



North Carolina Department of Environment and Natural Resources

Division of Water Resources
Water Quality Programs
Thomas A. Reeder
Director

Pat McCrory
Governor

John E. Skvarla, III
Secretary

March 3, 2014

Lisbon 1 Farms Inc
Lisbon Sow Farm #1
PO Box 1139
Wallace, NC 284661139

Subject: Application for Renewal of Coverage for Expiring State General Permit

Dear Permittee:

Your facility is currently approved for operation under one of the Animal Waste Operation State Non-Discharge General Permits, which expire on September 30, 2014. Copies of the new animal waste operation State Non-Discharge General Permits are available at <http://www.ncwaterquality.org/web/wq/aps/afo/apps> or by writing or calling:

NCDENR-DWR
Animal Feeding Operations Branch
1636 Mail Service Center
Raleigh, North Carolina 27699-1636

Telephone number: (919) 807-6464

In order to assure your continued coverage under the State Non-Discharge General Permits, you must submit an application for permit coverage to the Division. Enclosed you will find a 'Request for Certificate of Coverage Facility Currently Covered by an Expiring State Non-Discharge General Permit.' The application form must be completed, signed and returned by April 1, 2014. Please note that you must include one (1) copy of your most recent Waste Utilization Plan with the signed application form.

Failure to request renewal of your coverage under a general permit within the time period specified may result in a civil penalty. Operation of your facility without coverage under a valid general permit would constitute a violation of NCGS 143-215.1 and could result in assessments of civil penalties of up to \$25,000 per day.

If you have any questions about the State Non-Discharge General Permits, the enclosed application, or any related matter please feel free to contact the Animal Feeding Operations Branch staff at 919-807-6464.

Sincerely,

S. Jay Zimmerman, P.G., Chief
Water Quality Regional Operations Section

Enclosures

cc (w/o enclosures): Fayetteville Regional Office, Water Quality Regional Operations Section
Bladen County Soil and Water Conservation District
WQROS Unit Central Files - AWS090048
Murphy-Brown LLC

1636 Mail Service Center, Raleigh, North Carolina 27699-1636
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6464 \ FAX: 919-807-6492
Internet: www.ncwaterquality.org

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**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.

1. Facility Number: 090048 and Certificate of Coverage Number: AWS090048
2. Facility Name: Lisbon Sow Farm #1
3. Landowner's name (same as on the Waste Management Plan): Lisbon 1 Farms Inc
4. Landowner's mailing address: PO Box 1139
City/State: Wallace NC Zip: 284661139
Telephone Number (include area code): (910)285-1005 E-mail: _____
5. Facility's physical address: 368 Shepard Rd
City: Council State: NC Zip: 28434
6. County where facility is located: Bladen
7. Farm Manager's name (If different than the Landowner): David Nordin
8. Farm Manager's telephone number (include area code): _____
9. Integrator's name (if there is not an integrator write "None"): Murphy-Brown LLC
10. Operator in Charge (OIC) name: James McCall Jr Telephone Number 910-271-0925 OIC # 985986
11. Lessee's name (if there is not a lessee write "None"): _____
12. Indicate animal operation type and number:

Swine

Wean to Finish
Wean to Feeder 400
Farrow to Finish
Feeder to Finish 1000
Farrow to Wean 3500
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

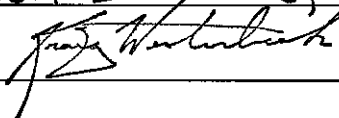
Non Laying Pullets
Layers

Mail one (1) copy of the most recent Waste Utilization Plan (WUP) along with the field maps for this facility with this completed and signed application as required by NC General Statutes 143-215.10C(d) to the address below. The WUP must be signed by the owner and a certified technical specialist.

As a second option to mailing paper copies of the application package, you can scan and email one signed copy of the application and the WUP to: animalpermits@ncdenr.gov

I attest that this application has been reviewed by me and is accurate and complete to the best of my knowledge. I understand that, if all required parts of this application are not completed and that if all required supporting information and attachments are not included, this application package will be returned to me as incomplete. **Note:** In accordance with NC General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application may be subject to civil penalties up to \$25,000 per violation. (18 U.S.C. Section 1001 provides a punishment by a fine of not more than \$10,000 or imprisonment of not more than 5 years, or both for a similar offense.)

Printed Name of Signing Official (Landowner, or if multiple Landowners all landowners should sign. If Landowner is a corporation, signature should be by a principal executive officer of the corporation):

Name: Lisbon 1 Farms, Inc Title: Owner
Signature:  Date: 3-24-2014

Name: _____ Title: _____
Signature: _____ Date: _____

Name: _____ Title: _____
Signature: _____ Date: _____

THE COMPLETED APPLICATION SHOULD BE SENT TO THE FOLLOWING ADDRESS:

NCDENR-DWR
Animal Feeding Operations Branch
1636 Mail Service Center
Raleigh, North Carolina 27699-1636

Telephone number: (919) 807-6464
E-mail: animalpermits@ncdenr.gov

NUTRIENT UTILIZATION PLAN

Grower(s): Lisbon 1 Farms, Inc.
Farm Name: Lisbon 1 Sow Farm, Fac. No. 9-48
County: Bladen

Farm Capacity:	
Farrow to Wean	3500
Farrow to Feeder	
Farrow to Finish	
Wean to Feeder	400
Feeder to Finish	1,000

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.):

Capacity	Type	Waste Produced per Animal	Total
3500	Farrow to Wean	3212 gal/yr	11,242,000 gal/yr
	Farrow to Feeder	4015 gal/yr	gal/yr
	Farrow to Finish	10585 gal/yr	gal/yr
400	Wean to Feeder	223 gal/yr	89,200 gal/yr
1000	Feeder to Finish	986 gal/yr	986,000 gal/yr
Total			12,317,200 gal/yr

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

Capacity	Type	Nitrogen Produced per Animal	Total
3500	Farrow to Wean	5.4 lbs/yr	18,900 lbs/yr
	Farrow to Feeder	6.5 lbs/yr	lbs/yr
	Farrow to Finish	26 lbs/yr	lbs/yr
400	Wean to Feeder	0.48 lbs/yr	192 lbs/yr
1000	Feeder to Finish	2.3 lbs/yr	2,300 lbs/yr
Total			21,392 lbs/yr

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.

LAND UTILIZATION SUMMARY

The following table describes the nutrient balance and land utilization rate for this facility. Note that the Nitrogen Balance for Crops indicates the ratio of the amount of nitrogen produced on this facility to the amount of nitrogen that the crops under irrigation may uptake and utilize in the normal growing season.

Total Irrigated Acreage: 114.78
Total N Required 1st Year: 40620.79
Total N Required 2nd Year: 37957.5

Average Annual Nitrogen Requirement of Crops: 39,289.14
Total Nitrogen Produced by Farm: 21,392.00
Nitrogen Balance for Crops: (17,897.14)

The following table describes the specifications of the hydrants and fields that contain the crops designated for utilization of the nitrogen produced on this facility. This chart describes the size, soil characteristics, and uptake rate for each crop in the specified crop rotation schedule for this facility.

Reception Area Specifications																			Year 1 of a 2 year rotation									
Tract	Field	Irrigated Acreage	Soil Type	1st Crop Code	Time to Apply	1st Crop Yield	1st Crop lbs N/Unit	Lbs W/Ac Residual	Lbs N /Ac	Total lbs N Utilized	2nd Crop Code	Time to Apply	2nd Crop Yield	2nd Crop lbs N/Unit	Lbs N/Ac Residual	Lbs N /Ac	Total lbs N Utilized	Total lbs N Utilized										
T4739-F1	Pull 1	2	ExA/AvB	C	Mar-Sept	6.5	50		325	850	L	Sept-April	1	50		50	100	375	750									
T4739-F1	Pull 2	4.07	ExA/AvB	C	Mar-Sept	6.5	50		325	1322.75	L	Sept-April	1	50		50	204	375	1526.25									
T4739-F1	3 (Pivot)	25.1	ExA/AvB	C	Mar-Sept	6.5	50		325	8157.5	L	Sept-April	1	50		50	1255	375	9412.5									
T4739-F1	Pull 4	5.21	ExA/AvB	C	Mar-Sept	6.5	50		325	1693.25	L	Sept-April	1	50		50	261	375	1953.75									
T4739-F1	Pull 5	3.35	ExA/AvB	C	Mar-Sept	6.5	50		325	1088.75	L	Sept-April	1	50		50	167.5	375	1256.25									
T4739-F1	Pull 6	3.71	ExA/AvB	C	Mar-Sept	6.5	50		325	1205.75	L	Sept-April	1	50		50	185.5	375	1391.25									
T4739-F6	Pull 7	4.39	Na	D	Feb15-June	125.0	1.25	15	141	620.0875	N	Sept-April	60	2.4		144	692.16	285.25	1252.248									
T4739-F6	Pull 8	2.16	Na	D	Feb15-June	125.0	1.25	15	141	305.1	N	Sept-April	60	2.4		144	311	285.25	616.14									
T4739-F5	Pull 9	3.36	ExA	D	Feb15-June	130.0	1.25	15	148	495.6	N	Sept-April	60	2.4		144	484	291.5	979.44									
T4739-F5	Pull 10	4.19	ExA	D	Feb15-June	130.0	1.25	15	148	618.025	N	Sept-April	60	2.4		144	603	291.5	1221.385									
T4739-F4	Pull 11	4.88	ExA	C	Mar-Sept	6.5	50		325	1586	L	Sept-April	1	50		50	244	375	1830									
T4739-F4	Pull 12	6.68	ExA	C	Mar-Sept	6.5	50		325	2171	L	Sept-April	1	50		50	334	375	2505									
T3230-F2	Pull 13	1.86	DuA	C	Mar-Sept	5.5	50		275	511.5	L	Sept-April	1	50		50	93	325	604.5									
T3230-F2	Pull 14	3.17	DuA	C	Mar-Sept	5.5	50		275	871.75	L	Sept-April	1	50		50	159	325	1030.25									
T3230-F3	Pull 15	4.05	NoB	C	Mar-Sept	6.5	50		325	1316.25	L	Sept-April	1	50		50	203	375	1518.75									
T3230-F3	Pull 16	1.53	NoB	C	Mar-Sept	6.5	50		325	497.25	L	Sept-April	1	50		50	76.5	375	573.75									
T4739-F7	17 solidset	1.67	AvB	C	Mar-Sept	6.4	50		320	534.4	L	Sept-April	1	50		50	84	370	617.9									
T4739-F7	18 solidset	4.72	DuA	C	Mar-Sept	5.5	50		275	1298	L	Sept-April	1	50		50	236	325	1534									
T4739-F1	Sub 1-3	11.02	ExA/AvB	C	Mar-Sept	6.5	50		325	3681.5	L	Sept-April	1	50		50	551	375	4132.5									
T4739-F1	Sub 4-6	2.27	ExA/AvB	C	Mar-Sept	6.5	50		325	737.75	L	Sept-April	1	50		50	114	375	851.25									
T4739-F6	Sub 7-8	4.2	Na	D	Feb15-June	125.0	1.25	15	141	593.25	N	Sept-April	60	2.4		144	605	285.25	1198.05									
T4739-F5	Sub 9-10	2.75	ExA	D	Feb15-June	130.0	1.25	15	148	405.625	N	Sept-April	60	2.4		144	396	291.5	801.825									
T4739-F4	Sub 11-12	4.96	ExA	C	Mar-Sept	6.5	50		325	1612	L	Sept-April	1	50		50	248	375	1860									
T3230-F2	Sub 13-14	2.02	DuA	C	Mar-Sept	5.5	50		275	555.5	L	Sept-April	1	50		50	101	325	656.5									
T3230-F3	Sub 15-16	1.46	NoB	C	Mar-Sept	6.5	50		325	474.5	L	Sept-April	1	50		50	73	375	547.5									
Totals:		114.78								32903.09							7717.7		40620.79									

Reception Area Specifications														Year 2 of a 2 year rotation									
Tract	Field	Irrigated Acreage	Soil Type	1st Crop Code	Time to Apply	1st Crop Yield	1st Crop lbs N/Unit	Lbs N/Ac	Lbs N/Ac Residual	Lbs N/Ac	2nd Crop Code	Time to Apply	2nd Crop Yield	2nd Crop lbs N/Unit	Lbs N/Ac	Lbs N/Ac Residual	Lbs N/Ac	Total lbs N Utilized	Total lbs N	Total lbs N Utilized	Total lbs N	Total lbs N Utilized	Total lbs N
T4739-F1	Pull 1	2	ExA/AyB	C	Mar-Sept	6.5	50	325		650	L	Sept-April	1	50			375	750					
T4739-F1	Pull 2	4.07	ExA/AyB	C	Mar-Sept	6.5	50	325		1322.75	L	Sept-April	1	50			375	1526.25					
T4739-F1	3 (Pivot)	25.1	ExA/AyB	C	Mar-Sept	6.5	50	325		8157.5	L	Sept-April	1	50			375	9412.5					
T4739-F1	Pull 4	5.21	ExA/AyB	C	Mar-Sept	6.5	50	325		1693.25	L	Sept-April	1	50			375	1963.75					
T4739-F1	Pull 5	3.35	ExA/AyB	C	Mar-Sept	6.5	50	325		1088.75	L	Sept-April	1	50			375	1256.25					
T4739-F1	Pull 6	3.71	ExA/AyB	C	Mar-Sept	6.5	50	325		1205.75	L	Sept-April	1	50			375	1391.25					
T4739-F6	Pull 7	4.39	Na	O	Apr-Sept15	38.0	4	152		667.28	*						152	667.28					
T4739-F6	Pull 8	2.16	Na	O	Apr-Sept15	38.0	4	152		328.32	*						152	328.32					
T4739-F5	Pull 9	3.36	ExA	O	Apr-Sept15	43.0	4	172		577.92	*						172	577.92					
T4739-F5	Pull 10	4.19	ExA	O	Apr-Sept15	43.0	4	172		720.68	*						172	720.68					
T4739-F4	Pull 11	4.88	ExA	C	Mar-Sept	6.5	50	325		1586	L	Sept-April	1	50			375	1830					
T4739-F4	Pull 12	6.88	ExA	C	Mar-Sept	6.5	50	325		2171	L	Sept-April	1	50			375	2505					
T3230-F2	Pull 13	1.86	DuA	C	Mar-Sept	5.5	50	275		511.5	L	Sept-April	1	50			325	604.5					
T3230-F2	Pull 14	3.17	DuA	C	Mar-Sept	5.5	50	275		871.75	L	Sept-April	1	50			325	1030.25					
T3230-F3	Pull 15	4.05	NoB	C	Mar-Sept	6.5	50	325		1316.25	L	Sept-April	1	50			375	1518.75					
T3230-F3	Pull 16	1.53	NoB	C	Mar-Sept	6.5	50	325		497.25	L	Sept-April	1	50			375	573.75					
T4739-F7	17 solidset	1.67	AyB	C	Mar-Sept	6.4	50	320		534.4	L	Sept-April	1	50			370	617.9					
T4739-F7	18 solidset	4.72	DuA	C	Mar-Sept	5.5	50	275		1298	L	Sept-April	1	50			325	1534					
T4739-F1	Sub 1-3	11.02	ExA/AyB	C	Mar-Sept	6.5	50	325		3581.5	L	Sept-April	1	50			375	4132.5					
T4739-F1	Sub 4-6	2.27	ExA/AyB	C	Mar-Sept	6.5	50	325		737.75	L	Sept-April	1	50			375	851.25					
T4739-F6	Sub 7-8	4.2	Na	O	Apr-Sept15	38.0	4	152		638.4	*						152	638.4					
T4739-F9	Sub 9-10	2.75	ExA	O	Apr-Sept15	43.0	4	172		473	*						172	473					
T4739-F4	Sub 11-12	4.96	ExA	C	Mar-Sept	6.5	50	325		1612	L	Sept-April	1	50			375	1860					
T3230-F2	Sub 13-14	2.02	DuA	C	Mar-Sept	5.5	50	275		555.5	L	Sept-April	1	50			325	656.5					
T3230-F3	Sub 15-16	1.46	NoB	C	Mar-Sept	6.5	50	325		474.5	L	Sept-April	1	50			375	547.5					
Totals:																	114.78	33271	4686.5	37957.5			

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.

CROP CODE LEGEND

Crop Code	Crop	Lbs N utilized / unit yield
A	Barley	1.6 lbs N / bushel
B	Grazed Hybrid Bermudagrass	37.5 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	Grazed Fescue	37.5 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	Grazed Overseed	50 lbs N / acre
L	Overseed 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
P	Pine Trees	40 lbs N / acre / yr

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.

Application Rate Guide

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

Tract	Hydrant	Soil Type	Crop	Application Rate in/hr	Application Amount * inches
T4739-F1	Pull 1	ExA/AyB	C	0.35	1
T4739-F1	Pull 2	ExA/AyB	C	0.35	1
T4739-F1	3 (Pivot)	ExA/AyB	C	0.35	1
T4739-F1	Pull 4	ExA/AyB	C	0.35	1
T4739-F1	Pull 5	ExA/AyB	C	0.35	1
T4739-F6	Pull 6	ExA/AyB	C	0.35	1
T4739-F6	Pull 7	Na	D	0.4	1
T4739-F5	Pull 8	Na	D	0.4	1
T4739-F5	Pull 9	ExA	D	0.35	1
T4739-F4	Pull 10	ExA	D	0.35	1
T4739-F4	Pull 11	ExA	C	0.35	1
T3230-F2	Pull 12	ExA	C	0.35	1
T3230-F2	Pull 13	DuA	C	0.4	1
T3230-F3	Pull 14	DuA	C	0.4	1
T3230-F3	Pull 15	NoB	C	0.5	1
T4739-F7	Pull 16	NoB	C	0.5	1
T4739-F7	17 solidset	AyB	C	0.35	1
T4739-F1	18 solidset	DuA	C	0.4	1
T4739-F1	Sub 1-3	ExA/AyB	C	0.35	1
T4739-F1	Sub 4-6	ExA/AyB	C	0.35	1
T4739-F6	Sub 7-8	Na	D	0.4	1
T4739-F5	Sub 9-10	ExA	D	0.35	1
T4739-F4	Sub 11-12	ExA	C	0.35	1
T3230-F2	Sub 13-14	DuA	C	0.4	1
T3230-F3	Sub 15-16	NoB	C	0.5	1

This plan revised to show the addition of hyd 18 (solid set) in field 7 and the additional land in field 4, (pulls 11 & 12 recalculated)

The subfields are those areas of the fields not covered by the existing irrigation systems that will be covered by using an Aerway machine.

[illegible]

NUTRIENT UTILIZATION PLAN CERTIFICATION

Name of Farm: Lisbon 1 Sow Farm, Fac. No. 9-48
Owner: Lisbon 1 Farms, Inc.
Manager:

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: Murphy - Brown, LLC

Signature: David Morden

Date

Name of Manager (if different from owner): _____

Signature: _____

Date

Name of Technical Specialist: M. Kevin Weston

Affiliation: Murphy-Brown, LLC.

Address: 2822 Hwy 24 West, PO Drawer 856

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5/22/2013

Date

NUTRIENT UTILIZATION PLAN

REQUIRED SPECIFICATIONS

- 1 Animal waste shall not reach surface waters of the state by runoff, drift, manmade conveyances, direct application, or direct discharge during operation or land application. Any discharge of waste which reaches surface water is prohibited.
- 2 There must be documentation in the design folder that the producer either owns or has an agreement for use of adequate land on which to properly apply the waste. If the producer does not own adequate land to properly dispose of the waste, he/she shall provide evidence of an agreement with a landowner, who is within a reasonable proximity, allowing him/her the use of the land for waste application. It is the responsibility of the owner of the waste production facility to secure an update of the Nutrient Utilization Plan when there is a change in the operation, increase in the number of animals, method of application, receiving crop type, or available land.
- 3 Animal waste shall be applied to meet, but not exceed, the nitrogen needs for realistic crop yields based upon soil type, available moisture, historical data, climatic conditions, and level of management, unless there are regulations that restrict the rate of applications for other nutrients.
- 4 Animal waste shall be applied to land eroding less than 5 tons per acre per year. Waste may be applied to land eroding at more than 5 tons per acre per year but less than 10 tons per acre per year provided grass filter strips are installed where runoff leaves the field (See USDA, NRCS Field Office Technical Guide Standard 393 - Filter Strips).
- 5 Odors can be reduced by injecting the waste or disking after waste application. Waste should not be applied when there is danger of drift from the land application field.
- 6 When animal waste is to be applied on acres subject to flooding, waste will be soil incorporated on conventionally tilled cropland. When waste is applied to conservation tilled crops or grassland, the waste may be broadcast provided the application does not occur during a season prone to flooding (See "Weather and Climate in North Carolina" for guidance).
- 7 Liquid waste shall be applied at rates not to exceed the soil infiltration rate such that runoff does not occur offsite or to surface waters and in a method which does not cause drift from the site during application. No ponding should occur in order to control odor and flies.
- 8 Animal waste shall not be applied to saturated soils, during rainfall events, or when the

NUTRIENT UTILIZATION PLAN

REQUIRED SPECIFICATIONS

(continued)

- 9 Animal waste shall be applied on actively growing crops in such a manner that the crop is not covered with waste to a depth that would inhibit growth. The potential for salt damage from animal waste should also be considered.
- 10 Nutrients from waste shall not be applied in fall or winter for spring planted crops on soils with a high potential for leaching. Waste/nutrient loading rates on these soils should be held to a minimum and a suitable winter cover crop planted to take up released nutrients. Waste shall not be applied more than 30 days prior to planting of the crop or forages breaking dormancy.
- 11 Any new swine facility sited on or after October 1, 1995 shall comply with the following: The outer perimeter of the land area onto which waste is applied from a lagoon that is a component of a swine farm shall be at least 50 feet from any residential property boundary and canal. Animal waste, other than swine waste from facilities sited on or after October 1, 1995, shall not be applied closer than 25 feet to perennial waters.
- 12 Animal waste shall not be applied closer than 100 feet to wells.
- 13 Animal waste shall not be applied closer than 200 feet of dwellings other than those owned by the landowner.
- 14 Waste shall be applied in a manner not to reach other property and public right-of-ways.
- 15 Animal waste shall not be discharged into surface waters, drainageways, or wetlands by discharge or by over-spraying. Animal waste may be applied to prior converted cropland provided the fields have been approved as a land application site by a "technical specialist". Animal waste shall not be applied on grassed waterways that discharge directly into water courses, and on other grassed waterways, waste shall be applied at agronomic rates in a manner that causes no runoff or drift from the site.
- 16 Domestic and industrial waste from washdown facilities, showers, toilets, sinks, etc., shall not be discharged into the animal waste management system.

NUTRIENT UTILIZATION PLAN

REQUIRED SPECIFICATIONS

(continued)

- 17 A protective cover of appropriate vegetation will be established on all disturbed areas (lagoon embankments, berms, pipe runs, etc.). Areas shall be fenced, as necessary, to protect the vegetation. Vegetation such as trees, shrubs, and other woody species, etc., are limited to areas where considered appropriate. Lagoon areas should be kept mowed and accessible. Berms and structures should be inspected regularly for evidence of erosion, leakage, or discharge.
- 18 If animal production at the facility is to be suspended or terminated, the owner is responsible for obtaining and implementing a "closure plan" which will eliminate the possibility of an illegal discharge, pollution and erosion.
- 19 Waste handling structures, piping, pumps, reels, etc., should be inspected on a regular basis to prevent breakdowns, leaks and spills. A regular maintenance checklist should be kept on site.
- 20 Animal waste can be used in a rotation that includes vegetables and other crops for direct human consumption. However, if animal waste is used on crops for direct human consumption, it should only be applied pre-plant with no further applications of animal waste during the crop season.
- 21 Highly visible markers shall be installed to mark the top and bottom elevations of the temporary storage (pumping volume) of all waste treatment lagoons. Pumping shall be managed to maintain the liquid level between the markers. A marker will be required to mark the maximum storage volume for waste storage ponds.
- 22 Waste shall be tested within 60 days of utilization and soil shall be tested at least annually at crop sites where waste products are applied. Nitrogen shall be the rate-determining nutrient, unless other restrictions require waste to be applied based on other nutrients, resulting in a lower application rate than a nitrogen based rate. Zinc and copper levels in the soil shall be monitored and alternative crop sites shall be used when these metals approach excessive levels. pH shall be adjusted and maintained for optimum crop production. Soil and waste analysis records shall be kept for a minimum of five years. Poultry dry waste application records shall be maintained for a minimum of three years. Waste application records for all other waste shall be maintained for a minimum of five years.
- 23 Dead animals will be disposed of in a manner that meets North Carolina regulations.

**Lisbon 1 Sow Farm
Spray Fields
Scale: 1"=400'**

