

**WHITLEY COUNTY BOARD OF ZONING APPEALS
STAFF REPORT**

19-W-SE-5 **SPECIAL EXCEPTION AMENDMENT**
Jeffrey & Sherri Sickafoose
5570 W. SR 205

AUGUST 27, 2019
AGENDA ITEM: 4

SUMMARY OF PROPOSAL

Current zoning: AG, Agricultural
Property area: 82± acres

The petitioners are requesting a special exception approval for a Class 2 Confined Feeding Operation ("CFO") on their property located on the north side of SR 205, approximately 3,000' west of CR 500 West in Cleveland Township. The petitioners have operated a CFO on the property since at least 1993.

The current proposal is to construct a new 81'x255' farrowing/gestation building to the northeast of an existing gestation barn. No changes are proposed to the existing buildings. The below table shows the minimum separations and setbacks from the new building:

	Minimum	Proposed		Minimum	Proposed
Natural lake (40 ac.)	2,640'	8.7± miles	Open waterways	300'	1,870'±
Recorded major residential subdivisions	1,320'	4,980'±	Property line (front) (side)	40' 10'	655' 202'
Off-site residences	660'	660'	RR, MR, or LR zoning	NA	6,800'± (to R-1 in South Whitley)

From the approved IDEM permit, the barn would contain up to 120 sows and litters and 640 gestating sows, with 782 days of self-contained manure storage. Using the animal unit calculation of \$5.17 of the zoning code, sows are 0.5 animal units (AU), and nursery pigs (up to 15lbs) are 0.1 AU. While the IDEM does not separate nursing piglets from the sow in their permit, using instead the term "sow and litter," to calculate the zoning code animal units, staff used the assumption that there would be, conservatively, 12 piglets per sow, making each "sow and litter" equivalent to 1.7 AU. Thus, in this new building, there would be up to a total of 524 AU.

CFO size calculations are based on the total animal units on the property. From the IDEM permit, the following are the barns and animals on the property:

Building #	Animal type	Number of animals	Animal units
2E	Gestation sows	80 sows	40
3E	Breeding/gestation sows	147 sows	73.5
4E	Breeding/gestation sows	150 sows	75
5E	Farrowing (sows & litters)	44 sows & litters	74.8
6E	Farrowing (sows & litters)	14 sows & litters	23.8
7E	Breeding/gestation sows	42 sows	21
8E	Farrowing (sows & litters)	20 sows & litters	34
9E	Farrowing (sows & litters)	10 sows & litters	17
10E	Farrowing (sows & litters)	144 sows & litters	244.8

11E	Breeding/gestation sows	875 sows	437.5
12P	Farrowing and gestation	120 sows & litters	204
		640 sows	320
Property total			1,565.4 animal units

The petitioner has rounded the special exception request up to 1,570 animal units.

For reference, if using a less conservative, more realistic assumption of 1 animal unit per "sow & litter," the total animal units would be about 1,320.

Class 2 CFOs are defined to be 1,201 to 3,000 animal units in size. In the AG, Agricultural District, Class 2 CFOs require a special exception through the Board of Zoning Appeals. The requirements of Sections 10.9 Special Exception Standards apply.

REVIEW CRITERIA

Indiana Code §36-7-4-918.2 and Section 10.9(A) of the Zoning Code authorize the Board to review special exceptions and state the criteria listed below upon which the Board must base its review. Staff's updated comments/proposed findings of fact under each criterion.

- 1. The special exception shall not involve any elements or cause any condition that may be dangerous, injurious, or noxious to any other property or persons, and shall comply with the performance standards;**

Confined feeding operations can create odors that may be a noxious condition, especially for properties in close proximity to the CFO. There is one dwelling to the southeast of the proposed building that may be affected by any such odors. However, the existing CFO has long been established, so the dwelling owner should be aware of any potential odors stemming from CFOs. Still, the Board must ensure that any noxious condition is mitigated.

Performance standards:

- a. Fire protection: Other than potentially flammable dust (e.g. litter, feed) or manure, no flammable or explosive materials are proposed. The requirements of the fire code would be applied as part of the construction process.
- b. Electrical disturbance: No electrical equipment that typically generates disturbance or interference is proposed.
- c. Noise: The equipment of the barn, such as fans, may generate noise, but the level should not be greater than any equipment used in other permitted agricultural operations. The noise of the animals may also be present, but the proposed structure should contain most noise inside.
- d. Vibrations: No vibrations are expected to be generated by this proposal.
- e. Odors: Modern barns are well sealed so as to contain most animal odors. Prevailing winds would be expected to drift most odors to the north and northeast, over property of the petitioner and adjacent fields and wooded areas.
- f. Air pollution: No air pollution, such as fly ash, dust, smoke, etc., are expected to be generated by this proposal.
- g. Erosion: A Rule 5 Erosion Control plan has been created, which the Soil and Water Conservation District will need to review and approve. Wind erosion is not expected to be a factor in this case.

- h. Water pollution: The state permit for CFOs has stringent controls, which if properly implemented, would largely prevent the possibility of water pollution. The County should defer to the state in enforcement and implementation of these measures.

2. The special exception shall be sited, or oriented and landscaped to produce a harmonious relationship of building and grounds to adjacent buildings and properties;

The proposed location of the building is in line with previously constructed buildings and is generally in keeping with the scale and nature of the existing farm. The proposed building would have the largest setback of any of the farm, being 655' from the road and 660' from the nearest dwelling. The deep setback helps to mitigate the visual and performance impacts and create a more harmonious configuration.

3. The special exception shall produce a total visual impression and environment that is consistent with the environment of the neighborhood;

The proposed barn is similar in scale and nature to the existing buildings that have been in place for at least 12 years. Farms have historically had large buildings, be they barns, livestock pens, or grain silos, so large agricultural buildings are to be expected throughout the neighborhood.

4. The special exception shall organize vehicular access and parking to minimize traffic congestion in the neighborhood; and

No specific number of vehicles were submitted related to the proposed building. Given the existing farm operations on the property, any increase would likely be marginal. Because of the location on State Road 205, INDOT was contacted for comment. They responded that they had no concerns with the plan and no permit is required.

5. The special exception shall preserve the purpose of this Ordinance as stated in Section 1.4.

The proposed use is a contemplated special exception use provided for in the AG district. The site appears to lie entirely within an agricultural classification of the Comprehensive Plan, in which CFOs are contemplated. This special exception review serves to promote and protect the public health, safety, comfort, convenience, and general welfare. Finally, the proposed use seems to fall within the plans for the future development of the County, particularly the needs of agriculture.

SUGGESTED CONDITIONS

Staff suggests the following conditions to consider specific to this amendment request. Conditions of the previous approval may be continued forward if the Board finds them to be relevant.

1. Special exception is granted as presented and per the submitted site plan.
2. Special exception is limited to 1,570 animal units, as described in the submittal.
3. Landscaping should be considered along the east side of the proposed barn for the purpose of screening it from the nearest dwelling and the highway. A tree line or windbreak row is suggested, with specifics to be discussed with the Board at the hearing.

Date report prepared: August 22, 2019.

BOARD OF ZONING APPEALS ACTION

Motion:

By:

Second by:

<i>Vote:</i>	Deckard	Denihan	Lopez	Wilkinson	Wright
<i>Yes</i>					
<i>No</i>					
<i>Abstain</i>					

JEFFREY SICKAFOOSE
5570 W STATE ROAD 205
SOUTH WHITLEY, IN 46787
2019 CFO APPROVAL





CFO / CAFO APPLICATION PACKET Manure Management Plan (MMP)

Part of State Form 55051 (R2 / 6-15)

Approved by State Board of Accounts, 2015

Confined Feeding Operation (CFO)

National Pollutant Discharge Elimination System Concentrated Animal Feeding Operation (NPDES CAFO)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Confined Feeding Section

Office of Land Quality

100 North Senate Avenue

MC 65-45, IGCN 1101

Indianapolis, Indiana 46204

(800) 451-6027 extension 2-4473

INSTRUCTIONS: The below required information supplements the general information and plot maps attachments for a complete CFO Approval Renewal application or construction application. CFO Approval Renewal applications and construction applications for expansions at currently regulated operations may also utilize the Marketing and Distribution of Manure attachment if appropriate. Complete all portions of the form below. This form is required and supersedes all previous versions. IDEM will not accept substitutes, altered, or previously supplied forms.

I. MANURE MANAGEMENT PLAN

A. Manure Testing

Consult Purdue University Cooperative Extension Service Publications AY-277, ID-101, ID-205 "Swine Manure Management Planning", ID-206 "Poultry Manure Management Planning", ID-208 "Dairy Manure Management Planning" for guidance on procedures for manure testing.

1. Manure Sample Collection Procedures:

[See attached.](#)

2. Nutrient Assessment:

☒ Private laboratory does a nutrient analysis of sample(s).

☒ Other (explain): [See attached.](#)

3. Sampling Frequency:

☐ Annual sampling required for CAFOs with a NPDES permit.

☒ Minimum of once every year for CFOs.

B. Soil Testing

You can consult Purdue University, Cooperative Extension Service Publication AY-281 for guidance on procedures for soil testing. A soil test must provide sufficient information about soil fertility to allow for nutrient recommendations for existing or planned crops. Soil tests may not represent more than twenty (20) acres per sample.

1. Do, or will, you perform soil testing for this operation?

☒ Yes, all or a portion of manure is, or will be, applied to land controlled by the operator (complete 2-4 below).

☐ No, 100 % of manure is, or will be, either marketed or distributed (2-4 below do not need to be completed).

2. Sample Collection Method:

☒ Management unit (field level)

☐ Grid method

☐ By soil type

☒ Other (explain): [See attached.](#)

3. Nutrient Assessment:

☒ Private laboratory does nutrient analysis.

☒ Other (explain): [See attached.](#)

4. Sampling Frequency:

☒ Minimum of once every four (4) years for CFOs and CAFOs.

II. SPRAY IRRIGATION

- A. Does the operation currently, or propose to, apply manure by spray irrigation?
☐ Yes ☒ No
- B. If yes, is the spray irrigation in a flood plain?
☐ Yes ☐ No
- C. CAFOs with NPDES permits must conduct spray irrigation in a flood plain in accordance with the NPDES CAFO individual permit rule for the operation, as applicable.
- D. CFOs may only conduct spray irrigation in a flood plain in accordance with a spray irrigation plan approved by IDEM. (327 IAC 19-14-5(d))

III. SURFACE APPLICATION OF MANURE TO FROZEN OR SNOW-COVERED GROUND

- A. CFOs which are not large CAFO-sized farms and have 120 days or less of approved storage capacity may request approval to surface apply manure to frozen or snow-covered ground based on a case-by-case authorization from the commissioner per 327 IAC 19-14-4(i).
Have you included additional information to obtain or renew a commissioner's authorization?
☐ Yes ☒ No
- B. CAFOs with a NPDES permit and CFOs (not CAFO-sized) with 180 days of approved storage can request approval for surface application of manure to frozen or snow-covered ground under the provisions of 327 IAC 19-5-1 as an Alternate Design or Compliance Approach which meets the performance standards of 327 IAC 19-3-1.
Does the operation plan to submit a request for approval of an Alternate Design or Compliance Approach?
☐ Yes ☒ No
- C. CFOs which are not large CAFO-sized farms may request approval to surface apply manure to frozen or snow-covered ground resulting from an unforeseen emergency condition per 327 IAC 19-14-4(g-h). Improper design or management of manure storage facilities will not qualify as an emergency condition.

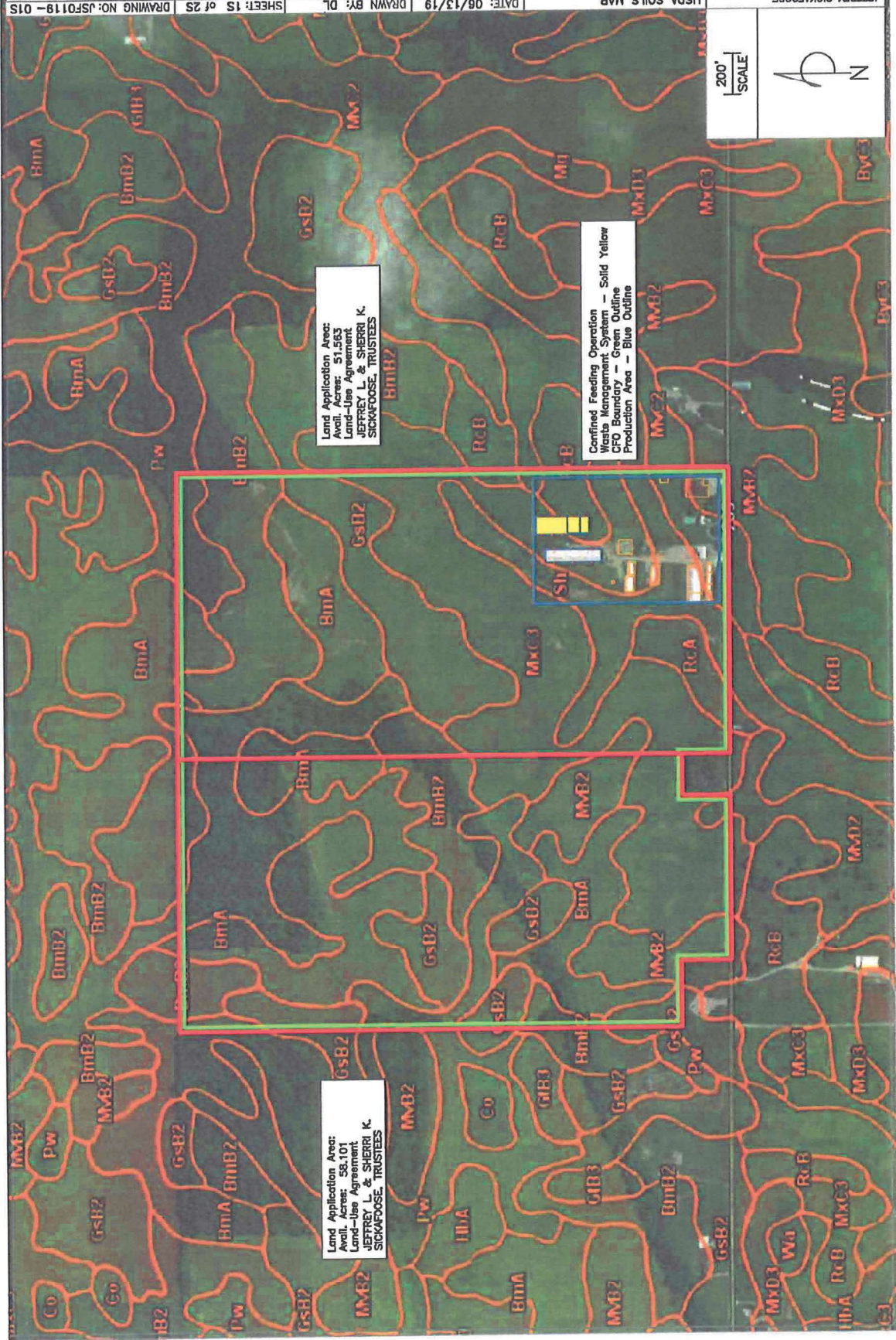
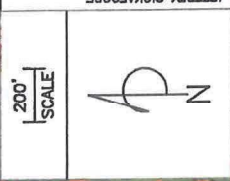
IV. CFO APPROVAL RENEWAL INFORMATION (THIS SECTION IS ONLY FOR CFO APPROVAL RENEWAL APPLICATIONS.)

- A. Farm ID Number: _____
- B. Total number of approved confinement barns currently present at operation: _____
- C. Total number of open confinement lots (earthen or concrete) currently present at operation: _____
- D. Total **approved** capacity of animals which can be confined at operation: _____
- E. Are earthen lagoon(s) or pit(s) currently present at operation? ☐ Yes ☐ No
- F. Separate from confinement barn(s), are any concrete or metal tanks currently present at operation? ☐ Yes ☐ No
- G. Separate from confinement barn(s), are any solid manure storage building (litterstack, barn, etc.) currently present at operation? ☐ Yes ☐ No
- H. Since the last renewal, have any confinement barns been closed? If yes, detail in J. below which barn(s) and the animal number(s) housed within. ☐ Yes ☐ No
- I. Since the last renewal, have any lagoon(s), pit(s), or tank(s) been closed? If yes, detail in J. below which structure(s). ☐ Yes ☐ No
- J. Detail any changes in manure storage capacity or animal capacity (number/species/type) at the operation that have been made since the time of the last CFO approval/renewal.
- If the changes increase manure production, you must also request an amendment to your CFO Approval.
 - If the changes do not increase manure production, you must also submit a CFO Facility Change Notification (SF 50209).
 - If a structure has been closed and has not been inspected by IDEM CFO Compliance staff, you must also submit a CFO Closure Certification (SF 55054).
- _____
- _____

JEFFREY SICKAPOOSE
6570 W STATE ROAD 205
SOUTH WHITLEY, IN 46787
2019 CFO APPROVAL

USDA SOILS MAP
SITE LOCATION
LAND APPLICATION AREA
T31N R8E SECT. 35

DATE: 06/13/19 DRAWN BY: DL
LIVESTOCK ENGINEERING SOLUTIONS, INC.
MICHAEL A. VEDHIZEN
2987 S. HONEY CREEK ROAD, GREENWOOD, IN 46143
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Land Application Area:
Avali Acres: 51.283
Land-Use Agreement:
JEFFREY L. & SHERRI K.
SICKAPOOSE, TRUSTEES

Confined Feeding Operation
Waste Management System - Solid Yellow
CFO Boundary - Green Outline
Production Area - Blue Outline

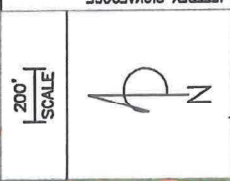
Land Application Area:
Avali Acres: 58.101
Land-Use Agreement:
JEFFREY L. & SHERRI K.
SICKAPOOSE, TRUSTEES

JEFFREY SICKAFOOSE
5570 W STATE ROAD 205
SOUTH WHITLEY, IN 46787
2019 CFO APPROVAL

USDA SOILS MAP
LAND APPLICATION AREA
T30N R8E SECT. 12

DATE: 06/13/19 DRAWN BY: DL
LVESTOCK ENGINEERING SOLUTIONS, INC.
MICHAEL A. VEDHIZEN
2987 S. HONEY CREEK ROAD, GREENWOOD, IN 46143

SHEET: 25 OF 25 DRAWING NO: JSF0119-025
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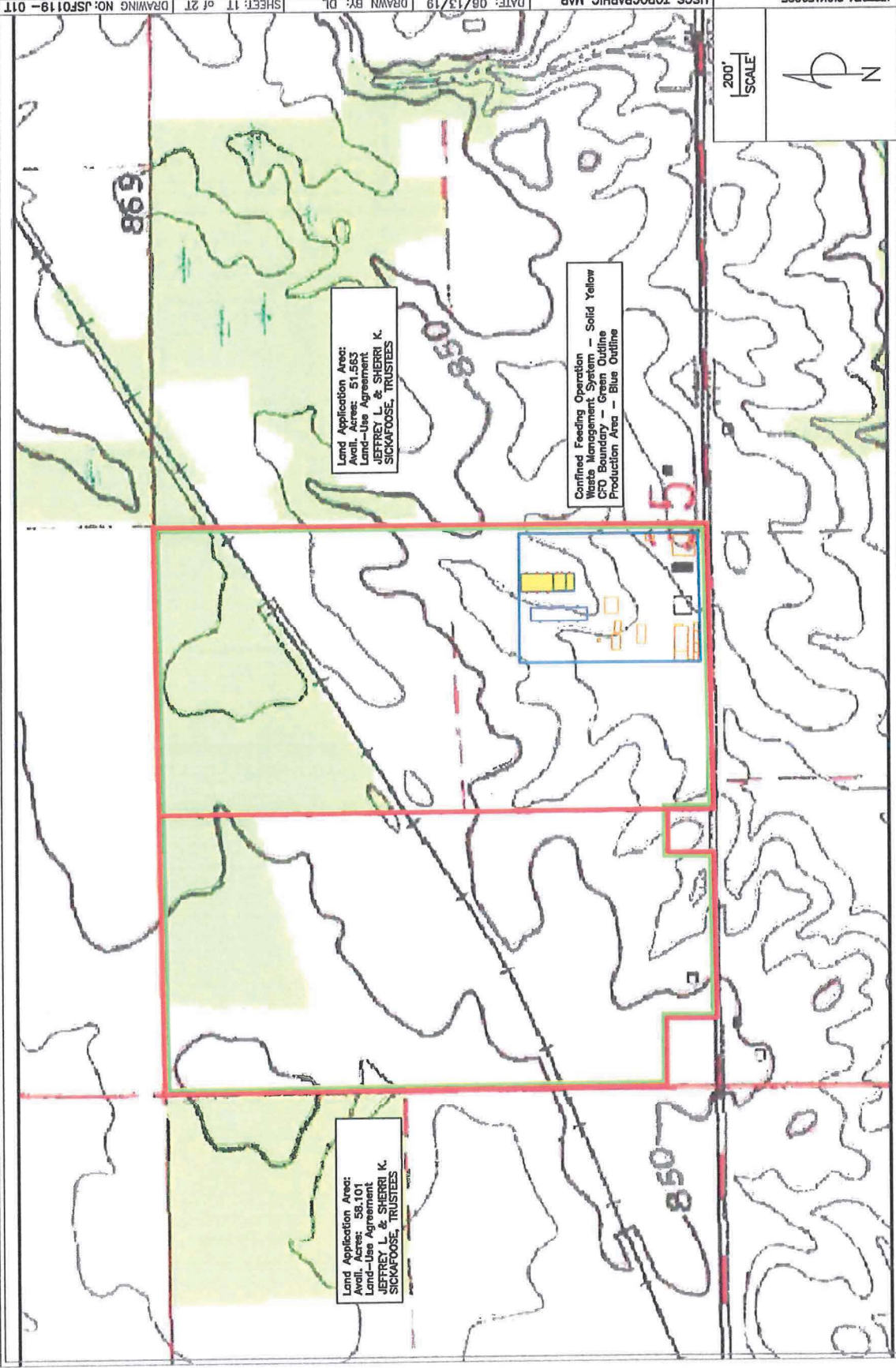
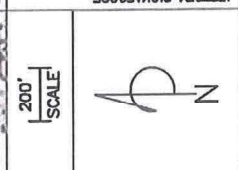


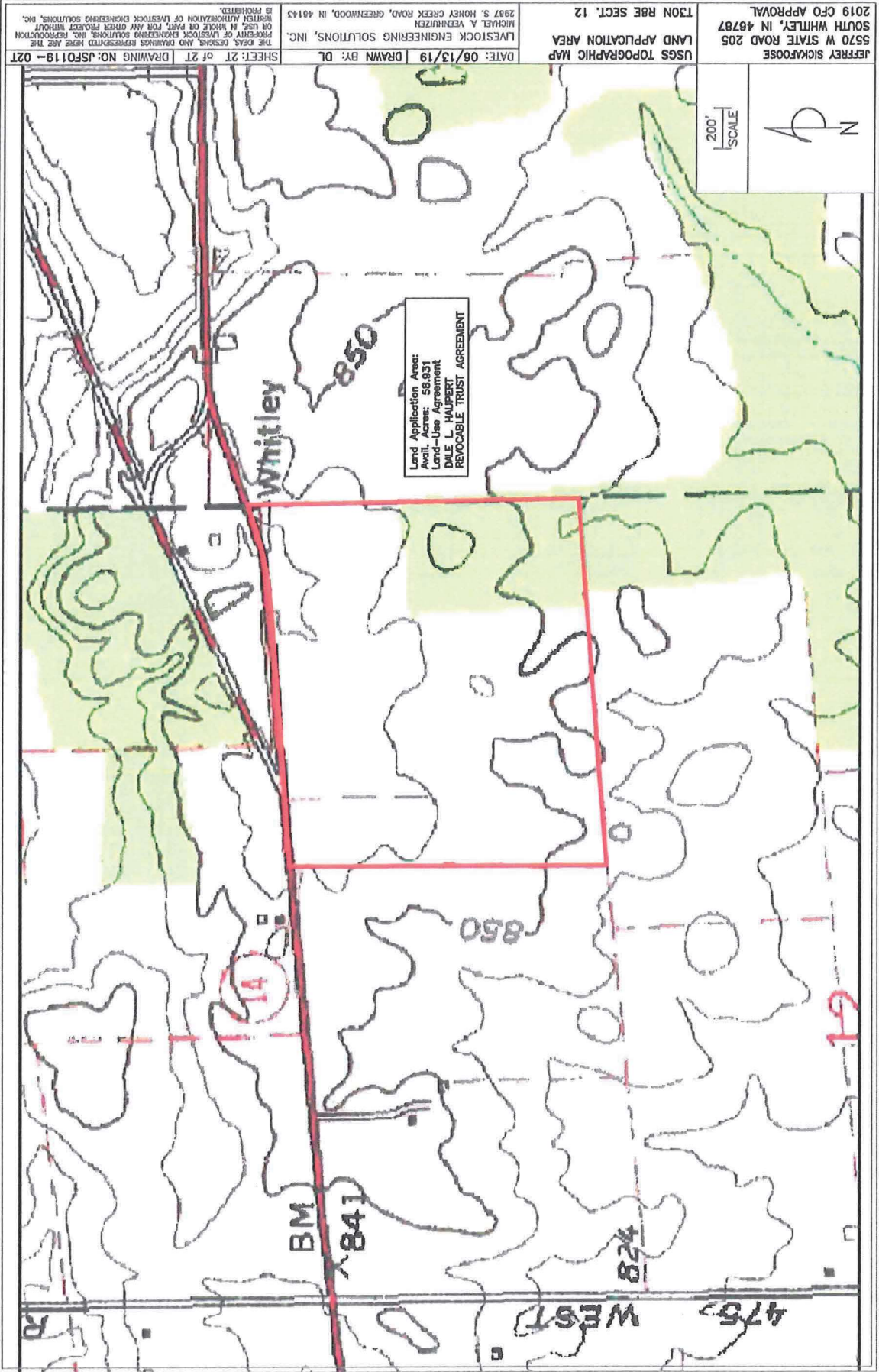
JEFFREY SICKAFOOSE
5570 W STATE ROAD 205
SOUTH WHITLEY, IN 46787
2019 CFO APPROVAL

USGS TOPOGRAPHIC MAP
SITE LOCATION
LAND APPLICATION AREA
T31N R8E SECT. 35

DATE: 08/13/19 DRAWN BY: DL
LIVESTOCK ENGINEERING SOLUTIONS, INC.
MICHAEL A. VEDRHNZEN
2987 S. HONEY CREEK ROAD, GREENWOOD, IN 46143

SHEET: 11 of 27 DRAWING NO: JSF0119-011
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JEFFREY SICKAFOOSE
5570 W STATE ROAD 205
SOUTH WHITLEY, IN 46787
2019 CFO APPROVAL

USGS TOPOGRAPHIC MAP
LAND APPLICATION AREA
130N R8E SECT. 12

DATE: 08/13/19 DRAWN BY: DL
LIVESTOCK ENGINEERING SOLUTIONS, INC.
MICHAEL A. VERHUIZEN
2937 S. HONEY CREEK ROAD, GREENWOOD, IN 46143

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Land Application Area:
Avalil. Acres: 58.931
Land-Use Agreement
DALE L. HAUPERT
REVOCABLE TRUST AGREEMENT

2019 Confined Feeding Operation Approval Application
Manure Management Plan Attachment

for
Jeffrey Sickafoose
5570 W State Road 205
South Whitley, Indiana 46787

A. Manure Testing

Consult Purdue University, Cooperative Extension Service Publications AY-277, ID-101, ID-205 "Swine Manure Management Planning," ID-206 "Poultry Manure Management Planning," ID-208 "Dairy Manure Management Planning" for guidance on procedures for manure testing.

1. **Manure Sample Collection Procedures:**

A representative sample of manure and process wastewater will be collected and analyzed prior to the first land application event. A representative sample from each type of manure will be collected (i.e. animal type and size, phase of production, storage structure, and treatment structure).

To obtain the most representative sample a composite sample using a method appropriate to represent the manure and process wastewater being land applied will be collected. A composite sample will be obtained by collecting multiple (5-10) samples from the concrete manure storages when manure is pumped from the concrete manure storages. Typically, to get the most representative sample, a core sampling device will be used prior to land application or sampling will be conducted at the time of agitation and land application. The sample will be placed in a plastic bucket or container to create a mixed sample. A mixed sample will be drawn and placed in a sample bottle. The sample bottle will be sent to a private analytical laboratory for analysis.

When animal type and size in multiple buildings are similar it is expected that the manure generation and characteristics in each building will be the same or similar. When animal type and size are similar one manure storage may be sampled each year to represent the manure nutrient concentration for that building type or phase of production. Once the first sample is collected prior to land application, future land application decisions may be made based on previous and historical analysis results.

2. **Nutrient Assessment:**

☒ Private Laboratory does a nutrient analysis of sample(s)

☒ Other (explain) _____

A private analytical laboratory qualified to analyze manure and wastewater will analyze the composite sample. Specific testing protocols will be determined by the analytical laboratory. At a minimum, manure and wastewater samples will be analyzed for available Nitrogen, Phosphorus, Potassium, and Moisture Content.

3. **Sampling Frequency:**

☐ Annual sampling required for CAFOs with a NPDES permit

☒ Minimum of once every year for CFOs.

The expected sampling frequency is at least once every year.

B. Soil Testing

You can consult Purdue University, Cooperative Extension Service Publication AY-281 for guidance on procedures for soil testing. A soil test must provide sufficient information about soil fertility to allow for nutrient recommendations for existing or planned crops. Soil test may not represent more than twenty (20) acres per sample.

1. Do, or will, you perform soil testing for this operation

- ☒ Yes, all or a portion of manure is, or will be, applied to land controlled by the operator (complete 2-4 below)
- ☐ No, 100% of manure is, or will be, either marketed or distributed (2-4 below do not need to be completed).

2. Sample Collection Method:

- ☒ Management unit (field level)
- ☐ Grid method
- ☐ By soil type
- ☒ Other (explain) _____

Fields used for manure application will be soil sampled by management unit. Soil samples from each field used for manure application will be collected and analyzed. Multiple composite soil samples are collected from each land application field depending on the size of the land application field. Multiple soil cores from the top 0" to 8" of the soil profile will be collected and combined. Typically, a composite soil sample is taken from multiple soil samples from within a land area of up to 20 acres. The composite samples collected and prepared from each land application field will be sent to a private analytical laboratory for analysis.

3. Nutrient Assessment:

- ☒ Private laboratory does nutrient analysis.
- ☒ Other (explain) _____

Soil samples will be collected and composited. The composite sample will be analyzed by a private analytical laboratory qualified to analyze soil nutrient content and soil properties. Specific testing protocols will be determined by the analytical laboratory. At a minimum, soil samples will be analyzed for Phosphorus.

4. Sampling Frequency:

- ☒ Minimum of once every four (4) years for CFOs and CAFOs.

The expected sampling frequency is at least once every four years.

Indiana Department of Environmental Management
2019 Confined Feeding Operation Approval Application
for

Jeffrey Sickafoose
5570 W State Road 205
South Whitley, Indiana 46787

Introduction:

Attached for your review are a CFO / CAFO Application Packet, State Form 55051 (R2/6-15) and supporting documentation requesting a Confined Feeding Operation Approval and construction authorization to modify and expand an existing confined feeding operation be granted to Jeffrey Sickafoose. The proposed modification includes the construction of a farrowing/gestation building with below-building concrete manure storage.

This confined feeding operation is owned and operated by Jeffrey Sickafoose. Jeffrey Sickafoose is the contact for the confined feeding operation. The confined feeding operation is located in Whitley County, Indiana in the South Whitley East USGS Quadrangle, Section 35, Township 31 N, Range 8 East.

The most recent confined feeding operation approval (Farm ID#4313) and construction authorization (AW#5555) was issued March 2, 2006. The most recent confined feeding operation approval renewal was issued January 25, 2016. The current approved operating capacity is 1,526 sows (232 sows & litters; 1,294 breeding/gestation sows) housed in ten (10) buildings.

Operating Capacity:

This confined feeding operation is operated as a breed-to-wean production facility. The current approved operating capacity is 1,526 sows. The existing confined feeding operation includes five (5) farrowing buildings and five (5) breeding and gestation buildings with below-building concrete manure storage. The proposed modification is to construct one (1) 81'-4" x 255'-0" farrowing and gestation building with below-building concrete manure storage. The requested operating capacity for the farrowing and gestation building is 120 sows and litters (farrowing) and 640 gestating sows (gestation).

The requested maximum operating capacity for the confined feeding operation is 352 sows and litters (farrowing) and 1,934 breeding/gestation sows housed in eleven (11) buildings. Total animal capacity will be 2,286 sows. Based on the animal categories defined in 40 CFR 122.23(b)(2) and 40 CFR 122.23(b)(4) this animal feeding operation is not defined as a large concentrated animal feeding operation and will have an operating capacity of 2,286 sows weighing fifty-five (55) pounds or more housed in eleven (11) buildings.

The existing and proposed production buildings and operating capacities are summarized below.

Table 1: Building Dimensions and Operating Capacities

ID	Structure Type	Building Dimensions	Animal Capacity
2E.	Gestation	30'-0" x 60'-0"	80 sows
3E.	Gestation	41'-0" x 72'-0"	147 sows
4E.	Gestation	42'-0" x 90'-6"	150 sows
5E.	Farrowing	44'-0" x 64'-0"	44 sows & litters
6E.	Farrowing	22'-0" x 40'-0"	14 sows & litters
7E.	Gestation	22'-0" x 45'-0"	42 sows
8E.	Farrowing	22'-0" x 55'-0"	20 sows & litters
9E.	Farrowing	22'-0" x 43'-0"	10 sows & litters
10E.	Farrowing	64'-0" x 120'-0"	144 sows & litters
11E.	Gestation	61'-4" x 271'-0"	875 sows
12P.	Farrowing & Gestation	81'-4" x 255'-0"	120 sows & litters, 640 sows
	Total Site		2,286-head

Manure and Process Wastewater:

In accordance with Natural Resource Conservation Service Conservation Practice Standard "Waste Storage Facility" Code 313 (Standard 313) the potential components of manure and process wastewater include, where appropriate:

- 1) manure, bedding, wastewater, and other wastes accumulated during the storage period;
- 2) normal precipitation, less evaporation, on the surface area of the facility during the storage period;
- 3) normal runoff from the facility's drainage area during the storage period;
- 4) 25-year, 24-hour runoff from the facility's drainage area; and
- 5) residual solids after liquids have been removed.

Manure and process wastewater generated and stored in the below-building concrete manure storage includes manure, wastewater, and other wastes accumulated during the storage period and residual solids after liquids have been removed.

For manure management planning, this confined feeding operation is operated as a breed-to-wean production site that includes five (5) gestation buildings, five (5) farrowing buildings, and one (1) farrowing and gestation building. The production buildings will house gestating sows and sows and litters. The IDEM Guidance Manual Table 1 "Manure Production Values for Calculating Storage Requirement Volumes" states that the daily manure production, as excreted, for a farrowing sow (sow & litter) is 0.41 ft^3 per day and for a breeding/gestation sow is 0.18 ft^3 per day. Table 1 (page 38) of the Guidance Manual includes a footnote stating that the manure production values are "*Prior to any changes due to dilution water addition, drying, volatilization or other physical, chemical or biological processes.*" Water spillage and wash water used to clean and sanitize the buildings between animal groups is in addition to the manure and urine production. It is estimated that the volume of water spillage is equal to approximately 10% of the manure production. Approximately 5.5 gallons per sow & litter will be used to clean the buildings between groups. Approximately 10 gallons per gestation sow per year will be used to clean the breeding/gestation and gestation buildings.

To determine the manure and process wastewater production for the breed-to-wean pig production site the following occupancy rates are assumed:

- Breeding/gestation sow, gestation sow 365 days
- Farrowing (sows & litters) 25 days/group, 13 groups/year, 40 days/year cleaning

The predicted annual manure and process wastewater production for the entire production site is approximately $197,326 \text{ ft}^3/\text{year}$. The predicted manure and process wastewater production is determined as follows.

Farrowing (5E, 6E, 8E, 9E, 10E, 12P)

Manure production

Sows & litters

sows & litters x $0.41 \text{ ft}^3/\text{head}/\text{day}$ x 13 groups/year x 25 days/group = [manure volume] ft^3/year

Water spillage

[manure volume] ft^3 x 0.10 = [water volume] ft^3/year

Wash water

5.5 gallons/head/group x # sows & litters x 13 groups/year $\div 7.48 \text{ gallons}/\text{ft}^3$ = [wash water] ft^3/year

Gestation Buildings (2E, 3E, 4E, 7E, 11E, 12P)

Manure production

Gestation sows

sows x $0.18 \text{ ft}^3/\text{head}/\text{day}$ x 365 days/year = [manure volume] ft^3/year

Water spillage

[manure volume] ft^3 x 0.10 = [water volume] ft^3/year

Wash water

10 gallons/head/year x # sows $\div 7.48 \text{ gallons}/\text{ft}^3$ = [wash water] ft^3/year

IV. FACILITY DETAIL INFORMATION

Label on Farmstead Plan	Animal Type	Number of Animals	Solid or Liquid	Date Constructed (for existing buildings)	Water Uses (gallons/unit of time)	Brief Description
1.	---	---	---	---	--	Removed; No longer exists
2E.	Gestation sows	80 sows	Liquid	1979	10 gallons per head per year Total usage: 800 gallons per year	Approved October 8, 1993; Log #4313, AW-2863. Total building dimensions: 30'-0" x 60'-0" One room, partially slatted 80 sow isolation building with below building concrete manure storage. Not shared with another structure. Single compartment manure storage: 9'-8" x 58'-8" x 7'-8" deep Total storage capacity: 4,348 cu ft Available capacity: 3,781 cu ft (6" freeboard; no residual solids storage due to regular manure an process wastewater removal) Storage capacity: 234 days
3E.	Breeding/ Gestation sows	147 head	Liquid	1993	10 gallons per head per year Total usage: 1,470 gallons per year	Approved October 8, 1993; Log #4313, AW-2863. Total building dimensions: 41'-0" x 72'-0" One room 147 head breeding/gestation sow building with below building concrete manure storage. Not shared with another structure. Single compartment manure storage: 39'-8" x 70'-8" x 7'-8" deep pit Total storage capacity: 21,491 cu ft Available capacity: 18,688 cu ft (6" freeboard; no residual solids storage due to regular manure an process wastewater removal) Storage capacity: 630 days

IV. FACILITY DETAIL INFORMATION

Label on Farmstead Plan	Animal Type	Number of Animals	Solid or Liquid	Date Constructed (for existing buildings)	Water Uses (gallons/unit of time)	Brief Description
4E.	Breeding/ Gestation sows	150 head	Liquid	1995	10 gallons per head per year Total usage: 1,500 gallons per year	Approved September 29, 1995; Log #4313, AW-3966. Total building dimensions: 42'-0" x 90'-6" One room, 150 head breeding/gestation sow building with below building concrete manure storage. Not shared with another structure. Single compartment manure storage: 40'-8" x 89'-2" x 5'-8" deep pit Total storage capacity: 20,549 cu ft Available capacity: 16,923 cu ft (6" freeboard; no residual solids storage due to regular manure an process wastewater removal) Storage capacity: 559 days
5E.	Farrowing (sows & litters)	44 sows and litters	Liquid	1997	75 gallons per sow & litter per year Total usage: 3,300 gallons per year	Approved February 11, 1997; Log #4313, AW #4271. Total building dimensions: 44'-0" x 64'-0" Four room farrowing building housing 44 sows & litters with below building concrete manure storage. Not shared with another structure. Single compartment manure storage: 40'-8" x 89'-2" x 5'-8" deep Total storage capacity: 20,549 cu ft Available capacity: 16,923 cu ft (6" freeboard; no residual solids storage due to regular manure an process wastewater removal) Storage capacity: 898 days

IV. FACILITY DETAIL INFORMATION

Label on Farmstead Plan	Animal Type	Number of Animals	Solid or Liquid	Date Constructed (for existing buildings)	Water Uses (gallons/unit of time)	Brief Description
6E.	Farrowing (sows & litters)	14 sows and litters	Liquid	1995	75 gallons per sow & litter per year Total usage: 1,050 gallons per year	Approved September 29, 1995; Log #4313, AW-3966. Total building dimensions: 22'-0" x 40'-0" One room farrowing building housing 14 sows & litters with pull plug collection gutters that drain into 7E. Single compartment manure storage: 20'-8" x 38'-8" x 3'-0" deep Total storage capacity: 21,491 cu ft Available capacity: 18,688 cu ft (6" freeboard; no residual solids storage due to regular manure an process wastewater removal) Storage capacity: 630 days
7E.	Breeding/ Gestation sows	42 head	Liquid	1979	10 gallons per head per year Total usage: 420 gallons per year	Approved October 8, 1993; Log #4313, AW-2863. Total building dimensions: 22'-0" x 45'-0" One room, 42 head breeding/gestation sow building with below building concrete manure storage. This pit provides the storage for 6E. Single compartment manure storage: 20'-8" x 43'-8" x 7'-8" deep Total storage capacity: 2,397 cu ft Available capacity: 1,598 cu ft (6" freeboard; no residual solids storage due to regular manure an process wastewater removal) Storage capacity: 266 days

IV. FACILITY DETAIL INFORMATION

Label on Farmstead Plan	Animal Type	Number of Animals	Solid or Liquid	Date Constructed (for existing buildings)	Water Uses (gallons/unit of time)	Brief Description
8E.	Farrowing (sows & litters)	20 sows and litters	Liquid	1979	75 gallons per sow & litter per year Total usage: 1,500 gallons per year	Approved October 8, 1993; Log #4313, AW-2863 & February 11, 1997; Log #4313, AW #4271. Total building dimensions 22'-0" x 55'-0" One room farrowing building housing 20 sows & litters with below building concrete manure storage. Not shared with another structure. Single compartment manure storage: 20'-8" x 53'-8" x 7'-8" deep Total storage capacity: 8,503 cu ft Available capacity: 7,394 cu ft (6" freeboard; no residual solids storage due to regular manure an process wastewater removal) Storage capacity: 863 days
9E.	Farrowing (sows & litters)	10 sows and litters	Liquid	1993	75 gallons per sow & litter per year Total usage: 750 gallons per year	Approved October 8, 1993; Log #4313, AW-2863. Total building dimensions 22'-0" x 43'-0" One room farrowing building housing 10 sows & litters with below building concrete manure storage. Not shared with another structure. Single compartment manure storage: 20'-8" x 41'-8" x 5'-8" deep Total storage capacity: 4,880 cu ft Available capacity: 4,018 cu ft (6" freeboard; no residual solids storage due to regular manure an process wastewater removal) Storage capacity: 938 days

IV. FACILITY DETAIL INFORMATION

Label on Farmstead Plan	Animal Type	Number of Animals	Solid or Liquid	Date Constructed (for existing buildings)	Water Uses (gallons/unit of time)	Brief Description
10E.	Farrowing (sows & litters)	144 sows and litters	Liquid	2002	75 gallons per sow & litter per year Total usage: 10,800 gallons per year	Approved March 8, 2002. Log #4313, AW #5187. Total building dimensions 64' -0" x 120' -0" Twelve room farrowing building housing 144 sows & litters with below building concrete manure storage. Not shared with another structure. Single compartment manure storage: 62' -8" x 118' -8" x 7' -8" deep Total storage capacity: 57,015 cu ft Available capacity: 49,579 cu ft (6" freeboard; no residual solids storage due to regular manure an process wastewater removal) Storage capacity: 804 days
11E.	Breeding/ Gestation sows	875 head	Liquid	2006	10 gallons per head per year Total usage: 8,750 gallons per year	Approved March 2, 2006. Log #4313, AW #5555. Total building dimensions: 61' -4" x 271' -0" O.D. One room, 875-head breeding/gestation sow building with below building concrete manure storage. Not shared with another structure. Single compartment below-building concrete manure storage: 60' -0" x 269' -8" x 7' -8" deep Total storage capacity: 124,052 cu ft Available capacity: 107,872 cu ft (6" freeboard; no residual solids storage due to regular manure an process wastewater removal) Storage capacity: 611 days

IV. FACILITY DETAIL INFORMATION

Label on Farmstead Plan	Animal Type	Number of Animals	Solid or Liquid	Date Constructed (for existing buildings)	Water Uses (gallons/unit of time)	Brief Description
12P.	Farrowing and Gestation	120 farrowing & 640 gestation	Liquid	Proposed		<p>Proposed</p> <p>Farrowing/Gestation building</p> <p>Two (2) room, 120 sows & litters and 640 gestation sow farrowing/gestation building with below-building self-contained manure storage. Not shared with another structure.</p> <p>Total building dimensions: 81'-4" x 255'-0" O.D.</p> <p>Three (3) compartment below-building concrete manure storage:</p> <p>1) 80'-0" x 40'-8" x 8'-0" deep</p> <p>2) 80'-0" x 59'-8" x 8'-0" deep</p> <p>3) 80'-0" x 151'-10" x 8'-0" deep</p> <p>Total capacity: 160,738 ft³</p> <p>Available capacity: 141,115 ft³</p> <p>(6" freeboard and 6" residual solids)</p> <p>Storage capacity: 782 days</p>