Tennessee Department of Environment and Conservation,
Division of Water Resources
William R. Snodgrass-Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor, Nashville, TN 37243
(615) 532-0625

CONCENTRATED ANIMAL FEEDING OPERATION (CAFO)
STATE OPERATING PERMIT (SOP)
NOTICE OF INTENT (NOI)

Type of permit you are requesting: ☐ SOPCD0000 (designed to discharge) ■ SOPC00000 (no discharge) ☐ Unknown, please advise

Application type: ☐ New Permit ☐ Permit Reissuance ☐ Permit Modification

If this NOI is submitted for Permit Modification or Reissuance provide the existing permit tracking number: _____

OPERATION IDENTIFICATION

Operation Name: Beecham Farms	County: Henry
Operation Location/ Physical Address: 1225 Radford Lake Road Henry, TN 38231	Latitude: 36.19999
	Longitude: -88.4453

Name and distance to nearest receiving water(s): 1200 feet to stream that eventually flows into Spring Creek

If any other State or Federal Water/Wastewater Permits have been obtained for this site, list those permit numbers:
SOPC00247

Animal Type: ☐ Poultry ■ Swine ☐ Dairy ☐ Beef ☐ Other _____

Number of Animals: 7440	Number of Barns: 3	Name of Integrator: Tosh Pork

Type of Animal Waste Management: (check all that apply)
☐ Dry
☐ Liquid
■ Liquid, Closed System (i.e. covered tank, under barn pit, etc.)

Attach the NMP ■ NMP Attached	Attach the closure plan ■ Closure Plan Attached	Attach a topographic map ■ Map Attached

PERMITTEE IDENTIFICATION

Official Contact (applicant): Tim Beecham	Title or Position: Owner			
Mailing Address: 1225 Radford Lake Road	City: Henry	State: TN	Zip: 38231	☐ Correspondence ☐ Invoice
Phone number(s): 731-363-1021	E-mail:			
Optional Contact: Leigh Ann Beecham	Title or Position: Owner			
Address: Same	City:	State:	Zip:	☐ Correspondence ☐ Invoice
Phone number(s): 731-363-9312	E-mail:			

APPLICATION CERTIFICATION AND SIGNATURE (must be signed in accordance with the requirements of Rule 0400-40-05-.14)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and title; print or type: Timothy Beecham	Signature: Timothy Beecham	Date: 5-15-17

STATE USE ONLY

Received Date	Reviewer	EFO	T & E Aquatic Fauna	Tracking No.
	Impaired Receiving Stream	High Quality Water		NOC Date

continued

NRCS Natural Resources Conservation Service

Comprehensive Nutrient Management Plan (CNMP)
(Version 3, 8/17/2016 Format)

The Comprehensive Nutrient Management Plan (CNMP) is an important part of the conservation management system (CMS) for your Animal Feeding Operation (AFO). This CNMP documents the planning decisions and operation and maintenance information for the AFO.

Farm/Facility: Beecham Farms
c/o Tim Beecham
1225 Radford Lake Road
Henry, TN 38231
7313631021

Owner/Operator:

Plan Period: Mar 2017 - Feb 2022

Certified Comprehensive Nutrient Management Plan (CNMP) Planner

As a Certified Comprehensive Nutrient Management Plan (CNMP) Planner, I certify that I have reviewed the *Comprehensive Nutrient Management Plan* and that the elements of the document are technically compatible, reasonable and can be implemented.

Signature: J. S. Walker IV Date: 5-10-17
Name:
Title: TSP Certification Credentials:

Conservation District (Optional)

As a Conservation District employee, I have reviewed the *Comprehensive Nutrient Management Plan* and concur that the plan meets the District's conservation goals.

Signature: _____ Date: _____
Name:
Title:

Owner/Operator

As the owner/operator of this CNMP, I, as the decision maker, have been involved in the planning process and agree that the items/practices listed in each element of the CNMP are needed. I understand that I am responsible for keeping all necessary records associated with implementation of this CNMP. It is my intention to implement/accomplish this CNMP in a timely manner as described in the plan.

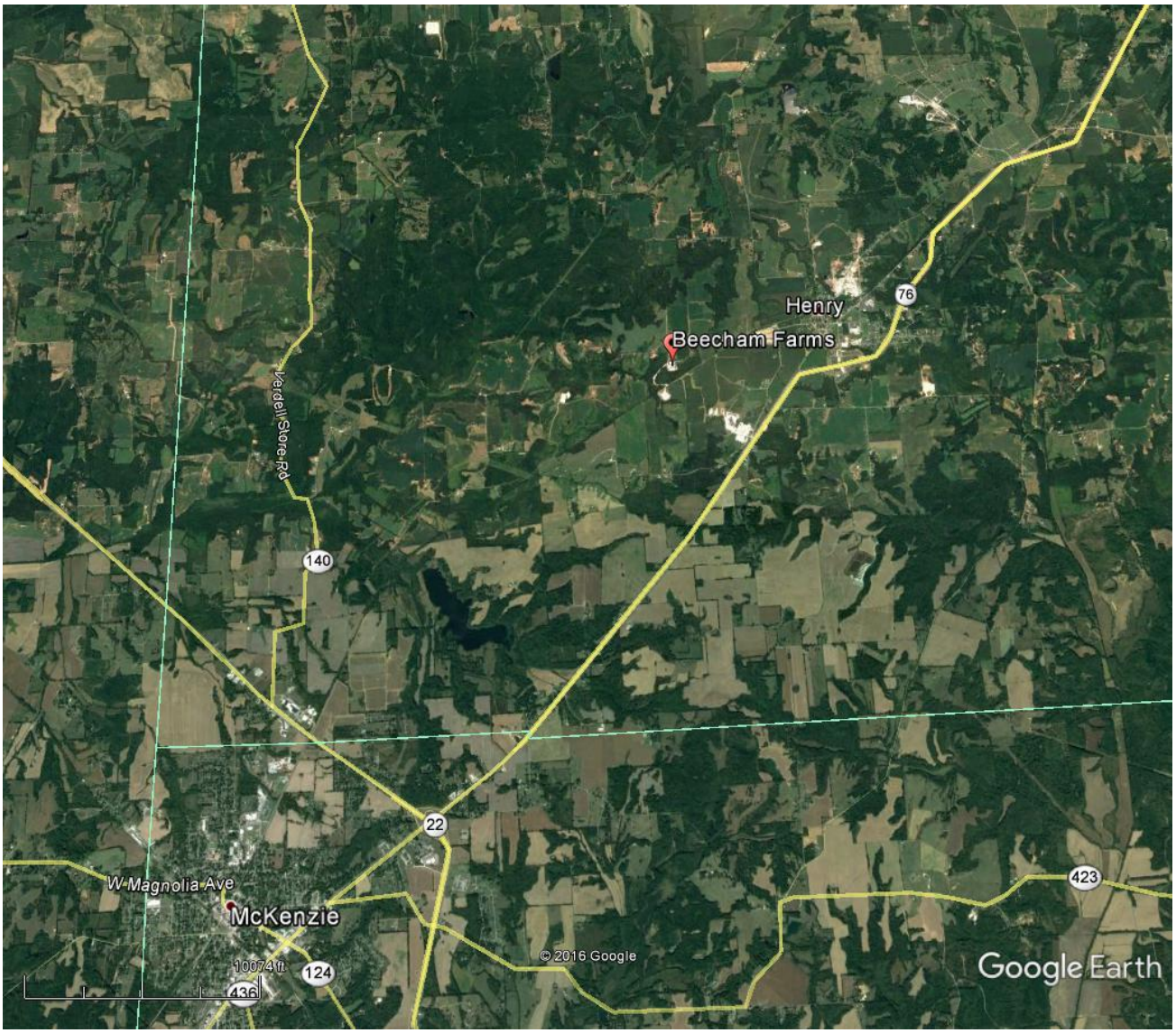
Signature: Timothy Beecham Date: 5-15-17
Name:

Table of Contents

Section 1. Farmstead (Production Area)

1.1. Maps of Existing and Planned Farmstead Conservation Practices

Possible location for third bar Barn 1&2 Composter Beecham House


Henry
Beecham Farms
76
Verdell Store Rd
140
22
W Magnolia Ave
McKenzie
423
124
436
10074 ft
© 2016 Google
Google Earth


N
W
E
S

1.2. Farmstead Conservation Practices -- Record of Decisions

Waste Storage Facility (313)

Facility(s)	Planned amount (No.)	Month	Year	Amount Applied	Date
3	3	3	2017	Already applied	
Total	3				

A waste impoundment structure has been constructed, according to NRCS specifications to temporarily store waste such as manure, wastewater, and contaminated runoff as a function of an agricultural waste management system which will protect the environment and public health and safety. Practice lifespan is 15 years. Refer to design drawings and practice standard 313 for additional information.

Composting Facility (317)

Create composting facility to properly dispose of dead hogs. Compost will need to be tested for nutrient levels. See Practice Standard 317.

Field(s)	Planned amount (No.)	Month	Year	Amount Applied	Date
1	1.0	3	2017		
Total	1.0				

All dead pigs must be immediately put in the compost facility and covered with a carbon matter. Suggested carbon matter is sawdust.

All NRCS conservation practices shall be installed, operated and maintained according to NRCS conservation practice standards and associated technical specifications.

1.3. Farmstead Conservation Practices – Implementation Requirements

Extension

W255

Disposing of Large Animal Mortalities in Tennessee

Forbes Walker, Associate Professor, and Shawn Hawkins, Assistant Professor
Biosystems Engineering and Soil Science

Animal deaths are a regrettable but sometimes unavoidable part of livestock production. Once an animal dies, it is important to handle and dispose of the carcass in a way that reduces the potential for impacting the health of humans and other livestock and minimizes the impact to the environment, such as pollution of groundwater or surface water. It is recommended that dead animals be disposed of within 48 hours of discovery in a way that follows state guidelines.

In May 2009, the Tennessee Department of Agriculture released its guidelines on handling mortalities in a short policy document entitled "Policy Concerning the Disposal of Dead Farm Animals and The Disposal Offal from Custom Slaughter Facilities." This document can be viewed at the Tennessee Department of Agriculture's website at: http://tn.gov/agriculture/publications/regulatory/animaldisposal.pdf

In Tennessee, dead animal carcasses are defined as a "solid waste," so are regulated by the Tennessee Department of the Environment and Conservation (TDEC), Division of Solid Waste. The disposal of dead animals falls under the solid waste regulations outlined by TDEC at its website: http://www.tennessee.gov/sos/rules/1200/1200-01/1200-01-07.20081126.pdf

The methods that livestock producers in Tennessee can choose to dispose of their dead animals include:

- On-farm burial
- Composting
- Landfilling
- Burning
- Incineration
- Rendering

the center of this base material with the extremities at least 2 feet away from the edge of the base material. Finally, the carcass should be covered with 2 feet of amendment that is mounded to divert rather than capture rainfall. The process will be complete in 3-9 months (only bones are left) and the material can then be land-applied.

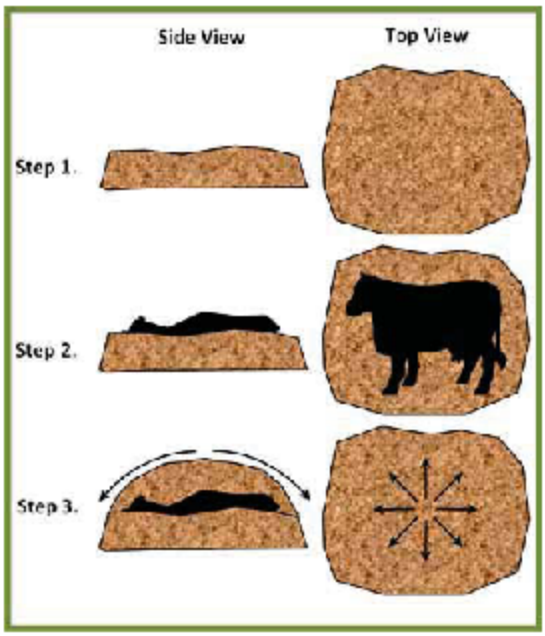


Figure 1. Top and side view schematics illustrating static pile composting of a large animal mortality. Rainfall drainage is illustrated in Step 3.

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W-251 2/11 11-0123

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UT Extension provides equal opportunities in programs and employment.

1.4. Animal Inventory

Animal Group	Type or Production Phase	Number of Animals[a]	Average Weight (lbs)	Confinement Period	Manure Collected (%)[b]	Manure Storage
Pigs 1	Wean-to-finish pig	2,480	140	Jan Early - Dec Late	100	Barn 1
Pigs 2	Wean-to-finish pig	2,480	140	Jan Early - Dec Late	100	Barn 2
Pigs 3	Wean-to-finish pig	2,480	140	Jan Early - Dec Late	100	Barn 3

a. The average number of animals present in the production facility at any one time.
b. If manure collected is less than 100%, this indicates that the animals spend a portion of the day outside of the production facility or the production facility is unoccupied one or more times during the confinement period.

1.5. Manure Storage Information

Storage ID	Type of Storage	Pumpable or Spreadable Capacity	Annual Manure Collected	Maximum Days of Storage
Barn 1	In-house storage pit	1,092,596 gal	472,500 gal	844
Barn 2	In-house storage pit	1,092,596 gal	472,500 gal	844
Barn 3	In-house storage pit	1,092,596 gal	472,500 gal	844

1.6. Planned Manure Exports

Month-Year	Manure Source	Amount	Receiving Operation	Location
Feb 2018	Barn 1	472,800 gal	Tosh Farms	
Feb 2018	Barn 2	472,800 gal	Tosh Farms	
Feb 2018	Barn 3	472,800 gal	Tosh Farms	
Feb 2019	Barn 1	472,800 gal	Tosh Farms	
Feb 2019	Barn 2	472,800 gal	Tosh Farms	
Feb 2019	Barn 3	472,800 gal	Tosh Farms	
Feb 2020	Barn 1	472,800 gal	Tosh Farms	
Feb 2020	Barn 2	472,800 gal	Tosh Farms	
Feb 2020	Barn 3	472,800 gal	Tosh Farms	
Feb 2021	Barn 1	472,800 gal	Tosh Farms	
Feb 2021	Barn 2	472,800 gal	Tosh Farms	
Feb 2021	Barn 3	472,800 gal	Tosh Farms	
Feb 2022	Barn 1	472,800 gal	Tosh Farms	
Feb 2022	Barn 2	472,800 gal	Tosh Farms	
Feb 2022	Barn 3	472,800 gal	Tosh Farms	

Manure is being received by:

Tosh Farms
1586 Atlantic Ave
Henry, TN 38231
731-243-4861

1.7. Planned Manure Imports

Month-Year	Manure's Animal Type	Amount	Originating Operation	Location

(None)

1.8. Planned Internal Transfers of Manure

Month-Year	Manure Source	Amount	Manure Destination

(None)

1.9. Brief Description of or Additional Information about Animal Feeding Operation (Optional)

Tim Beecham owns and operates Beecham Farms. It consists of 2 barns with deep pit manure storage that hold 2480 pigs each. A third barn is being constructed with the same parameters. Tosh Pork will supply the pigs and the feed management. All manure will be exported to Tosh Farms. The closest stream is 1200 feet away and eventually flows into Spring Creek.

1.2. Sampling, Calibration and Other Statements

- Manure sampling frequency
  Manure test will be taken each time manure is sold.

- Soil testing frequency
  No soil testing is required

- Equipment calibration method and frequency
  No calibration required manure is sold.

- Clean water diversion
  No clean water will enter pit. It is sealed off from outside water.

- Measures to prevent direct contact of animals with water
  All animals will remain inside above the under floor pit.

1.3. Natural Resource Concerns

If checked, the indicated resource concerns have been identified and have been addressed in this plan.

Soil Quality Concerns

	Soil Quality Concern	*Activities to Address Concern*
	Ephemeral Gully Erosion	

	Soil Quality Concern	*Activities to Address Concern*
	Gully Erosion	
X	Sheet and Rill Erosion	New Barns have a silk fence around them during construction
	Stream/Ditchbank Erosion	
	Wind Erosion	

Water Quality Concerns

	Water Quality Concern	*Activities to Address Concern*
	Facility Wastewater Runoff	
	Manure Runoff (Field Application)	
	Manure Runoff (From Facilities)	
	Nutrients in Groundwater	
	Nutrients in Surface Water	
	Silage Leachate	
	Excessive Soil Test Phosphorus	
	Tile-Drained Fields	

Other Concerns Addressed

	Other Concern	*Activities to Address Concern*
	Acres Available for Manure Application	
	Aesthetics	
	Maximize Nutrient Utilization	
	Minimize Nutrient Costs	

	Other Concern	*Activities to Address Concern*
X	Neighbor Relations	Closest Neighbor 1,100 feet away.
	Profitability	
	Regulations	
	Soil Compaction	
	Time Available for Manure Application	
	Odors	
X	Air Quality	This facility shouldn't affect air quality
X	Biosecurity	Plan in place.

In Case of an Emergency Storage Facility Spill, Leak or Failure

Implement the following first containment steps:

a. Stop all other activities to address the spill.
b. Stop the flow. For example, use skid loader or tractor with blade to contain or divert spill or leak.
c. Call for help and excavator if needed.
d. Complete the clean-up and repair the necessary components.
e. Assess the extent of the emergency and request additional help if needed.

In Case of an Emergency Spill, Leak or Failure during Transport or Land Application

Implement the following first containment steps:

a. Stop all other activities to address the spill and stop the flow.
b. Call for help if needed.
c. If the spill posed a hazard to local traffic, call for local traffic control assistance and clear the road and roadside of spilled material.
d. Contain the spill or runoff from entering surface waters using straw bales, saw dust, soil or other appropriate materials.
e. If flow is coming from a tile, plug the tile with a tile plug immediately.
f. Assess the extent of the emergency and request additional help if needed.

Emergency Contacts

Department / Agency	Phone Number
Fire	731-644-9360
Rescue services	731-642-5581
State veterinarian	615-837-5183
Sheriff or local police	731-642-1672

Nearest available excavation equipment/supplies for responding to emergency

Equipment Type	Contact Person	Phone Number
Trackhoe	Jamie Tosh	731-694-8792

Contacts to be made by the owner or operator within 24 hours

Organization	Phone Number
EPA Emergency Spill Hotline	1-800-424-8802
County Health Department	731-642-4025
Other State Emergency Agency	1-888-891-8332 TDEC's Water Pollution Control

Be prepared to provide the following information:

a. Your name and contact information.
b. Farm location (driving directions) and other pertinent information.
c. Description of emergency.
d. Estimate of the amounts, area covered, and distance traveled.
e. Whether manure has reached surface waters or major field drains.
f. Whether there is any obvious damage: employee injury, fish kill, or property damage.
g. Current status of containment efforts.

Biosecurity Measures

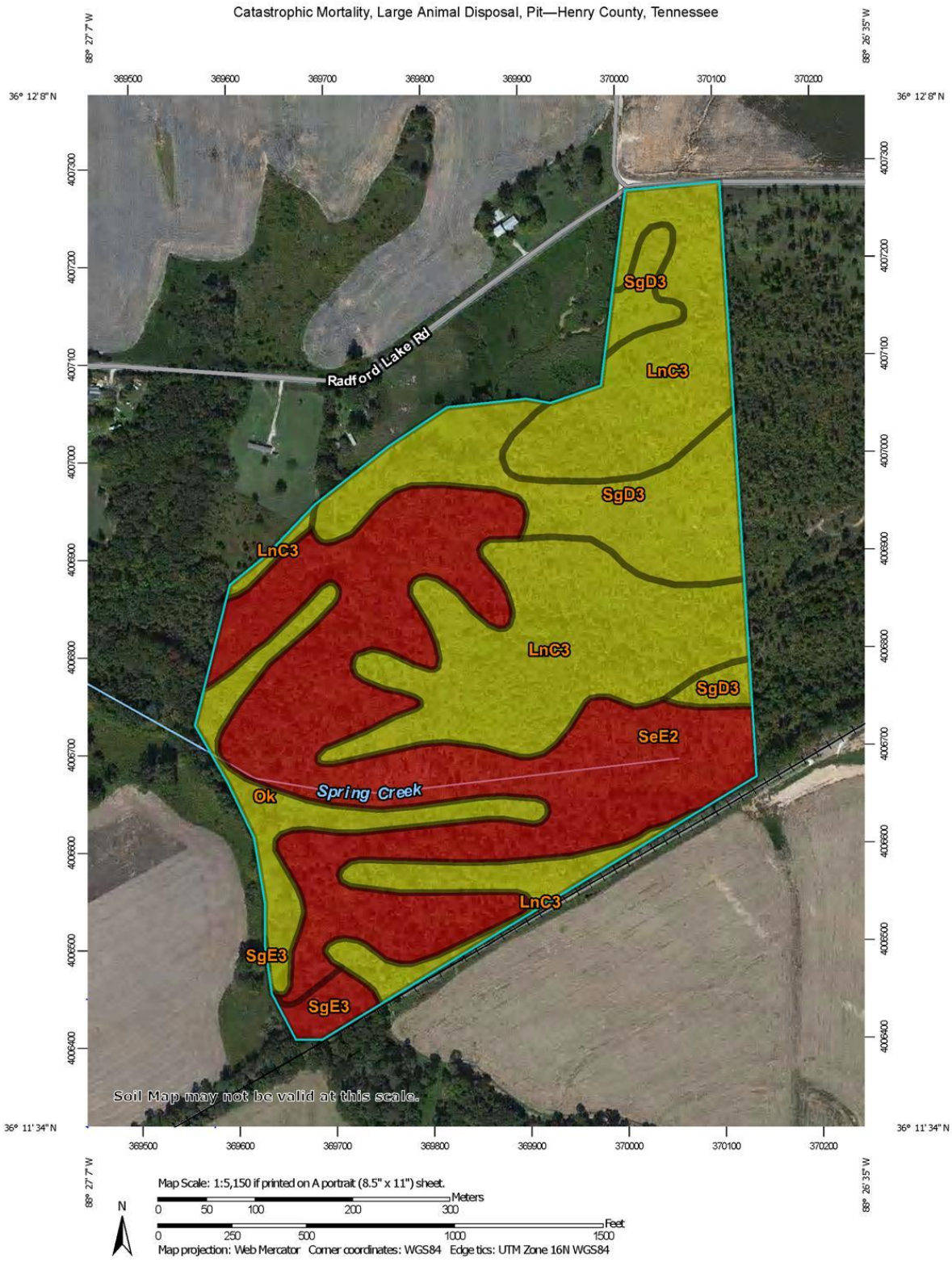
Biosecurity is critical to protecting livestock and poultry operations. Visitors must contact and check in with the producer before visiting the operation or entering any production or storage facility.

The following narrative describes how animal veterinary wastes (including medical equipment, empty containers, sharps and expired medications) will be managed at the operation.

Medicine will be disposed to as directed on label. Needles and other sharps will be put in to a sharps container. If any medicine is left it shall remain in the control rooms or in a building that is protected from outside environment and stored according to label.

Catastrophic Animal Mortality Management

Refer to NRCS standards, or state guidance, regarding appropriate catastrophic animal mortality handling methods.



USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

5/9/2017
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Catastrophic Mortality, Large Animal Disposal, Pit

Catastrophic Mortality, Large Animal Disposal, Pit— Summary by Map Unit — Henry County, Tennessee (TN079)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
LnC3	Lexington silty clay loam, 5 to 8 percent slopes, severely eroded	Somewhat limited	Lexington (95%)	Seepage (0.52)	26.5	36.8%
				Slope (0.16)		
				Dusty (0.05)		
				Unstable excavation walls (0.01)		
Ok	Ochlockonee fine sandy loam, 0 to 3 percent slopes, rarely flooded	Somewhat limited	Ochlockonee (100%)	Seepage (0.50)	4.8	6.7%
				Flooding (0.40)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
SeE2	Smithdale loam, 12 to 25 percent slopes, eroded	Very limited	Smithdale (100%)	Slope (1.00)	28.6	39.7%
				Seepage (0.52)		
				Adsorption (0.08)		
				Dusty (0.03)		
				Unstable excavation walls (0.01)		
SgD3	Smithdale-Lexington complex, 8 to 12 percent slopes, severely eroded	Somewhat limited	Smithdale (67%)	Slope (0.96)	11.1	15.4%
				Seepage (0.52)		
				Adsorption (0.08)		
				Dusty (0.02)		
				Unstable excavation walls (0.01)		
			Lexington (33%)	Slope (0.84)		
				Seepage (0.52)		
				Dusty (0.05)		
				Unstable excavation walls (0.01)		
SgE3	Smithdale-Lexington complex, 12 to 25 percent slopes,	Very limited	Smithdale (67%)	Slope (1.00)	1.1	1.5%
				Seepage (0.52)		
				Adsorption (0.08)		

Catastrophic Mortality, Large Animal Disposal, Pit— Summary by Map Unit — Henry County, Tennessee (TN079)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
	severely eroded			Dusty (0.02)		
				Unstable excavation walls (0.01)		
			Lexington (33%)	Slope (1.00)		
				Seepage (0.52)		
				Dusty (0.05)		
				Unstable excavation walls (0.01)		
Totals for Area of Interest					**72.0**	**100.0%**

Catastrophic Mortality, Large Animal Disposal, Pit— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Somewhat limited	42.3	58.8%
Very limited	29.7	41.2%
Totals for Area of Interest	**72.0**	**100.0%**

Description

"Catastrophic mortality, large animal disposal, pit," is a method of disposing of dead animals by placing the carcasses in successive layers in an excavated pit. The carcasses are spread, compacted, and covered daily with a thin layer of soil that is excavated from the pit. When the pit is full, a final cover of soil material at least 2 feet thick is placed over the burial pit.

The interpretation is applicable to both heavily populated and sparsely populated areas. While some general observations may be made, onsite evaluation is required before the final site is selected. Improper site selection, design, or installation may cause contamination of ground water, seepage, and contamination of stream systems from surface drainage or floodwater. The risk of contamination can be reduced or eliminated by installing systems designed to eliminate or reduce the adverse effects of limiting soil properties. Ratings are for soils in their present condition. The present land use is not considered in the ratings.

Ratings are based on properties and qualities to the depth normally observed during soil mapping (approximately 6 or 7 feet). However, because pits may be as deep as 15 feet or more, geologic investigations are needed to determine the potential for pollution of ground water and to determine the design needed. These investigations, which are generally arranged by the pit developer, include examination of stratification, rock formations, and geologic conditions that might lead to the conducting of leachates to aquifers, wells, watercourses, and other water sources. The presence of hard, nonrippable bedrock, bedrock crevices, or highly permeable strata at or directly below the proposed pit bottom is undesirable because of the difficulty in excavation and the potential pollution of underground water.

Properties that influence the risk of pollution, ease of excavation, trafficability, and revegetation are major considerations. Soils that are flooded or have a water table within the depth of excavation present a potential pollution hazard and are difficult to excavate. Slope is an important consideration because it affects the work involved in road construction, the performance of the roads, and the control of surface water around the pit. It may also cause difficulty in constructing pits in which the pit bottom must be kept level and oriented to follow the contour of the land.

The ease with which the pit is dug and with which a soil can be used as daily and final cover is based largely on soil texture and consistence, which determine workability when the soil is dry and when it is wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and difficult to place as a uniformly thick cover over a layer of carcasses. The uppermost part of the final cover should be soil material that favors the growth of plants. It should not contain excess sodium or salts and should not be too acid. In comparison with other horizons, the surface layer in most soils has the best workability and the highest content of organic matter. Thus, it may be desirable to stockpile the surface layer for use in the final blanketing of the filled pit area.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected of a properly designed and installed system. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of the individual limitations. The ratings are shown in decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

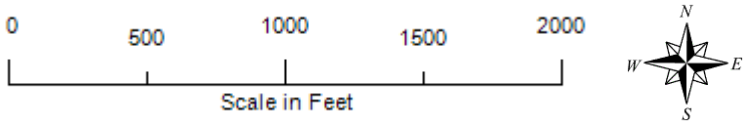
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

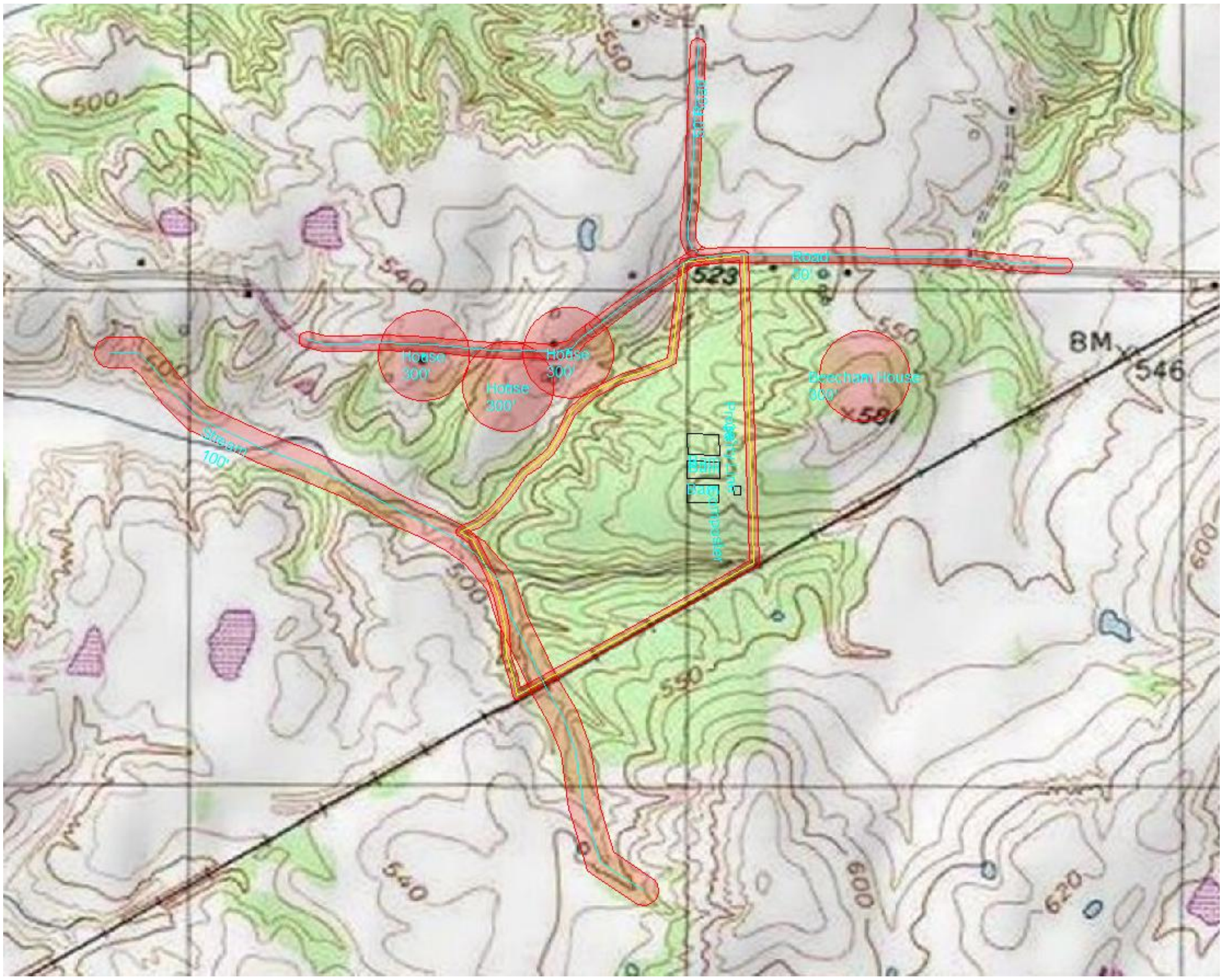
Section 2. Crop and Pasture (Land Treatment)

2.1. Maps of Fields, Soils, Application Setbacks, Existing and Planned Crop and Pasture Conservation Practices

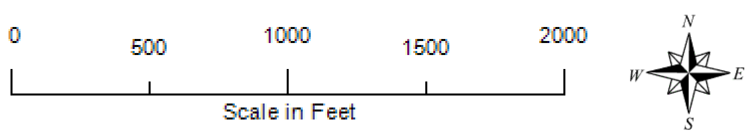
Map with Setbacks



Topo



500
540
550
523
Road
House
300'
Beecham House
Stream
100'
BM
546
581
600
620



0
500
1000
1500
2000
Scale in Feet
N
W
E
S

Soil Map

WORKMAN CONSULTING

Current Map

Tosh

Farm: Beecham **Acres:** 72.69

Field: Beecham

Location:

County: Henry, TN

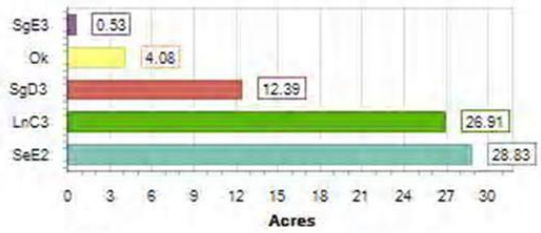
Twp Rng Sec:

Summary Statistics

Layer Name: Soil Types

Count: 8

MuSym



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Page 1
May 10, 2017 3:50 PM

MapShots AgStudio

2.2. Crop and Pasture Conservation Practices -- Record of Decisions

All NRCS conservation practices shall be installed, operated and maintained according to NRCS conservation practice standards and associated technical specifications.

2.3. Crop and Pasture Conservation Practices – Implementation Requirements

2.4. Predicted Soil Erosion

Average water, wind, irrigation, gully and ephemeral erosion estimates

Field	Predominant Soil Type	T Factor (t/ac/yr)	Slope (%)	Water (t/ac/yr)	Wind (t/ac/yr)	Irrigation Erosion Controlled (y/n)	Gully Erosion Controlled (y/n)	Ephemeral Erosion Controlled (y/n)	Total (t/ac/yr)

Section 3. Nutrient Management Plan (590)

3.1. Nitrogen and Phosphorus Risk Analyses

Tennessee Phosphorus Index

Field	Crop Year	Site Total	Management Total	P Index w/o P Apps	P Index w/ P Apps	P Loss Risk

3.2. Manure Application Setback Distances

Setback Requirements: Class I CAFO

Feature	Setback Criteria	Setback Distance (Feet)
Streams	Applied upgradient, no permanent or insufficient vegetated setback	100
Streams	New operation, near high quality stream	60
Surface waters	Applied upgradient, no permanent or insufficient vegetated setback	100
Open tile line inlet structures	Applied upgradient, no permanent or insufficient vegetated setback	100
Sinkholes	Applied upgradient, no permanent or insufficient vegetated setback	100
Agricultural well heads	Applied upgradient, no permanent or insufficient vegetated setback	100
Other conduits to surface waters	Applied upgradient, no permanent or insufficient vegetated setback	100
Potable well, public or private	Application down-gradient of feature	150
Potable well, public or private	Application upgradient of feature	300

Source: TN DEQ Rule 1200-4-5-.14(17)(d) (http://www.state.tn.us/sos/rules/1200/1200-04/1200-04-05.pdf)

Setback Requirements: NRCS Standard

Feature	Setback Criteria	Setback Distance (Feet)
Well	Application upgradient of feature	300
Well	Application down-gradient of feature	150
Waterbody	Predominant slope <5% with good vegetation	30
Waterbody	Poor vegetation	100
Public road	All applications	50
Dwelling (other than producer)	All applications	300
Public use area	All applications	300
Property line	Application upgradient of feature	30

Source: Nutrient Management Standard 590 (http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_(590)_Standard.doc)

3.3. Soil Test Data

Field	Test Year	OM (%)	P Test Used	P	K	Mg	Ca	Units	Soil pH	Buffer pH	CEC (meq/ 100g)

3.4. Manure Nutrient Analyses

Manure Source	Dry Matter (%)	Total N	NH_4-N	Total P_2O_5	Total K_2O	Avail. P_2O_5	Avail. K_2O	Units	Analysis Source and Date	Alum Treatment Rate (lbs/1000 sq.ft.)
Barn 1		58.3	0.0	36.2	26.3	36.2	26.3	lbs/1000 gal	Beecham Farms 4/13/2017	
Barn 2		58.3	0.0	36.2	26.3	36.2	26.3	lbs/1000 gal	Beecham Farms 4/13/2017	
Barn 3		58.3	0.0	36.2	26.3	36.2	26.3	lbs/1000 gal	Beecham Farms 4/13/2017	

a. Entered analysis may be the average of several individual analyses.
b. Tennessee assumes that 100% of manure phosphorus and 100% of manure potassium is crop available. First-year per-acre nitrogen availability for individual manure applications is given in the Planned Nutrient Applications table. For more information about nitrogen availability in Tennessee, see "Manure Application Management," Tables 3 and 4, Tennessee Extension, PB1510, 2/94 (http://wastemgmt.ag.utk.edu/Pubs/PB1510.pdf).

3.5. Planned Crops and Fertilizer Recommendations

Field	Crop Year	Planned Crop	Yield Goal (per ac)	N Rec (lbs/ac)	P_2O_5 Rec (lbs/ac)	K_2O Rec (lbs/ac)	N Removed (lbs/ac)	P_2O_5 Removed (lbs/ac)	K_2O Removed (lbs/ac)	Custom Fert. Rec. Source

a. Unharvested cover crop or first crop in double-crop system.
b. Custom fertilizer recommendation.

3.6.

3.7. Field Nutrient Balance

Year	Field	Size	Crop	Yield Goal	Fertilizer Recs[a]			Nutrients Applied[b]			Balance After Recs[c]			Balance After Removal[d]	
		ac		per ac	N lbs/ac	P_2O_5 lbs/ac	K_2O lbs/ac	N lbs/ac	P_2O_5 lbs/ac	K_2O lbs/ac	N lbs/ac	P_2O_5 lbs/ac	K_2O lbs/ac	P_2O_5 lbs/ac	K_2O lbs/ac

[a] Fertilizer Recs are the crop fertilizer recommendations. The N rec accounts for any N credit from previous legume crop.

[b] Nutrients Applied are the nutrients expected to be available to the crop from that year's manure applications plus nutrients from that year's commercial fertilizer applications and nitrates from irrigation water. With a double-crop year, the total nutrients applied for both crops and the year's balances are listed on the second crop's line.

[c] For N, Nutrients Applied minus Fertilizer Recs for indicated crop year. Also includes amount of residual N expected to become available that year from prior years' manure applications. For P_2O_5 and K_2O, Nutrients Applied minus Fertilizer Recs *through* the indicated crop year, with positive balances carried forward to subsequent years. Negative values indicate a potential need to apply additional nutrients.

[d] Nutrients Applied minus amount removed by harvested portion of crop through the indicated year. Positive balances are carried forward to subsequent years.

[e] Custom fertilizer recommendation.

[f] Legume crop is assumed to utilize some or all of the supplied N.

[g] Includes residual N expected to become available that year from prior years' manure applications.

3.8. Manure Inventory Annual Summary (Optional)

Manure Source	Plan Period	On Hand at Start of Period	Total Generated	Total Imported	Total Trans-ferred In	Total Applied	Total Exported	Total Trans-ferred Out	On Hand at End of Period	Units
Barn 1	Mar '17 - Feb '18	0	472,500	0	0	0	472,800	0	-300	gal
Barn 2	Mar '17 - Feb '18	0	472,500	0	0	0	472,800	0	-300	gal
Barn 3	Mar '17 - Feb '18	0	472,500	0	0	0	472,800	0	-300	gal
All Sources	**Mar '17 - Feb '18**	**0**	**1,417,500**	**0**	**0**	**0**	**1,418,400**	**0**	**-900**	**gal**
Barn 1	Mar '18 - Feb '19	-300	472,500	0	0	0	472,800	0	-600	gal
Barn 2	Mar '18 - Feb '19	-300	472,500	0	0	0	472,800	0	-600	gal
Barn 3	Mar '18 - Feb '19	-300	472,500	0	0	0	472,800	0	-600	gal
All Sources	**Mar '18 - Feb '19**	**-900**	**1,417,500**	**0**	**0**	**0**	**1,418,400**	**0**	**-1,800**	**gal**
Barn 1	Mar '19 - Feb '20	-600	472,500	0	0	0	472,800	0	-900	gal
Barn 2	Mar '19 - Feb '20	-600	472,500	0	0	0	472,800	0	-900	gal
Barn 3	Mar '19 - Feb '20	-600	472,500	0	0	0	472,800	0	-900	gal
All Sources	**Mar '19 - Feb '20**	**-1,800**	**1,417,500**	**0**	**0**	**0**	**1,418,400**	**0**	**-2,700**	**gal**
Barn 1	Mar '20 - Feb '21	-900	472,500	0	0	0	472,800	0	-1,200	gal
Barn 2	Mar '20 - Feb '21	-900	472,500	0	0	0	472,800	0	-1,200	gal
Barn 3	Mar '20 - Feb '21	-900	472,500	0	0	0	472,800	0	-1,200	gal
All Sources	**Mar '20 - Feb '21**	**-2,700**	**1,417,500**	**0**	**0**	**0**	**1,418,400**	**0**	**-3,600**	**gal**
Barn 1	Mar '21 - Feb '22	-1,200	472,500	0	0	0	472,800	0	-1,500	gal
Barn 2	Mar '21 - Feb '22	-1,200	472,500	0	0	0	472,800	0	-1,500	gal
Barn 3	Mar '21 - Feb '22	-1,200	472,500	0	0	0	472,800	0	-1,500	gal
All Sources	**Mar '21 - Feb '22**	**-3,600**	**1,417,500**	**0**	**0**	**0**	**1,418,400**	**0**	**-4,500**	**gal**

3.9. Fertilizer Material Annual Summary (Optional)

Product Analysis	Plan Period	Product Needed Mar - Aug	Product Needed Sep - Dec	Product Needed Jan - Feb	Total Product Needed	Units

3.10. Plan Nutrient Balance

	N (lbs)	P_2O_5 (lbs)	K_2O (lbs)
Total Manure Nutrients on Hand at Start of Plan[a]	0	0	0
Total Manure Nutrients Collected[b]	413,201	256,568	186,401
Total Manure Nutrients Imported[c]	0	0	0
Total Manure Nutrients Exported[d]	413,464	256,730	186,520
Total Manure Nutrients Gained/Lost in Transfer[e]	0	0	0
Total Manure Nutrients on Hand at End of Plan[f]	-262	-163	-118
Total Manure Nutrients Applied[g]	0	0	0
Available Manure Nutrients Applied (Utilized by plan's crops)[h]	0	0	0
Available Manure Nutrients Applied (Not utilized by plan's crops)[i]	0	0	0
Commercial Fertilizer Nutrients Applied (Utilized by plan's crops)[j]	0	0	0
Commercial Fertilizer Nutrients Applied (Not utilized by plan's crops)[k]	0	0	0
Available Nutrients Applied (Manure and fertilizer; utilized by plan's crops)[l]	0	0	0
Nutrient Utilization Potential[m]	0	0	0
Nutrient Balance of Spreadable Acres[n p]	0	0	0
Average Nutrient Balance per Spreadable Acre per Year[o p]	0	0	0

a. Total manure nutrients present in storage at the beginning of the plan.
b. Total manure nutrients collected on the farm.
c. Total manure nutrients imported onto the farm.
d. Total manure nutrients exported from the farm to an external operation.
e. Net change in total manure nutrients due to transfers between storage units with differing analyses.
f. Total manure nutrients present in storage at the end of plan.
g. Total nutrients present in land-applied manure. These values do not account for losses due to rate, timing, and method of application.
h. Manure nutrients applied and available to crops in the plan. These values are based on the total manure nutrients applied after accounting for nutrient losses due to rate, timing, and method of application. Nutrients which will not be utilized by crops in the plan are excluded from these values.
i. Manure nutrients applied that will be utilized by crops outside the plan. This usually results from Fall nutrient applications at the end of the plan intended for crops in subsequent years.
j. Nutrients applied as commercial fertilizers and nitrates contained in irrigation water. Nutrients that will not be utilized by crops in the plan are excluded from these values.
k. Nutrients applied as commercial fertilizer which will be utilized by crops outside the plan.
l. Sum of available manure nutrients applied and commercial fertilizer nutrients applied.
m. Nutrient utilization potential of crops grown. For N the value is based on the N recommendation for non-legume crops and N uptake or other state-imposed limit for N application rates for legumes. P_2O_5 and K_2O values are based on fertilizer recommendations or crop removal (whichever is greater).
n. Available nutrients applied minus crop nutrient utilization potential. Negative values indicate additional nutrient utilization potential and positive values indicate over-application.
o. Average per acre-year nutrient balance. Values are calculated by dividing nutrient balance of spreadable acres by the number of spreadable acres in the plan and by the length of the plan in years. Negative values indicate additional nutrient utilization potential and positive values indicate over-application.

p. Non-trivial, positive values for N indicate that the plan was not properly developed. Negative values for N indicate additional nutrient utilization potential which may or may not be intentional. For example, plans that include legume crops often will not utilize the full N utilization potential for legume crops if manure can be applied to non-legume crops that require N for optimum yield. Positive values for P_2O_5 and/or K_2O do not necessarily indicate that the plan was developed improperly. For example, producers may be allowed to apply N-based application rates of manure to fields with low soil test P values or fields with a low potential P-loss risk based on the risk assessment tool used by the state. Negative values for P_2O_5 and K_2O indicate that planned applications to some fields are less than crop removal rates or fertilizer recommendations.

Closure Plan

In the event that Swine production at this location ceases, the following will be done within 360 days:

- All manure in all animal use areas will be removed and spread on the farm or spread elsewhere according to my current Nutrient Management Plan.
- The most current manure analysis will be provided to anyone removing manure from the farm.
- Any dead pigs on the farm will be disposed of at the time of closure according to methods outlined in my current Nutrient Management Plan and or allowable by Tennessee Law.
- Any manure which is land applied will be done so according to the rates discussed in my most recent Nutrient Management Plan.

The following will be completed within a reasonable period as allowable by law using Tennessee Natural Resources Conservation Service (NRCS) Standard Code 360- Closure of Waste Impoundments:

- Any manure storage facility (lagoon) located on the swine farm will be properly decommissioned.
- Any manure currently in storage at the time of closure will be removed and spread on the farm or spread elsewhere according to my current Nutrient Management Plan.
- The lagoon will be breached and backfilled and or converted to freshwater storage according to NRCS standards.

Timothy Beecham

Date: 5-15-17

Record Keeping

This section includes a list of key records that Tim Beecham will keep in order to document and verify implementation of the procedures in this CNMP. Records shall be kept for a minimum of 5 years, or for the length of the contract, rotation, or permit, whichever is longer, for each field where manure is applied.

These general records include but are not limited to:

1. Soil Test Results
2. Weather and soil conditions 24 hours prior to, during and 24 hours application of manure, chemicals and pesticides.
3. Type, quantities, and sources of all nutrients generated and collected
4. Type, quantities, and sources of all nutrients applied to each field
5. Dates of manure applications
6. Inspection Reports
7. Operation and Maintenance records of conservation practices and equipment
8. Restricted pesticides used to meet label requirements
9. Equipment Calibration records
10. Crops planted, tillage method and dates planted
11. Crop harvest dates and yield
12. Adjustments to nutrient management plan based on records and changes in farming operations as appropriate
13. Weekly check of volume in pit
14. Annual visual inspection of retention structure (pits), animal holding areas, if applicable and land application areas
15. Records of mortalities and how managed

Section 9. Operation and Maintenance

Declarations to Nutrient Management Plan:

By my signature below, I affirm that I have read, understand, and will comply with the following stipulations from Tennessee's CAFO regulations that apply to my CAFO operation:

1) All animals in confinement are prevented from coming in direct contact with waters of the state.
2) All chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.
3) Pesticide-contaminated waters will be prevented from discharging into waste retention structures. Waste from pest control and from facilities used to manage potentially hazardous or toxic chemicals shall be handled and disposed of in a manner that will prevent pollutants from entering waste retention structures or waters of the state.
4) Chemicals, manure/litter, and process wastewater will be managed to prevent spills. Spill clean-up plans will be developed and any equipment needed for spill clean-up will be available to facility personnel.
5) All sampling of soil and manure/litter is conducted according to protocols developed by UT Extension.
6) All records outlined in the permit that I am applying for will be maintained and available on-site.
7) Any confinement buildings, waste/wastewater handling or treatment systems, lagoons, holding ponds, and any other agricultural waste containment/treatment structures constructed or modified after April 13, 2006, are or will be located in accordance with NRCS Conservation Practice Standard 313.
8) A copy of the most recent Nutrient Management Plan will be kept as part of the farm records and will be maintained and implemented as written.
9) If applicable, all waste directed to under floor pits shall be composed entirely of wastewater (i.e. washwater and animal waste).
10) The Tennessee Department of Environment and Conservation Division of Water Resources will be notified of any significant wildlife mortalities near retention ponds or following any land application of animal wastes to fields.
11) All employees involved in work activities that relate to permit compliance will receive regular training on proper operation and maintenance (O&M) of the facility and waste disposal. Training shall include appropriate topics, such as land application of wastes, good housekeeping and material management practices, proper O&M of the facility, record keeping, and spill response and clean up. The periodic scheduled dates for such training shall be identified in the current Nutrient Management Plan.
12) There shall be no land application of nutrients within 24 hours of a precipitation event that may cause runoff. The operator shall not land apply nutrients to frozen, flooded, or saturated soils.

Timothy Beecham

Signature of CAFO Owner/Operator

5-15-17

Date

Operation and Maintenance

Tim Beecham is responsible for safe operation and maintenance of the nutrient management plan including all equipment. Operation and maintenance includes the following items:

1. periodic plan review to determine if adjustments or modifications to the plan are needed. As minimum, plans will be reviewed/revised with each soil test cycle.
2. weekly there will be a visual inspection of pits
3. calibration of application equipment to ensure uniform distribution of material at planned rates.
4. documentation of the actual rate at which nutrients were applied. When the actual rates used differ from or exceed the recommended and planned rates, records will indicate the reasons for the differences.
5. Maintaining records to document plan implementation. As applicable, records include
    a. Soil test results and recommendations for nutrient application
    b. Quantities, analysis and sources of nutrients applied
    c. Dates and method of nutrient applications
    d. Crops planted, planting and harvest dates, yields, and residues removed
    e. Results of water, plant and organic byproduct analysis
    f. Dates of review and person performing the review and recommendations
    g. Conservation practices being applied.

Records will be maintained for five years or for a period longer than five years if required by other Federal, state, or local ordinances or program or contract requirements.

The disposal of material generated by the cleaning nutrient application equipment accomplished properly. Excess material should be collected and stored or field applied in an appropriate manner. Excess material should not be applied on areas of high potential risk for runoff and leaching.

The disposal/recycling of nutrient containers should be according to state and local guidelines or regulations.

Pesticides, toxic chemicals, and petroleum products will not be used in areas where leakage could enter the manure storage facility.

Conservation Practices Operation & Maintenance

Heavy Use Area Protection

The Operation and Maintenance (O&M) plan shall specify that the treatment areas and associated practices will be inspected annually and after significant storm events to identify repair and maintenance needs. The O&M plan shall contain the operational requirements for managing the heavy use area. Planned scraping intervals, replacement of fine material, storage, treatment, and/or utilization methods will also be described. Provisions for re-establishment of vegetated areas will be included. The O&M plan shall detail the level of repairs needed to maintain the effectiveness and useful life of the practice. If using a front-end loader, recommend back dragging the manure/hay to conserve removal of gravel from the surface. Consider using fabricated large equipment tire for scraping surface. The O&M plan shall be provided to, and discussed with, the operator. The O&M plan must complement the Comprehensive Nutrient Management Plan, as necessary.

Composting Facility

An operation and maintenance (O&M) plan shall be developed consistent with the purposes of this standard, its intended life, safety requirements, and the criteria for its design. The O&M plan shall include recipe ingredients and sequence that they are layered and mixed, maximum and minimum temperature for operation, land application rates, moisture level, management of odors, testing, etc. Make adjustments throughout the composting period to ensure proper composting processes. The compost facility should be inspected regularly when the facility is empty. Replace deteriorated wooden materials or hardware. Patch concrete floors and curbs as necessary to assure water tightness. Roof structures should be examined for structural integrity and repaired as needed. Exposed metal components should be inspected for corrosion. Corroded metal should be wire brushed and painted as necessary. Closely monitor temperatures above 165^{o}F. Take action immediately to cool piles that have reached temperatures above 185^{o}F. The operation and maintenance plan shall state that composting is a biological process. It requires a combination of art and science for success. Hence, the operation may need to undergo some trial and error in the start-up of a new composting facility.

Nutrient Management (590)

The owner/client is responsible for safe operation and maintenance of the nutrient management plan including all equipment. Operation and maintenance addresses the following:

1. periodic plan review to determine if adjustments or modifications to the plan are needed. As a minimum, plans will be reviewed/revised with each soil test cycle.
2. protection of fertilizer and organic byproduct storage facilities from weather and accidental leakage or spillage.
3. calibration of application equipment to ensure uniform distribution of material at planned rates.
4. documentation of the actual rate at which nutrients were applied. When the actual rates used differ from or exceed the recommended and planned rates, records will indicate the reasons for the differences.
5. Maintaining records to document plan implementation. As applicable, records include:

soil test results and recommendations for nutrient application,

quantities, analyses and sources of nutrients applied,

dates and method of nutrient applications,

crops planted, planting and harvest dates, yields, and residues removed,

results of water, plant, and organic byproduct analyses, and

dates of review and person performing the review, and recommendations.

Records should be maintained for five years or for a period longer than five years if required by other Federal, state, or local ordinances, or program or contract requirements. Workers shall be protected from and avoid unnecessary contact with chemical fertilizers and organic by-products. Protection should include the use of protective clothing when working with plant nutrients. Extra caution must be taken when handling ammonia sources of nutrients, or when dealing with organic wastes stored in unventilated enclosures. The disposal of material generated by the cleaning nutrient application equipment should be accomplished properly. Excess material should be collected and stored or field applied in an appropriate manner. Excess material should not be applied on areas of high potential risk for runoff and leaching. The disposal/recycling of nutrient containers should be according to state and local guidelines or regulations.

Waters Agricultural Laboratories, Inc.

Manure/Sludge Analysis and Application Report

*P.O. Box 382 * 257 Newton Highway * Camilla, Georgia 31730-0382 * phone: (229) 336-7216*

Ship To:	Grower: **BEECHUM**	
TOSH FARMS P.O. BOX 308 HENRY, TN 38231-	SampleNumber: **1** Lab Number: **71938MS** Type: **LAGOON**	Date Submitted: **04/13/2017** Report Date: **04/17/2017**

	Parts per million (ppm)	Pounds per 1000 gallons
Nitrogen - Total	7000	58.380
P2O5 - Total	4349.45	36.274
K2O - Total	3154.15	26.306

Results Reported On: L=LIQUID BASIS

Remarks: Suggest the use of PLANT and SOIL analysis to monitor the need for additional and/or build up of some elements.

STANDARD HOG BARN
SITE ADDRESS
CITY, COUNTY, STATE

L. I. SMITH & ASSOCIATES, INC.
SURVEYORS · ENGINEERS

DETAILS
S - 2

GENERAL NOTES

STRUCTURAL NOTES & GENERAL SPECIFICATIONS

SLAB CONSTRUCTION JOINT DETAIL

SLAB CONTRACTION JOINT DETAIL

WALL CONSTRUCTION JOINT DETAIL

PIT FAN OPENING DETAIL

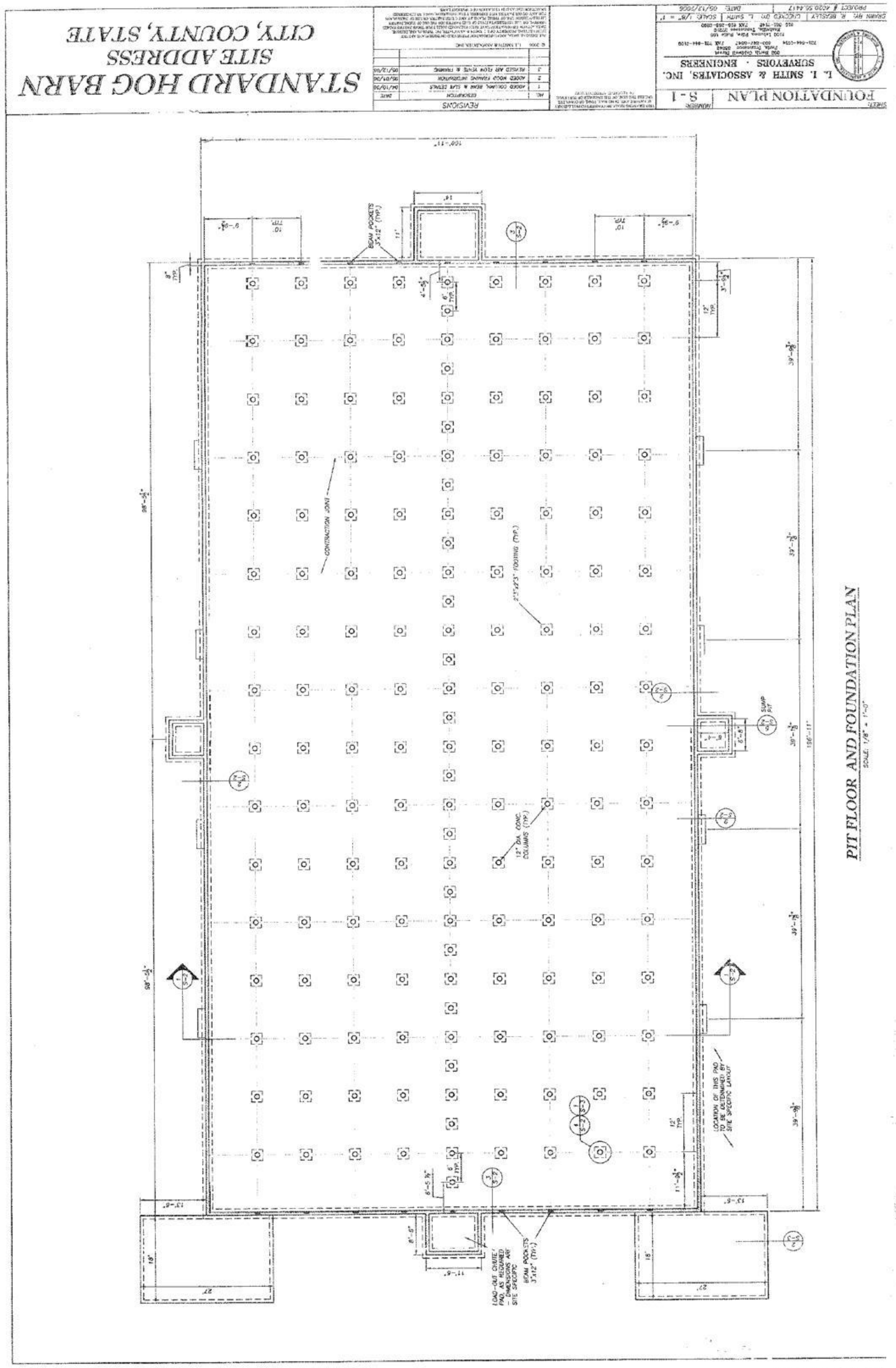
PIT SECTION 1 - 1

PIT END WALL DETAIL

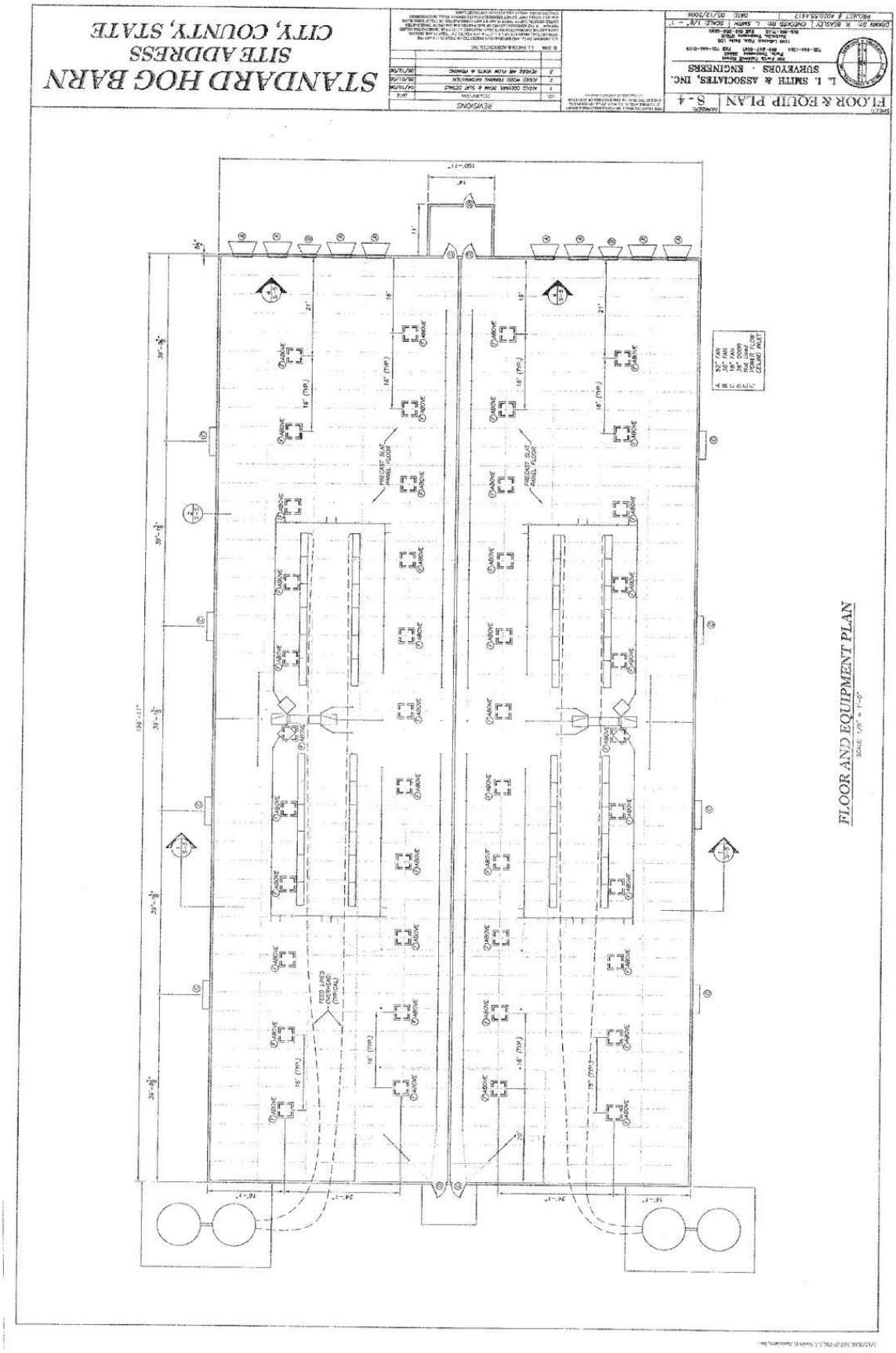
PIT SIDE WALL DETAIL

SUMP PIT DETAIL

COLUMN CAP DETAIL


STANDARD HOG BARN
SITE ADDRESS
CITY, COUNTY, STATE
L. I. SMITH & ASSOCIATES, INC.
SURVEYORS · ENGINEERS
FOUNDATION PLAN
S-1
PIT FLOOR AND FOUNDATION PLAN

STANDARD HOG BARN
SITE ADDRESS
CITY, COUNTY, STATE
L. I. SMITH & ASSOCIATES, INC.
SURVEYORS · ENGINEERS
DETAILS
S - 3
PRE-CAST CONC. SLATS
CONCRETE COLUMNS
SLAB TURN-DOWN DETAIL
PRE-CAST PIT FAN BASE
PRE-CAST CONC. BEAM
PRE-CAST CONC. T-BEAM


STANDARD HOG BARN
SITE ADDRESS
CITY, COUNTY, STATE
L. L. SMITH & ASSOCIATES, INC.
SURVEYORS · ENGINEERS
FLOOR & EQUIP PLAN
S-4
FLOOR AND EQUIPMENT PLAN
SCALE: 1/8" = 1'-0"
FEED LINES OVERHEAD (TYPICAL)
PRECAST SLAT PANEL FLOOR
ABOVE