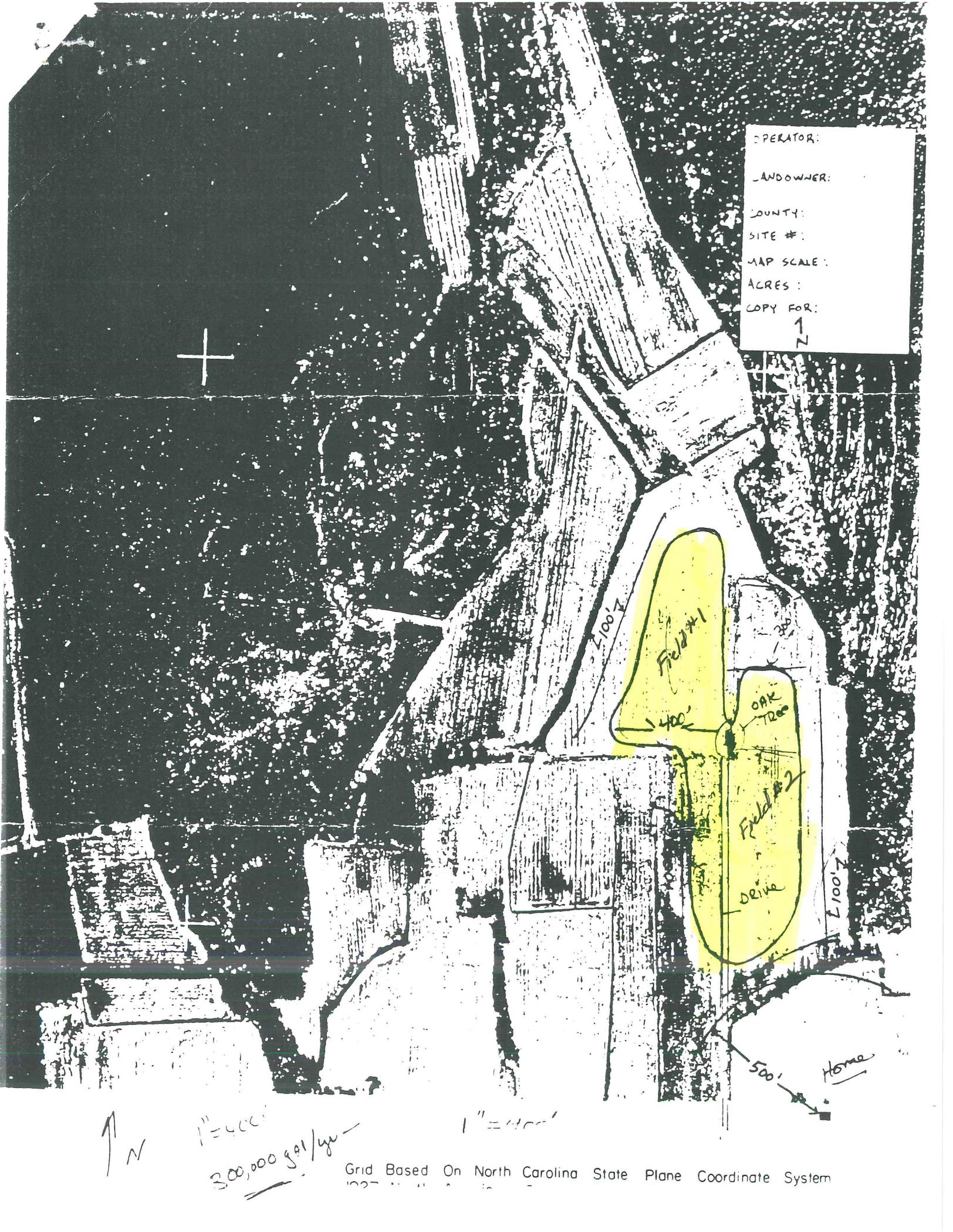
SOIL EROSION AND RUNOFF CONTROL PLAN

Given that the slopes on this site does not exceed three percent, a 50 foot buffer, planted in bermudagrass/ ryegrass, should suffice to prevent septage waste from migrating off the fields.

Submitted by: Daniel Gray Date 8-19-96
(site operator)

Prepared by: A. Ray Harris Date 8/13/96
Office Cooperative Extension
Address Courthouse Square
Beaufort NC 28594
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OPERATOR:
 LANDOWNER:
 COUNTY:
 SITE #:
 MAP SCALE:
 ACRES:
 COPY FOR:
 1
 N



1" = 400'
 300,000 gal/yr

1" = 400'

Grid Based On North Carolina State Plane Coordinate System