State of North Carolina
Department of Environment and Natural Resources
Division of Water Resources

Animal Waste Management Systems
Request for Certificate of Coverage
Facility Currently Covered by an Expiring State Non-Discharge General Permit

On September 30, 2014, the North Carolina State Non-Discharge General Permits for Animal Waste Management Systems will expire. As required by these permits, facilities that have been issued Certificates of Coverage to operate under these State Non-Discharge General Permits must apply for renewal at least 180 days prior to their expiration date. Therefore, all applications must be received by the Division of Water Resources by no later than **April 1, 2014**.

Please do not leave any question unanswered. Please verify all information and make any necessary corrections below.

Application must be signed and dated by the Permittee.

RECEIVED/DENR/DWR
APR 15 2014
Water Quality Regional Operations Section

1. Facility Number: 090069 and Certificate of Coverage Number: AWS090069
2. Facility Name: Squirrel Hill Farm
3. Landowner's name (same as on the Waste Management Plan): Raymond Marlowe
4. Landowner's mailing address: PO Box 211
   City/State: White Oak NC Zip: 28399
   Telephone Number (include area code): (910)876-2899 **E-mail:**
5. **Facility's physical address:** 721 Squirrel Hill Ln
   City: White Oak **State**: NC **Zip:** 28399
6. County where facility is located: Bladen
7. Farm Manager's name (If different than the Landowner):
8. Farm Manager's telephone number (include area code): 910-876-2899
9. Integrator's name (if there is not an integrator write "None"): Murphy-Brown LLC
10. Operator in Charge (OIC) name: Barry Billups Telephone Number 910-876-3644 OIC # 17943
11. Lessee's name (if there is not a lessee write "None"): none
12. Indicate animal operation type and number:

Swine
Wean to Finish
Wean to Feeder **2600**
Farrow to Finish
Feeder to Finish
Farrow to Wean
Farrow to Feeder
Boar/Stud
Gilts
Other

Horses - Horses
Horses - Other

Cattle
Dairy Calf
Dairy Heifer
Milk Cow
Dry Cow
Beef Stocker Calf
Beef Feeder
Beef Brood Cow
Other

Sheep - Sheep
Sheep - Other

Dry Poultry
Non Laying Chickens
Laying Chickens
Turkeys
Other
Pullets
Turkey Poults

Wet Poultry
Non Laying Pullets
Layers

NUTRIENT MANAGEMENT PLAN

Ray Marlowe 9-69
PO Box 211
White Oak NC 28399

Grower(s):	
Farm Name:	**Nursery**
County:	**Bladen**
Farm Type:	**Wean-Feed**
Farm Capacity:	**2600**
Storage Structure:	**Anaerobic Lagoon**
Storage Period:	**180 days**
Application Method:	**Irrigation**

The waste from your animal facility must be land applied at a specified rate to prevent pollution of surface water and/or groundwater. The plant nutrients in the animal waste should be used to reduce the amount of commercial fertilizer required for the crops in the fields where the waste is to be applied.

This waste utilization plan uses nitrogen as the limiting nutrient. Waste should be analyzed before each application cycle. Annual soil tests are strongly encouraged so that all plant nutrients can be balanced for realistic yields of the crop to be grown.

Several factors are important in implementing your waste utilization plan in order to maximize the fertilizer value of the waste and to ensure that it is applied in an environmentally safe manner:

1. Always apply waste based on the needs of the crop to be grown and the nutrient content of the waste. Do not apply more nitrogen than the crop can utilize.

2. Soil types are important as they have different infiltration rates, leaching potentials, cation exchange capacities, and available water holding capacities.

3. Normally waste shall be applied to land eroding at less than 5 tons per acre per year. Waste may be applied to land eroding at 5 or more tons per acre annually, but less than 10 tons per acre per year providing that adequate filter strips are established.

4. Do not apply waste on saturated soils, when it is raining, or when the surface is frozen. Either of these conditions may result in runoff to surface waters which is not allowed under DWQ regulations.

5. Wind conditions should also be considered to avoid drift and downwind odor

problems.

6. To maximize the value of the nutrients for crop production and to reduce the potential for pollution, the waste should be applied to a growing crop or applied not more than 30 days prior to planting a crop or forages breaking dormancy. Injecting the waste or disking will conserve nutrients and reduce odor problems.

This plan is based on the waste application method shown above. If you choose to change methods in the future, you need to revise this plan. Nutrient levels for different application methods are not the same.

The estimated acres needed to apply the animal waste is based on typical nutrient content for this type of facility. In some cases you may want to have plant analysis made, which could allow additional waste to be applied. Provisions shall be made for the area receiving waste to be flexible so as to accommodate changing waste analysis content and crop type. Lime must be applied to maintain pH in the optimum range for specific crop production.

This waste utilization plan, if carried out, meets the requirements for compliance with 15A NCAC 2H .0217 adopted by the Environmental Management Commission.

AMOUNT OF WASTE PRODUCED PER YEAR (gallons, ft3, tons, etc.):

2600 animals X 223 gal/animal/year = 578,890 gallons

AMOUNT OF PLANT AVAILABLE NITROGEN PRODUCED PER YEAR (lbs):

2600 animals X 0.48 lbs/animal/year = 1,248.00 lbs

Applying the above amount of waste is a big job. You should plan time and have appropriate equipment to apply the waste in a timely manner.

The following acreage will be needed for waste application based on the crop to be grown, soil type, and surface application.

Tract	Field	Soil Type	Crop Code	Yield /Ac	lbs N /unit	Acres	Lbs N/Ac Residual	Lbs N /Ac	lbs N Required	Time to Apply
2769	2	AuA	C	5.5	50.00	3.77		275.0	1036.75	Mar-Oct
2769	1	AuA	C	5.5	50.00	1.07		275.0	294.25	Mar-Oct
					Total	[redacted] 4.84ac			1331.00	
					Available N				1248.00	
					***Difference**				-83.00	

~Indicates that this field is being overseeded (i.e. interplanted) or winter annuals follow summer annuals.

*A negative number reflects the total lbs of additional nitrogen needed to achieve yields on acreage listed in chart. A positive number means additional acreage is required to utilize the nitrogen produced by the farm.

NOTE:
This plan does not include commercial fertilizer. The farm should produce adequate plant available nitrogen to satisfy the requirements of the crops listed above.

The applicator is cautioned that P and K may be over applied while meeting the N requirements. In the future, regulations may require farmers in some parts of North Carolina to have a nutrient management plan that addresses all nutrients. This plan only addresses nitrogen.

In interplanted fields (i.e. small grain, etc, interseeded in bermuda), forage must be removed through grazing, hay, and/or silage. Where grazing, plants should be grazed when they reach a height of six to nine inches. Cattle should be removed when plants are grazed to a height of four inches. In fields where small grain, etc, is to be removed for hay or silage, care should be exercised not to let small grain reach maturity, especially late in the season (i.e.

April or May). Shading may result if small grain gets too high and this will definately interfere with stand of bermudagrass. This loss of stand will result in reduced yields and less nitrogen being utilized. Rather than cutting small grain for hay or silage just before heading as is the normal situation, you are encouraged to cut the small grain earlier. You may want to consider harvesting hay or silage two to three times during the season, depending on the time small grain is planted in the fall.

The ideal time to interplant small grain, etc, is late September or early October. Drilling is recommended over broadcasting. Bermudagrass should be grazed or cut to a height of about two inches before drilling for best results.

The following legend explains the crop codes listed in the table above:

Crop Code	Crop	Lbs N utilized / unit yield
A	Barley	1.6 lbs N / bushel
B	Hybrid Bermudagrass - Grazed	50 lbs N / ton
C	Hybrid Bermudagrass - Hay	50 lbs N / ton
D	Corn - Grain	1.25 lbs N / bushel
E	Corn - Silage	12 lbs N / ton
F	Cotton	0.12 lbs N / lbs lint
G	Fescue - Grazed	50 lbs N / ton
H	Fescue - Hay	50 lbs N / ton
I	Oats	1.3 lbs N / bushel
J	Rye	2.4 lbs N / bushel
K	Small Grain - Grazed	50 lbs N / acre
L	Small Grain - Hay	50 lbs N / acre
M	Grain Sorghum	2.5 lbs N / cwt
N	Wheat	2.4 lbs N / bushel
O	Soybean	4.0 lbs N / bushel

Acres shown in the preceding table are considered to be the usable acres excluding required buffers, filter strips along ditches, odd areas unable to be irrigated, and perimeter areas not receiving full application rates due to equipment limitations. Actual total acres in the fields listed may, and most likely will be, more than the acres shown in the tables.

See attached map showing the fields to be used for the utilization of animal waste.

SLUDGE APPLICATION:

The waste utilization plan must contain provisions for periodic land application of sludge at agronomic rates. The sludge will be nutrient rich and will require precautionary measures to prevent over application of nutrients or other elements. Your production facility will produce approximately 0.072 pounds of plant available nitrogen per animal per year in the sludge based on the application method listed earlier.

If you remove the sludge every 5 years, you will have approximately 936.00 pounds of PAN to utilize. Assuming you apply this PAN to hybrid bermudagrass hayland at the rate of 300 pounds of nitrogen per acre, you will need 3.12 acres of land. If you apply the sludge to corn at a rate of 125 pounds per acre, you will need 7.49 acres of land. Please be aware that these are only estimates of the PAN and land needed. Actual requirements could vary by 25% depending on your sludge waste analysis, soil types, realistic yields, and applications.

APPLICATION OF WASTE BY IRRIGATION:

The irrigation application rate should not exceed the intake rate of the soil at the time of irrigation such that runoff or ponding occurs. This rate is limited by initial soil moisture content, soil structure, soil texture, water droplet size, and organic solids. The application amount should not

exceed the available water holding capacity of the soil at the time of irrigation nor should the plant available nitrogen applied exceed the nitrogen needs of the crop.

If surface irrigation is the method of land application for this plan, it is the responsibility of the producer and irrigation designer to ensure that an irrigation system is installed to properly irrigate the acres shown in the preceding table. Failure to apply the recommended rates and amounts of nitrogen shown in the tables may make this plan invalid.

The following is provided as a guide for establishing application rates and amounts.

Tract	Field	Soil Type	Crop	Application Rate in/hr	Application Amount * inches
2769	1,2	KeA	C	0.60	1.00

*This is the maximum application amount allowed for the soil assuming the amount of nitrogen allowed for the crop is not over applied. In many situations, the application amount shown cannot be applied because of the nitrogen limitation. The maximum application amount shown can be applied under optimum soil conditions.

Your facility is designed for 180 days of temporary storage and the temporary storage must be removed on the average of once every 6 months. In no instance should the volume of the waste stored in your structure be within the 25 year 24 hour storm storage or one foot of freeboard except in the event of the 25 year 24 hour storm.

It is the responsiability of the producer and waste applicator to ensure that the spreader equipment is operated properly to apply the correct rates to the acres shown in the tables. Failure to apply the recommended rates and amounts of nitrogen shown in the tables may make this plan invalid.

Call your technical specialist after you receive the waste analysis report for assistance in determining the amount of waste per acre and the proper application prior to applying the waste.

Additional Comments:

Grower may overseed coastal with small grain to utilize for winter irrigation at an application rate not to exceed 50 lbs N/acre.

Grower may opt to graze small grain if rather than cut for hay.

NUTRIENT MANAGEMENT PLAN CERTIFICATION

Name of Farm: Barry Billups

Owner/Manager Agreement:

I/we understand and will follow and implement the specifications and the operation and maintenance procedures established in the approved animal waste nutrient management plan for the farm named above. I/we know that any expansion to the existing design capacity of the waste treatment and/or storage system, or construction of new facilities, will require a new nutrient management plan and a new certification to be submitted to DWQ before the new animals are stocked.

I/we understand that I must own or have access to equipment, primarily irrigation equipment, to land apply the animal waste described in this nutrient management plan. This equipment must be available at the appropriate pumping time such that no discharge occurs from the lagoon in the event of a 25 year 24 hour storm. I also certify that the waste will be applied on the land according to this plan at the appropriate times and at rates which produce no runoff.

This plan will be filed on site at the farm office and at the office of the local Soil and Water Conservation District and will be available for review by NCDWQ upon request.

Name of Facility Owner: Barry Billups

Signature: Barry D Billups **Date**

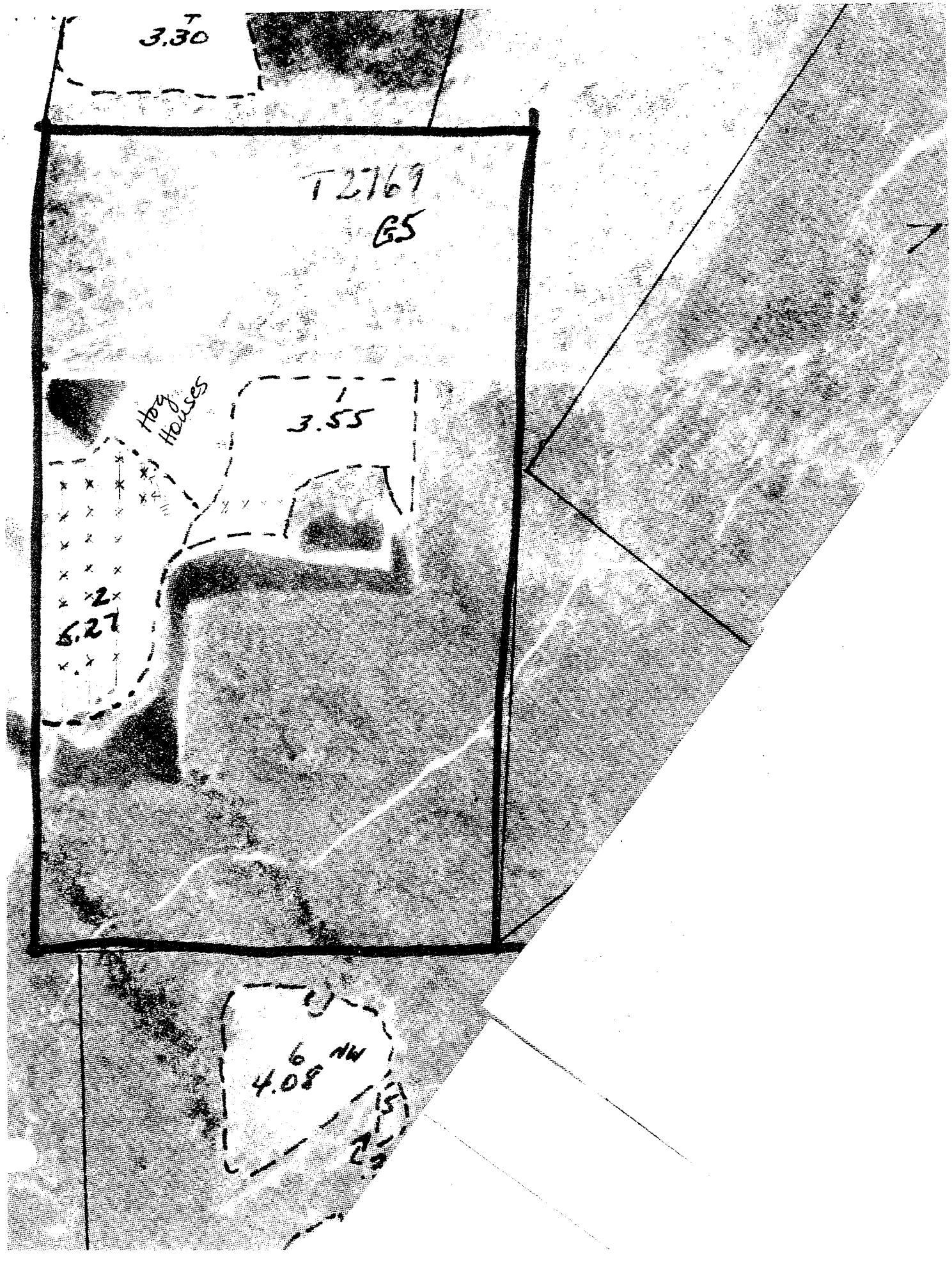
Name of Manager (if different from owner): _____
Please Print

Signature: _____ **Date**

Name of Technical Specialist: SONYA BARBER
Affiliation: HARVEST NET INC.
Address: PO BOX 32
COUNCIL NC 28434

Telephone:

Signature: Sonya J. Barber **Date** 2/28/01


3.30
T2769
G5
Hog Houses
3.55
6.27
6
4.08 NW
5
2