ITEM 4
01-15-13

PLANNING & DEVELOPMENT
500 West Fourth Street
Davenport, Iowa 52801-1106
E-mail: planning@scottcountyiowa.com
Office: (563) 326-8643 Fax: (563) 326-8257

Timothy Huey
Director

To: Dee F. Bruemmer, County Administrator

From: Timothy Huey, Planning Director

Date: January 10, 2013

Re: County review and public hearing on the Construction Permit Application of Dennis Kirby, dba Kirby Farms, Inc in the SW¼SW¼ Section 21, T79N, R4E (Lincoln Township) for the expansion of a confined animal feeding operation located at 22293 200th Avenue.

On December 26th the above referenced application was submitted to the Iowa DNR. Scott County has 30 days from the date we received notice from the IDNR (Dec 29th) to submit comments and a recommendation on that application. Notice of the receipt of this application also must be published as a public notice. A public hearing was also set for the Board meeting on January 17th to take comments from the public. Both these notices have been published. In order to submit the County's recommendation on the application prior to the IDNR required deadline of January 29th the Board will need to act on its recommendation following the public hearing on January 17th.

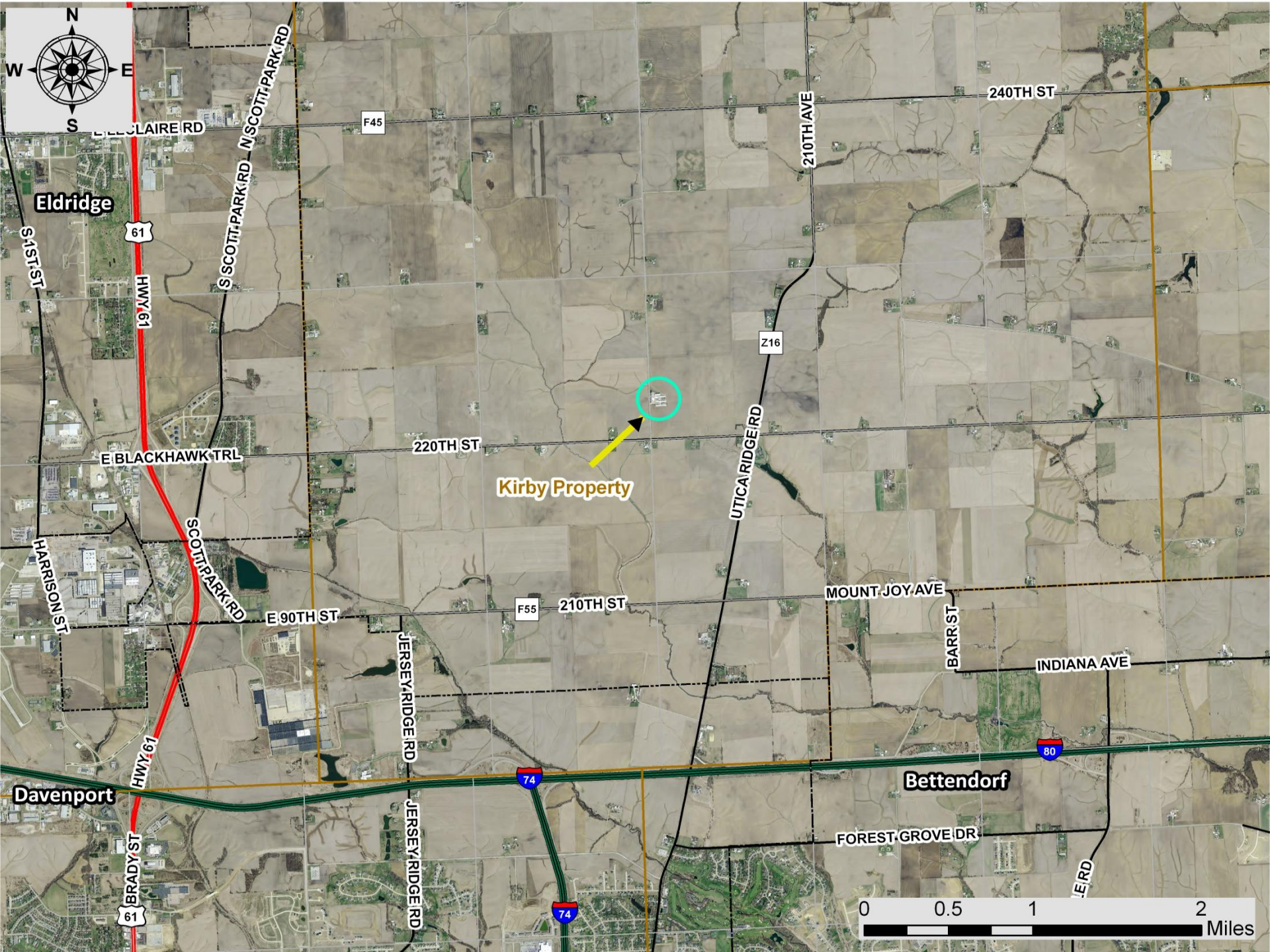
This request is for the expansion of an existing hog confinement operation in Lincoln Township that requires compliance with the standards of the Master Matrix. The separation distances for an expansion of the size proposed requires that any residences, business, church or school be no closer 1,000 feet to the proposed site. This application meets that requirement and there are five houses within 2,000 feet of the site but all are greater than 1,000. There are no businesses, or schools within a mile of the site. Summit Church, at the corner of 200 Avenue and Utica Ridge Road is just over a ½ mile from the site. However it is staff's understanding that it does not have an active congregation and is only used occasionally for cemetery burials, religious services and events. The city limits of Davenport is 1 ¾ miles south of the site and Eldridge city limits are 2 miles west. In both cases, it is all agricultural land within the closest portions of the incorporated areas. There are no residential subdivisions, either within the cities or in the unincorporated areas within 2 miles of this site.

The site meets the distance requirements for water sources and designated wetlands. The building is also required to be setback a minimum of 100 feet from the County road right of way.

The Planning and the Health Department will present its review of this request at the Committee of the whole meeting.

Staff has not, as of yet, received any calls or comments on this application. Staff will include any written comments and a summary of any verbal comments received at the public hearing with the Board's recommendation to the IDNR.

The IDNR inspector from the Washington, Iowa district office has scheduled his site inspection on Friday January 18th. Planning and Health Department Staff will accompany the IDNR on that site visit..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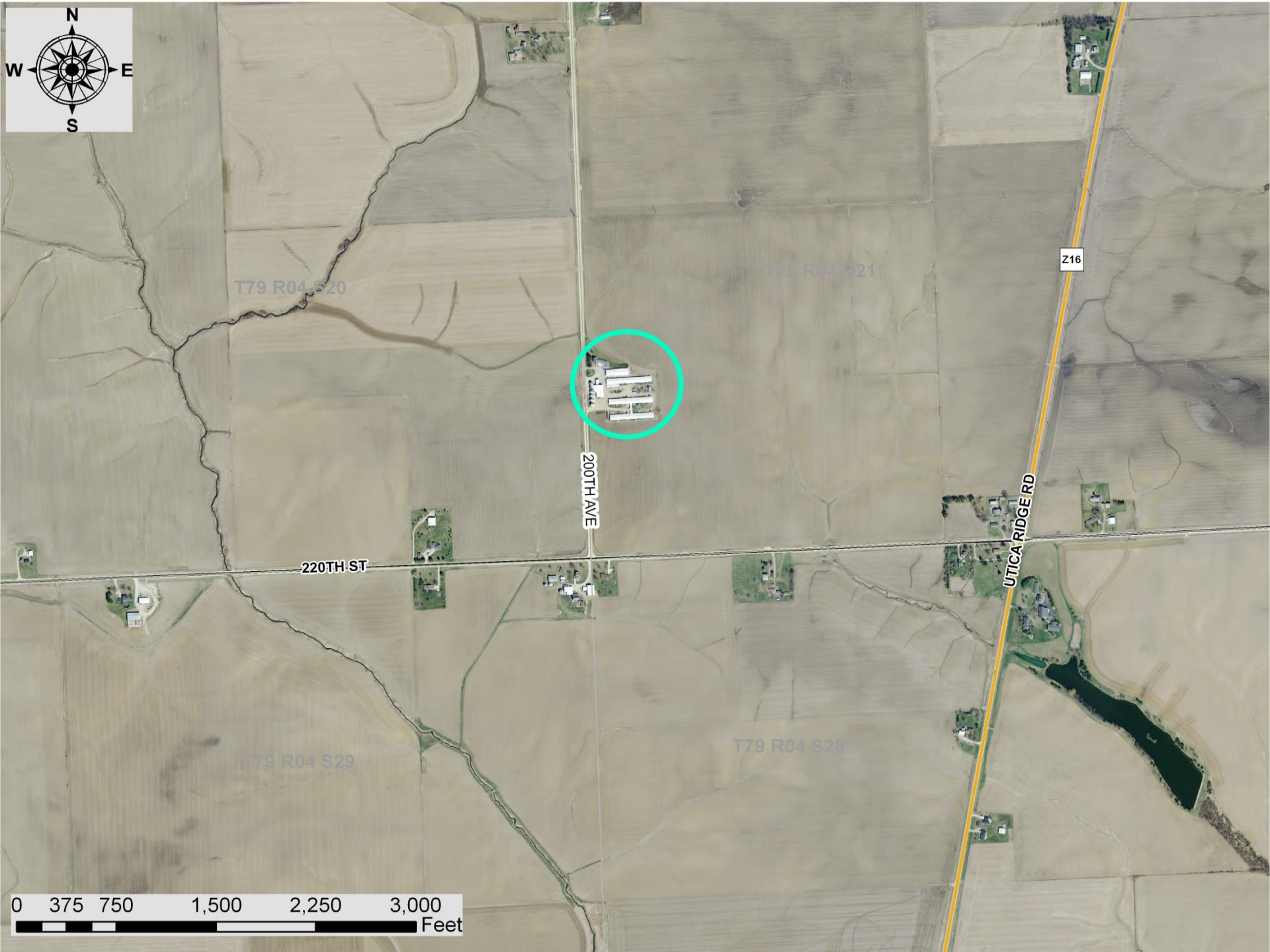
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Feet


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200TH AVE
22293
Dimensions: 193' x 101'
Proposed Gestation Barn
0
150
300
600
Feet

Please staple check here

Iowa Department of Natural Resources

Construction Permit Application Form

Confinement Feeding Operations

INSTRUCTIONS:

Prior to constructing, installing, modifying or expanding a confinement feeding operation structure[1], answer questions 1-8 on Item 3, Section A (page 2), to determine if a construction permit is required. To calculate the animal unit capacity (AUC) of the operation, complete Table 1 (page 4.) If a construction permit is required, complete the rest of the form, have the owner(s) sign it on pages 5 and 6. Mail to the DNR (see address on page 5) this application form, documents and fees requested in Checklist No. 1 or 2 (pages 10-16). See item 5 (page 5), to determine which checklist to use.

If a construction permit is not needed, some pre-construction requirements may still apply prior to the construction of a formed manure storage structure[2]. See page 5 for additional DNR contact information.

RECEIVED
2012 DEC 26 PM 2:06
SCOTT CO. AUDITOR

THIS APPLICATION IS FOR:

1. ☐ **A new confinement feeding operation**
2. ☒ **An existing confinement feeding operation** *(answer all of the following questions):*
   a. Facility ID No. (5 digit number): 61851
   b. Date when the operation was first constructed: 1990
   c. Date when the last construction, expansion or modification was completed: 2005.
   (Not needed if the confinement operation has previously received a construction permit from DNR.)
   d. Is this also an ownership change? ☐ Yes. ☒ No.

ITEM 1 – LOCATION AND CONTACT INFORMATION (*See page 17 for instructions and an example*):

A) Name of operation: Kirby Farms Inc.

Location:

SW	SW	21	79N 4E	Lincoln	Scott
(1/4 1/4)	(1/4)	(Section)	(Tier & Range)	(Name of Township)	(County)

B) Owner information:

Name: Dennis Kirby Title: Owner

Address: 22293 200th Ave., Davenport, IA 52804

Telephone: 563-285-7319 Fax: _____ Email: _____

C) Person to contact with questions about this application (if different than owner):

Name: _____ Title: _____

Address: _____

Telephone: _____ Fax: _____ Email: _____

☒ Enclose aerial photo or engineering drawing showing the proposed location of the confinement feeding operation structure[1] and all applicable separation distances, as requested in Attachment 1 (pages 11 or 14). See example of aerial photo on pages 18 to 19, at the end of this form.

☐ I manage or am the majority owner of another confinement feeding operation located within 2,500 feet of the proposed site. Please contact the DNR-AFO Program staff at (515) 281-8941 to verify site adjacency requirements.

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[1] Confinement feeding operation structure = animal feeding operation structure (confinement building, manure storage structure or egg washwater storage structure) that is part of a confinement feeding operation. Manure storage structures include formed and unformed manure storage structures.

[2] Formed manure storage structure = covered or uncovered concrete or steel tanks, and concrete pits below the building.

ITEM 2 – SITING INFORMATION:

A) Karst Determination: Go to www.IowaDNR.gov select the link to 'Mapping (GIS Interactive)', then check the AFO Siting Atlas. If the site is not located in karst or potential karst, print and enclose the map with the name and location of the site clearly marked. If the site is in karst or potential karst, if you cannot access the map, or if you have questions about this issue, contact a DNR geologist at (515) 242-6848. Check one of the following:

☒ The site is not in karst or potential karst. Include documentation requested in checklist 1 or 2 (pages 10 or 13).

☐ The DNR geologist has verified that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" must be used.

B) Alluvial Soils Determination: Go to www.IowaDNR.gov, select the link to 'Mapping (GIS Interactive)', then check the AFO Siting Atlas. If the site is not in potential alluvial soils, print and enclose the map with the name and location of the site clearly marked. If the site is in potential alluvial soils, if you cannot access the map, or if you have questions about this issue, contact a DNR geologist at (515) 242-6848. Check one of the following:

☒ The site is not in alluvial soils. Include documentation requested in checklist 1 or 2 (pages 10 or 13).

☐ The DNR geologist has verified that the site is in alluvial soils. Check one of the following:

- ☐ Not in 100-year floodplain or does not require a floodplain permit. Include correspondence from the DNR.
- ☐ Requires floodplain permit. Include Floodplain Permit.

ITEM 3 – OPERATION INFORMATION:

A) A construction permit is required prior to any of the following:

1. ☐ Constructing or modifying any unformed manure storage structure[3], or constructing or modifying a confinement building that uses an unformed manure storage structure[3].
2. ☒ Constructing, installing or modifying a confinement building or a formed manure storage structure[2] at a confinement feeding operation if, after construction, installation or expansion, the AUC of the operation is 1,000 animal units (AU) or more. This also applies to confinement feeding operations that store manure exclusively in a dry form.
3. ☐ Initiating a change that would result in an increase in the volume of manure or a modification in the manner in which manure is stored in any unformed manure storage structure[3], even if no construction or physical alteration is necessary. Increases in the volume of manure due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
4. ☐ Initiating a change, even if no construction or physical alteration is necessary, that would result in an increase in the volume of manure or a modification in the manner in which manure is stored in a formed manure storage structure[2] if, after the change, the AUC of the operation is 1,000 AU or more. Increases in the volume of manure due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
5. ☐ Constructing or modifying any egg washwater storage structure or a confinement building at a confinement feeding operation that includes an egg washwater storage structure.
6. ☐ Initiating a change that would result in an increase in the volume of egg washwater or a modification in the manner in which egg washwater is stored, even if no construction or physical alteration is necessary. Increases in the volume of egg washwater due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
7. ☐ Repopulating a confinement feeding operation if it was closed for 24 months or more and if any of the following apply:
   1. ☐ The confinement feeding operation uses an unformed manure storage structure[3] or egg washwater storage structure;
   2. ☐ The confinement feeding operation includes only confinement buildings and formed manure storage structures[2] and has an AUC of 1,000 AU or more.
8. ☐ Installing a permanent manure transfer piping system, unless the department determines that a construction permit is not required.

[3] Unformed manure storage structure = covered or uncovered anaerobic lagoon, earthen manure storage basin, aerobic earthen structure.

We are planning to build a gestation barn approximately 209 ft long and 101 ft wide. This barn will have a 10 ft deep concrete manure pit and will be covered by cement slats. It will house approximately 1,000 sows. (see attached map, section A). A current gestation barn will be converted from gestation to farrowing with no material changes to the structure or foundation. Animal units and manure production will be reduced (section B). Current gestation space will be converted to a nursery with no material changes to the structure or foundation. Animal units will remain the same and manure production will be reduced. (section C).

B) In your own words, describe in detail, the proposed construction, expansion, installation, modification or repair being proposed in this project. Attach additional pages if necessary:

_____

_____

_____

_____

_____

_____

C) Master Matrix *(must check one)*. If any of boxes 1 to 3 are checked, the operation is required to be evaluated with the master matrix if the county, where the confinement feeding operation structure[1] is or would be located, has adopted a 'Construction Evaluation Resolution' (CER). Select the one that best describes your confinement feeding operation:

1. ☐ A new confinement feeding operation proposed in a county that has adopted a CER.
2. ☐ An existing operation constructed on or after April 1, 2002, in a county that has adopted a CER.
3. ☒ An existing operation constructed prior to April 1, 2002, with a current or proposed AUC of 1,667 AU or more, in a county that has adopted a CER.
4. ☐ None of the above. Therefore, the master matrix evaluation is not required.

D) Qualified Operation *(must check one)*. If any of boxes 1 to 4 are checked, the operation is also a 'qualified operation'. A qualified operation is required to use a manure storage structure that employs bacterial action which is maintained by the utilization of air or oxygen, and which shall include aeration equipment. However, this requirement does not apply if box 5 is checked. Select the one that best describes your confinement feeding operation:

1. ☐ A swine farrowing and gestating operation with an AUC of 2,500 AU or more.
2. ☐ A swine farrow-to-finish operation with an AUC of 5,400 AU or more.
3. ☐ A cattle confinement feeding operation (including dairies) with an AUC of 8,500 AU or more.
4. ☐ Other confinement feeding operations with an AUC of 5,333 AU or more.
5. ☒ This is not a qualified operation because:
   a. ☒ It is below the limits shown on boxes 1 to 4.
   b. ☐ It includes a confinement feeding operation structure[1] constructed prior to May 31, 1995.
   c. ☐ It handles manure exclusively on a dry form.

ITEM 4 – ANIMAL UNIT CAPACITY (AUC) and, if applicable, ANIMAL WEIGHT CAPACITY (AWC):

A) Calculating AUC – Required for all operations

For each animal species, multiply the maximum number of animals that you would ever confine at one time by the appropriate factor, then add all AU together on Table 1 (page 4). Use the maximum market weight for the appropriate animal species to select the AU factor.

You must complete all applicable columns in Table 1. Use column a) to calculate the existing AUC, before permit for existing operations only. Use column b) to calculate the 'Total proposed AUC' (after a permit is issued) including new operations. The number obtained in column b) is the AUC of the operation and must be used to determine permit requirements. Use column c) to calculate the 'New AU' to be added to an existing operation. To calculate the indemnity fee (see page 7), also use column c), however, if the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in the "New AU" (column c).

In calculating the AUC of a confinement feeding operation, you must include the AUC of all confinement buildings which are part of the confinement feeding operation, unless a confinement building has been abandoned. A confinement feeding operation structure[1] is abandoned if the confinement feeding operation structure[1] has been razed, removed from the site of a confinement feeding operation, filled in with earth, or converted to uses other than a confinement feeding operation structure[1] so that it cannot be used as a confinement feeding operation structure[1] without significant reconstruction. Therefore, in Table 1, enter the animal unit capacity of all the confinement buildings, including those that are from an "adjacent" operation located within 2,500 feet. For more information, contact the AFO Program at (515) 281-8941.

Table 1. Animal Unit Capacity (AUC): **(No. HEAD) x (FACTOR) = AUC**

Animal Species	a) Existing AUC (Before permit)			b) Total Proposed AUC (After permit)		
	(No. Head)	x (Factor)	= AUC	(No. Head)	x (Factor)	= AUC
Slaughter or feeder cattle		1.0			1.0	
Immature dairy cattle		1.0			1.0	
Mature dairy cattle		1.4			1.4	
Gestating sows	600	0.4	240	1265	0.4	506
Farrowing sows & litter	150	0.4	60	240	0.4	96
Boars		0.4		10	0.4	4
Gilts		0.4		150	0.4	60
Finished (Market) hogs	3200	0.4	1280	3200	0.4	1280
Nursery pigs 15 lbs to 55 lbs	600	0.1	60	600	0.1	60
Sheep and lambs		0.1			0.1	
Horses		2.0			2.0	
Turkeys 7lbs or more		0.018			0.018	
Turkeys less than 7 lbs		0.0085			0.0085	
Broiler/Layer chickens 3 lbs or more		0.01			0.01	
Broiler/Layer chickens less than 3 lbs		0.0025			0.0025	

Note: If the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in the "New AU" (column c)

TOTALS: **a) Existing AUC:** 1640 **b) Total proposed AUC:** 2006 **c) New AU = b) - a):** 366

(This is the AUC of the operation)

B) Calculating AWC - Only for operations first constructed prior to March 1, 2003

The AWC is needed for an operation that was first constructed prior to March 1, 2003, to determine some of the minimum separation distance requirements for construction or expansion.

The AWC is the product of multiplying the maximum number of animals that you would ever confine at any one time by their average weight (lbs) during the production cycle. Then add the AWC if more than one animal species is present (examples on how to determine the AWC are provided in 567 IAC 65.1(455B).)

If the operation was first constructed prior to March 1, 2003, you must complete all applicable columns in Table 2:

Table 2. Animal Weight Capacity (AWC): **(No. head) * (Avg. weight, lbs) = AWC, lbs**

Animal Species	a) Existing AWC (Before Permit)			b) Proposed AWC (After permit)		
	(No. head) x	avg weight	= AWC	(No. head) x	avg weight	= AWC
Slaughter or feeder cattle						
Immature dairy cattle						
Mature dairy cattle						
Gestating sows	600	400	240000	1265	400	506000
Farrowing sows & litter	150	450	67500	240	450	108000
Boars				10	400	4000
Gilts				150	300	45000
Finished (Market) hogs	3200	150	480000	3200	150	480000
Nursery pigs 15 lbs to 55 lbs	600	35	21000	600	35	21000
Sheep and lambs						
Horses						
Turkeys 7lbs or more						
Turkeys less than 7 lbs						
Broiler/Layer chickens 3 lbs or more						
Broiler/Layer chickens less than 3 lbs						

TOTALS: **a) Existing AWC:** 808500 **b) Total proposed AWC:** 1164000 **c) New AWC = b) - a):** 355500

(This is the AWC of the operation)

ITEM 5 – SUBMITTAL REQUIREMENTS Checklists No. 1 or 2 (pages 10-16) describe the submittal requirements, which are based on the type of confinement feeding operation structure[1] and AUC proposed. To determine which checklist to use, choose the option that best describes your confinement feeding operation:

A) ☐ **Formed manure storage structures[2]**: The proposed confinement feeding operation structure[1] will be or will use a formed manure storage structure[2]. Check one of the following boxes:

1. ☐ A swine farrowing and gestating operation with an AUC of 1,250 AU or more. Use submittal checklist No. 2 (page 13.)
2. ☐ A swine farrow-to-finish operation with an AUC of 2,750 AU or more. Use submittal checklist No. 2 (page 13.)
3. ☐ A cattle confinement feeding operation (including dairies) with an AUC of 4,000 AU or more. Use submittal checklist No. 2 (page 13.)
4. ☐ Other confinement feeding operations with an AUC of 3,000 AU or more. Use submittal checklist No. 2 (page 13.)
5. ☒ None of the above. Use Submittal Checklist No. 1 (page 10.)

If any of boxes 1 to 4 are checked, the operation meets the threshold requirements for an engineer[4] and a Professional Engineer (PE), licensed in Iowa, is required. For these cases, use Submittal Checklist No. 2 (pages 13-15.)

If you checked box 5, your operation is below threshold requirements for an engineer[4] and a Professional Engineer (PE) is not required. Use Submittal Checklist No. 1 (pages 10-12).

B) ☐ **Unformed manure storage structure[3]**: The proposed confinement feeding operation structure[1], will be or will use an unformed manure storage structure[3] or an egg washwater storage structure. A Professional Engineer (PE) licensed in Iowa must design and sign the engineering documents for any size of operation. Use Submittal Checklist No. 2 (pages 13-15) and Addendum "A" (page 16).

ITEM 6 – SIGNATURE:

I hereby certify that the information contained in this application is complete and accurate.

Signature of Owner(s): _____ Date: 12/24/12

_____

MAILING INSTRUCTIONS:

To expedite the application process, follow the submittal requirements explained in Checklist No. 1 or 2 (pages 10 to 16), whichever applies. Page 1 of this form should be the first page of the package. Mail all documents and fees to:

Iowa DNR
AFO Program
502 East 9th St.
Des Moines, IA 50319-0034

(Note: Incomplete applications will be returned to the sender. Application documents submitted to the Field Office will delay the application process).

Questions

Questions about construction permit requirements or regarding this form should be directed to an engineer of the animal feeding operations (AFO) Program at (515) 281-8941 or go to http://www.iowadnr.gov (select the link to "Animal Feeding Operations"). To contact the appropriate DNR Field Office, go to http://www.iowadnr.gov/fo/index.html.

[4] Threshold requirements for an engineer apply to the construction of a formed manure storage structure[2]. Operations that meet or exceed the threshold requirements for an engineer, are required to submit engineering documents signed by a professional engineer licensed in the state of Iowa. Please refer to Checklist No. 2 (pages 13 to 15.)

ITEM 7

Interested Parties Form
Confinement Feeding Operation

Interest means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly or indirectly through a spouse or dependent child, or both.

INSTRUCTIONS:

Please list all persons (including corporations, partnerships, etc.) who have an interest in any part of the confinement feeding operation covered by this permit application.

Full Name	Address	City/State	Zip
Dennis Kirby	22293 200th Ave.	Davenport/IA	52804
Shelie A. Kirby	22293 200th Ave.	Davenport/IA	52804

For each name above, please list below all other confinement feeding operations in Iowa in which that person has an interest. Check box "**None**", below, if there are no other confinement feeding operations in Iowa in which the above listed person has an interest.

Operation Name	Location (1/4 1/4, 1/4, Section, Tier, Range, Township, County)	City
☒ **None** [There are no other confinements in Iowa in which the above listed person(s) has or have an interest].		

I hereby certify that the information provided on this form is complete and accurate.

Signature of Owner(s): Dennis L. Kirby Date: 12/23/12

ITEM 8

Manure Storage Indemnity Fee Form for Construction Permits

CASHIER'S USE ONLY
0474-542-474A-0431
Facility ID #
County

Credit fees to: Dennis Kirby

Name of operation: Kirby Farms Inc.

NSTRUCTIONS:

1) Use the 'Total Proposed AUC' from column b), Table 1 (page 4), to select the appropriate fee line in the table below. The 'Total Proposed AUC' is the AUC of the operation.

2) Select the animal specie and row number (see examples). Enter the 'New AU' from column c), Table 1 (page 4). The 'New AU' is the number of AU to be added to an existing operation or being proposed with a new operation. **Note**: If the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in "New AU" (column c).

3) Multiply the 'New AU' by the appropriate 'Fee per AU'. The resulting number is the indemnity fee due.

- **Example 1**: An existing swine operation is expanding from an 'Existing AUC' of 1,000 AU to a 'Total Proposed AUC' of 1,800 AU, and has previously paid an indemnity fee for the existing 1,000 AU. Calculate the indemnity fee as follows: The 'Total Proposed AUC' is between 1,000 AU and 3,000 AU; the animal specie is other than poultry; enter 800 AU in the 'New AU' column, row 4, and multiply it by $ 0.15:
  (800 AU) x ($ 0.15 per AU) = $ 120.00

- **Example 2**: An existing poultry operation is expanding from an 'Existing AUC' of 250 AU to a 'Total Proposed AUC' of 2,000 AU and has not paid the indemnity fee for animals housed in the existing buildings. Calculate the indemnity fee as follows: The 'Total Proposed AUC' is between 1,000 AU and 3,000 AU; the animal specie is poultry and the indemnity fee has not previously been paid, enter 2,000 AU in the 'New AU' column on row 3, and multiply it by $0.06:
  (2,000 AU) x ($ 0.06 per AU) = $ 120.00

- **Example 3**: If you are proposing a new swine confinement feeding operation with a 'Total Proposed AUC' of 3,500 AU, enter 3,500 AU in the 'New AU' column, row 6 and multiply it by $ 0.20:
  (3,500 AU) x ($ 0.20 per AU) = $ 700.00

- **Example 4**: If you are applying for a construction permit but you are not increasing the AUC of the operation, and has previously paid the applicable indemnity for the animals housed in the existing buildings, there is no indemnity fee due ($ 0.00). If no indemnity fee is due, do not submit this page.

Indemnity Fee Table:

Total Proposed AUC - (After permit) from column b), Table 1	Row	Animal species	New AU - from column c), Table 1	x	Fee per AU	Indemnity Fee
Less than 1,000 AU	1	Poultry		x	$ 0.04 =	
	2	Other		x	$ 0.10 =	
1,000 AU or more to less than 3,000 AU	3	Poultry		x	$ 0.06 =	
	4	Other	366	x	$ 0.15 =	54.90
3,000 AU or more	5	Poultry		x	$ 0.08 =	
	6	Other		x	$ 0.20 =	

ITEM 8 (Cont.)

Filing Fees Form for Construction Permits

CASHIER'S USE ONLY
0473-542-473A-0431
0474-542-474A-0431
Facility ID #
County

Credit fees to: Dennis Kirby

Name of operation: Kirby Farms Inc.

INSTRUCTIONS:

1. If the operation is applying for a construction permit enclose a payment for the following:

   ☒ Construction application fee $ 250.00.
   (Note: This fee is non-refundable)

2. A manure management plan must be submitted and you must also pay the following:

   ☒ Manure management plan filing fee $ 250.00
   (Note: This fee is non-refundable)

3. Total filing fees: Add the fees paid in items 1 and 2 (above): $ 500.00

SUMMARY:

- Manure Storage Indemnity Fee (see previous page) to be deposited in the Manure Storage Indemnity Fee Fund (474)	$	54.90
- Total filing fees (see item 3 on this page) to be deposited in the Animal Agriculture Compliance Fund (473)	$	500.00
TOTAL DUE:	$	554.90

4. Make check payable to: Iowa Department of Natural Resources or Iowa DNR; and send it along with the construction application documents (See submittal checklist No. 1 or 2, pages 10-15.) Note: Do not send this fee to the county.

ITEM 9

COUNTY VERIFICATION RECEIPT OF DNR CONSTRUCTION PERMIT APPLICATION

This form provides proof that the County Board of Supervisors has been provided with a complete copy of the construction permit application documents (everything except the fees) for the confinement feeding operation:

Owner: Dennis Kirby Telephone: 563-285-7319

Name of operation: Kirby Farms Inc.

Location:	SW	SW	21	79N & 4E	Lincoln	Scott
	(1/4 1/4)	(1/4)	(Section)	(Tier & Range)	(Name of Township)	(County)

Documents being submitted to the county:

- ☒ Construction permit application form: submit items 1 to 9 (see Submittal Checklist No. 1 or 2)
- ☒ Attachment 1 - Aerial photos: Must clearly show the location of the proposed confinement feeding operation structure[1] and that all the separation distances are met, including those claimed for points in the master matrix (if applicable).
- ☒ Attachment 2 - Statement of design certification, submit any of the following (see Checklist No. 1 or 2):
  - ☒ Construction Design Statement form
  - ☐ Professional Engineer (PE) Design Certification form
  - ☐ Engineering report, construction plans and technical specifications
  - ☐ In addition, if proposing an unformed manure storage structure[3] or an egg washwater storage structure submit documentation required in Addemdum "A" of this construction application form.
- ☒ Attachment 3 - Manure management plan.
- ☒ Attachment 4 - Master Matrix (if required). You must include supporting documents (see Checklist No. 1 or 2)

THIS SECTION IS RESERVED FOR THE COUNTY

As soon as DNR receives a construction permit application, the DNR will fax your County Auditor a "Courtesy reminder letter" explaining what actions your County Board of Supervisors must complete and the deadlines.

Public Notice is required for **all** construction permit applications, including those applications not required to be evaluated with the master matrix and applications in counties not participating in the Master matrix.

Counties participating in the master matrix: the county's master matrix evaluation and county's recommendation is required for the following cases:

- A new confinement feeding operation that is applying for a construction permit
- An existing confinement feeding operation that was first constructed on or after April 1, 2002 that is applying for a construction permit.
- An existing confinement feeding operation that was first constructed prior to April 1, 2002 that is applying for a construction permit with an animal unit capacity (AUC) is 1,667 animal units (AU) or more.

I have read and acknowledge the county's duty with this construction permit application, as specified in 567 IAC 65.10(455B) and Iowa Code 459.304. On behalf of the Board of Supervisors for:

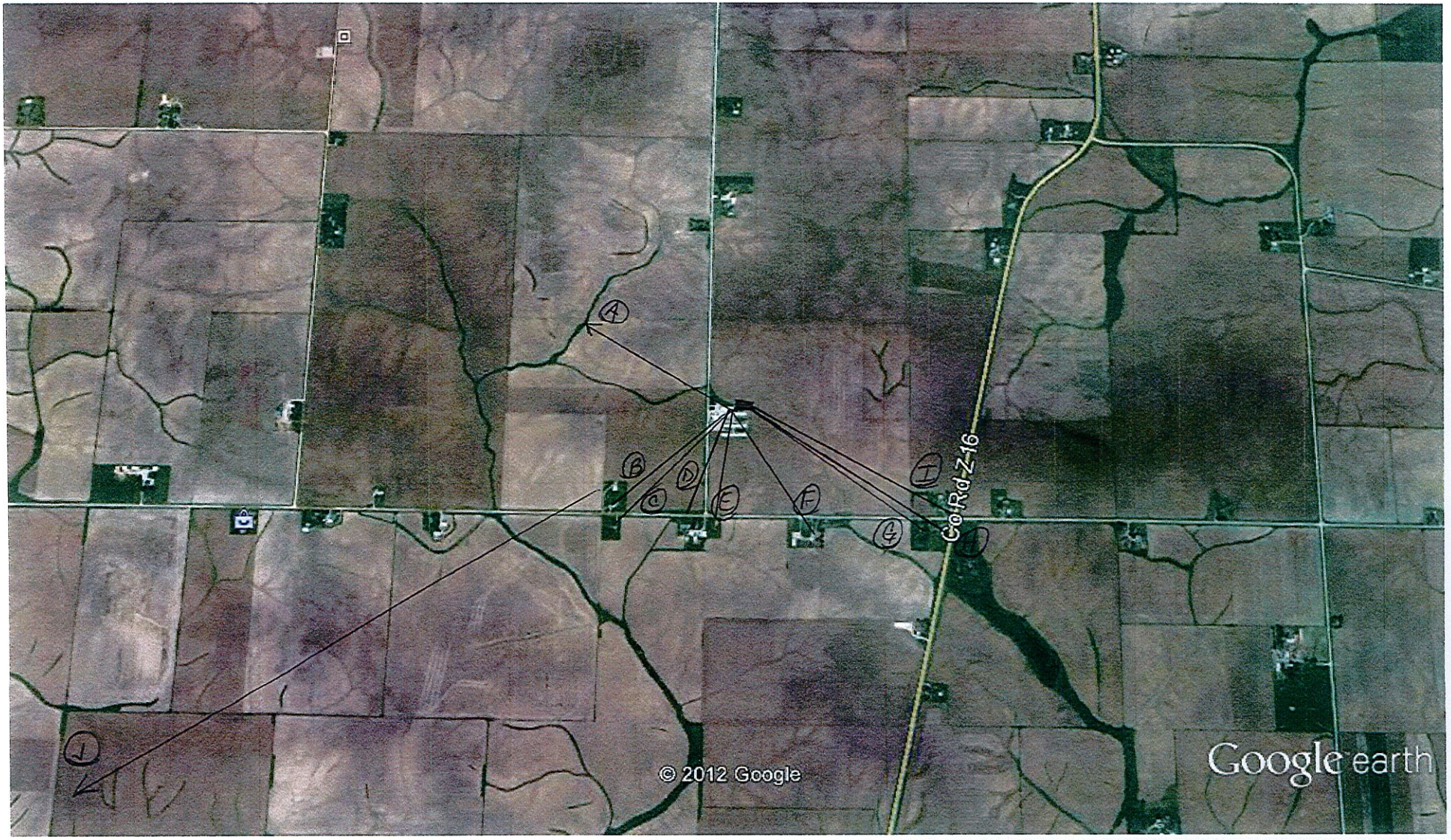
COUNTY: _____

NAME: _____

TITLE: _____
(Member of the County Board of Supervisors or its designated official/employee)

Date: _____, 20____.

If you do not receive the courtesy reminder letter within a reasonable time, or if you have any questions, please contact the animal feeding operations (AFO) Program at (515) 281-8941 or visit www.IowaDNR.gov



Google earth

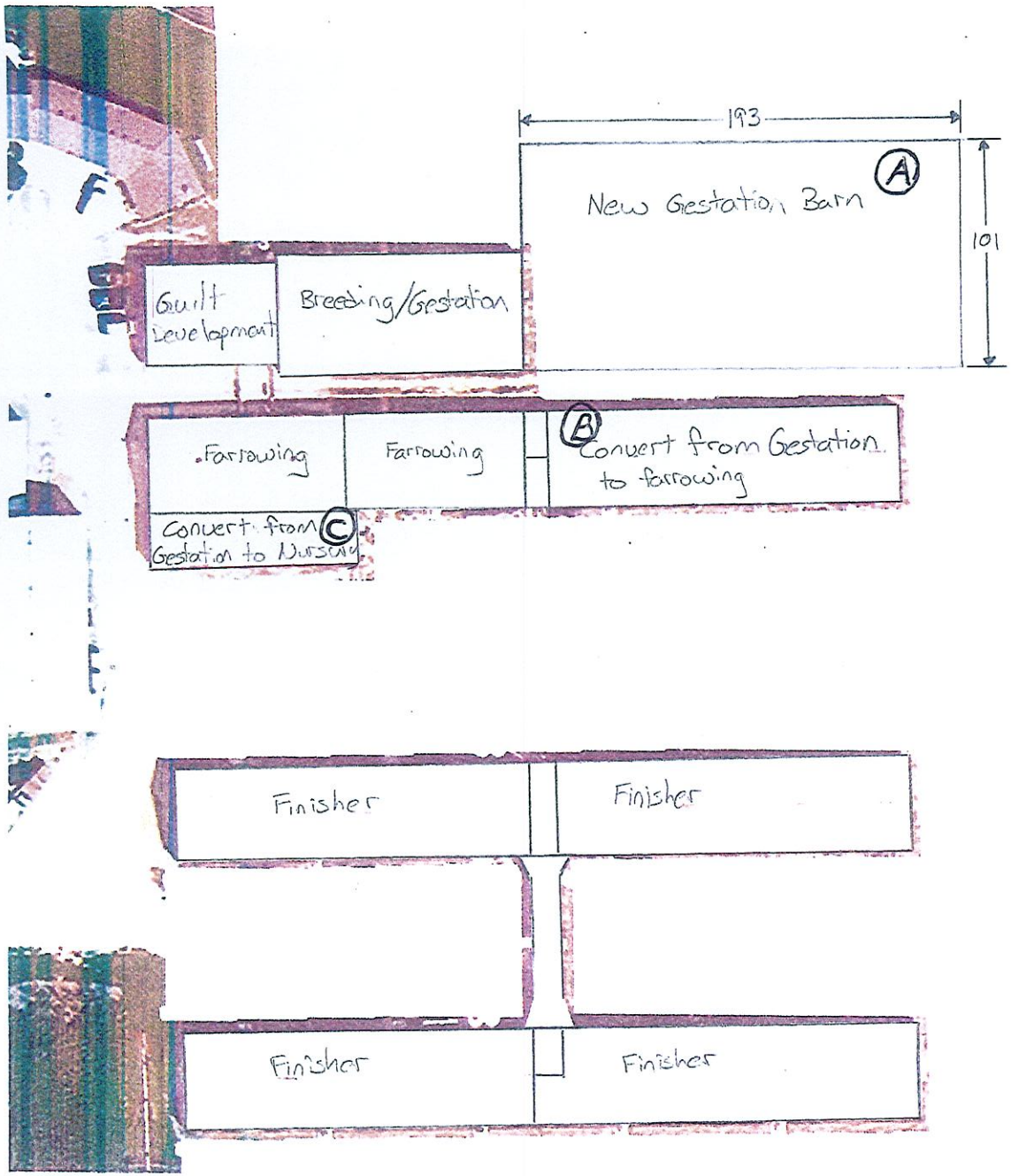
miles 2
km 3

Ⓐ nearest surface water ~2200' (MM #4)
Ⓑ neighbor ~1830'
Ⓒ neighbor ~2100'
Ⓓ neighbor ~1560'
Ⓔ neighbor ~1550'
Ⓕ neighbor ~1800'
Ⓖ neighbor ~2600'
Ⓗ cemetary - Public use area ~2800' (MM #2)
Ⓘ neighbor ~2600'
Ⓙ Major water sources - Mt Joy ~13500'

Google earth

feet 600
meters 100

distance to well ~265'
distance to road ~308'


193
New Gestation Barn
A
101
Gilt Development
Breeding/Gestation
Farrowing
Farrowing
B
Convert from Gestation to farrowing
Convert from Gestation to Nursery
C
Finisher
Finisher
Finisher
Finisher

Construction Design Statement (CDS)

Instructions:

1. This form is for new or expanding confinement feeding operations with an AUC[1] of more than 500 AU, not required to have a professional engineer (PE)[2], that are proposing to construct a formed manure storage structure[3].
2. Complete and submit Sections 1, 2 and 3 (pages 1 to 5).
3. Complete and submit Section 4 (page 6) only if you are applying for a construction permit and are constructing three or more confinement feeding operation structures[4].
4. Mail only pages 1 to 5, and page 6 (if applicable) as instructed on page 6. Do not mail the remainder of this form.
5. If the site-specific design is sealed by a PE[2], do not use this CDS instead use DNR Form 542-8122.

Section 1 - Information about the proposed formed manure storage structure[3](s)

A) Information about the operation:

Name of operation: KIRBY FARMS INC. Facility ID No. :

Location:	SW	SW	21	T79N, R4E	LINCOLN	SCOTT
	(¼ ¼)	(¼)	(Section)	(Tier & Range)	(Name of Township)	(County)

B) Description of the proposed formed manure storage structure[3]. Include dimensions (length, width, or diameter, depth). Indicate if it is aboveground or belowground; covered or uncovered, made of concrete or steel. If necessary attach more pages:

101'10" x 209'4" x 10' Deep, Belowground, Covered, Concrete Pit Foundation

C) Karst Determination: Go to http://www.iowadnr.gov, select the link to 'Environment' then click on 'Mapping and GIS'. then click on AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the karst box is checked in the left legend. If you cannot access the map, or if you have questions about this issue, contact the AFO Engineer at 712-262-4177. Check one of the following:

- [■] The site is not in karst or potential karst. Print and enclose the map with the name and location of the site clearly marked.
- [ ] The Siting Atlas has indicated that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" must be used. Complete and sign Section 3,H (page 5).

D) Alluvial Soils Determination: Go to http://www.iowadnr.gov, select the link to 'Environment' then click on 'Mapping and GIS' then click on AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the alluvial box is checked in the left legend. If you cannot access the map, or if you have questions about this issue, contact DNR Flood Plain at 1-866-849-0321. Check one of the following:

- [■] The site is not in alluvial soils. Print and enclose the map with the name and location of the site clearly marked.
- [ ] If the site is in alluvial soils contact DNR Flood Plain at 866-849-0321. You will be required to submit a petition for a declaratory order if less than 1000 AU or request a flood plain determination if 1000 AU or greater. After receiving Flood Plain determination, submit one of the following:
  - [ ] Include correspondence from the DNR showing the site is not in 100-year flood plain or does not require a Flood Plain permit. .
  - [ ] Include copy of the Flood Plain permit if a Flood Plain permit is required.

Section 2 - Manure management plan:

[■] An original manure management plan (MMP) is enclosed with this form, even if a MMP was previously filed.

Dennis Kirby — Owner's Name (print)

Owner's Signature

12/23/12 — Date

[1] To determine the AUC see the 'Manure Storage Indemnity Fee' (Form 542-4021) or the 'Construction Permit Application' (Form 542-1428), or visit http://www.iowadnr.gov
[2] PE is a professional engineer licensed in the state of Iowa or a NRCS-Engineer working for the USDA-Natural Resources Conservation Service (NRCS).
[3] Formed manure storage structure means a covered or uncovered concrete or steel tank, including concrete pits below the floor.
[4] Confinement feeding operation structure = A confinement building, a formed or unformed manure storage structure, or an egg washwater storage structure.

Section 3 - Construction design standards: The person responsible for constructing the formed manure storage structure(s)[3] must complete pages 2 to 5.

A) Liquid and semi-liquid manure: The proposed formed manure storage structure[3] will be (check one):

- A.1 ☒ A non-circular concrete tank, belowground, with walls laterally braced or below the building concrete pit designed according to 567 IAC Chapter 65, Appendix D.
- A.2 ☐ A non-circular concrete tank, belowground, walls designed according to MidWest Plan Service (MWPS), publication MWPS-36. Include design calculations.
- A.3 ☐ A circular concrete tank, walls designed according to MidWest Plan Service (MWPS), publication MWPS TR-9. Include design calculations.
- A.4 ☐ Will be made of steel, constructed aboveground according to the manufacturer's recommendations.

B) Dry manure: The proposed formed manure storage structure[3] will be (check one):

- B.1 ☐ An aboveground concrete tank, with walls designed according to MWPS-36. Include design calculations.
- B.2 ☐ Will be made of steel, constructed aboveground according to the manufacturer's recommendations.
- B.3 ☐ Will be a belowground or partially belowground concrete tank, with walls laterally braced designed according to 567 IAC Chapter 65, Appendix D or MWPS-36. Include design calculations.

C) Details of the proposed design: Submit an additional completed copy of this page 2 for each formed manure storage structure[3] that have different dimensions. Complete all of the following information:

Number of buildings: 1 **Building name:** Gestation

Dimensions of proposed formed manure storage structure[3]

	Length	Width	Height or depth	Wall thickness	Diameter (circular tanks only)
Feet	209	101	10	0	
Inches	4	10	0	10	

To determine the appropriate vertical steel in walls, first check one of the following boxes (must check one):

☐ a. To use Tables D-1 and D-2 (on pages 7-8), backfilling of walls shall be performed with gravel, sand, silt, and clay mixtures (less than 50 percent fines), with coarse sand with silt or clay (less than 50 percent fines), or cleaner granular material (see page 9 for the unified soils classification). You will need to submit a copy of a USDA soil survey map with the proposed location of the formed manure storage structures[3] clearly marked showing the unified soil classification; or a statement signed by a qualified organization or NRCS staff.

☒ b. Use Tables D-3 and D-4 (on pages 8-9) if backfilling of walls will be performed with soils that are unknown or with low plasticity silts and clays with some sand or gravel (50 percent or more fines); or fine sands with silt or clay (less than 50 percent fines); or low to medium plasticity silts and clays with little sand or gravel (50 percent or more fines); or high plasticity silts and clays (see page 9 for unified soils classification). You must use Tables D-3 and D-4 if you do not submit the soils information requested in box "a", above.

Maximum spacing of steel, in inches

Description of reinforcing steel in walls	Proposed vertical steel in walls (see boxes "a" and "b", above)				Proposed horizontal steel in walls (use Table D-5)
	Walls where vehicles are not allowed within 5 feet (use Table D-1)[a]	All walls with pumpout ports and walls where vehicles are allowed within 5 feet (use Table D-2)[a]	Walls where vehicles are not allowed within 5 feet (use Table D-3)[b]	All walls with pumpout ports and walls where vehicles are allowed within 5 feet (use Table D-4)[b]	
Grade 40, No. 4					
Grade 40, No. 5					
Grade 60, No. 4					
Grade 60, No. 5				10"	17"

D) Aboveground tanks or partially aboveground tanks: Liquid and semi-liquid manure (check the following box):

☐ If the proposed tank is to be constructed **aboveground or partially aboveground** and will have an external outlet or inlet below the liquid level, the tank will also be constructed according to the 567 IAC 65.15(20).

E) Steel Tanks: Certification that the tank will be constructed according to the tank manufacturer's specifications:

Name of tank manufacturer company: _____

Address: _____

Telephone: _____ Fax: _____

F) **Additional construction design standards:**

To determine the additional requirements set forth in 567 IAC 65.15(14) that would apply to the proposed formed manure storage structure[3], check any of the following 3 boxes based on the information entered on Sections 3.A or 3.B (page 2):

- ☒ If you checked boxes A.1, A.2, A.3 or B.3 (on page 2) **all** of the following 15 additional requirements apply. Complete the numbered items 1 to 15 (below).
- ☐ If you checked box B.1 (on page 2), only the requirements of numbered items 1, 3, 4, 5, 6, 8 and 12 apply and need to check those boxes (below).
- ☐ If you checked boxes A.4 or B.2 (on page 2) and the steel tank will have a concrete floor, only the requirements of numbered items 1, 2, 3, 4, 5, 8, 9, 12, apply and need to check those boxes (below).

Additional Requirements that will be followed during construction of the formed manure storage structure(s)[3]:

1. Site preparation (check the following box):
   - ☒ The finished subgrade of a formed manure storage structure shall be graded and compacted to provide a uniform and level base and shall be free of vegetation, manure and debris. For the purpose of this subrule, "uniform" means a finished subgrade with similar soils.

2. Groundwater separation requirements (check one of the following boxes):
   - ☒ When the groundwater table, as determined in 65.15(7)*"c,"* is above the bottom of the formed structure, a drain tile shall be installed along the footings to artificially lower the groundwater table pursuant to 65.15(7)*"b"(2).* The drain tile shall be placed within 3 feet of the footings as indicated in Appendix D, Figure D-1, at the end of this chapter and shall be covered with a minimum of 2 inches of gravel, granular material, fabric or a combination of these materials to prevent plugging the drain tile. A device to allow monitoring of the water in the drainage tile lines installed to lower the groundwater table and a device to allow shutoff of the drainage tile lines shall be installed if the drainage tile lines do not have a surface outlet accessible on the property where the formed manure storage structure is located.

   - ☐ In lieu of the drain tile, a certification signed by a PE[2], a groundwater professional certified pursuant to 567 Chapter 134, or a qualified staff from NRCS, is being submitted indicating that the groundwater elevation, according to 65.15(7)"c", is below the bottom of the formed structure.

3. Minimum as-placed concrete compressive strength (check the following box):
   - ☒ All concrete shall have the following minimum as-placed compressive strengths and shall meet American Society for Testing and Materials (ASTM) standard ASTM C 94: 4,000 pounds per square inch (psi) for walls, floors, beams, columns and pumpouts and 3,000 psi for the footings. The average concrete strength by testing shall not be below design strength. No single test result shall be more than 500 psi less than the minimum compressive strength.

4. Cement and aggregates specifications (check the following box):
   - ☒ Cementitious materials shall consist of Portland cement conforming to ASTM C 150. Aggregates shall conform to ASTM C 33. Blended cements in conformance with ASTM C 595 are allowed only for concrete placed between March 15 and October 15. Portland-pozzolan cement or Portland blast furnace slag blended cements shall contain at least 75 percent, by mass, of Portland cement.

5. Concrete consolidation and vibration requirements (check the following box):
   - ☒ All concrete placed for walls shall be consolidated or vibrated, by manual or mechanical means, or a combination, in a manner which meets ACI 309.

6. Minimum rebar specifications: (check the following box):
   - ☒ All rebar used shall be a minimum of grade 40 steel. All rebar, with the exception of rebar dowels connecting the walls to the floor or footings, shall be secured and tied in place prior to the placing of concrete.

7. Wall reinforcement placement specifications (check the following box):
   - ☒ All wall reinforcement shall be placed so as to have a rebar cover of 2 inches from the inside face of the wall for a belowground manure storage structure. Vertical wall reinforcement should be placed closest to the inside face. Rebar placement shall not exceed tolerances specified in ACI 318.

8. Minimum floor specifications. Complete part a) and b):

a) Floor thickness requirements (check the following box):

☒ The floor slab shall be a minimum of 5 inches thick. Nondestructive methods to verify the floor slab thickness may be required by the department. The results shall indicate that at least 95 percent of the floor slab area meets the minimum required thickness. In no case shall the floor slab thickness be less than 4½ inches.

b) The floor slab reinforcement shall be located in the middle of the thickness of the floor slab (check one of the following boxes):

☒ Formed manure storage structures with a depth of 4 feet or more shall have primary reinforcement consisting of a minimum of #4 rebar placed a maximum of 18 inches on center in each direction placed in a single mat.

☐ Formed manure storage structure with a depth less than 4 feet shall have shrinkage reinforcement consisting of a minimum of 6 × 6-W1.4 × W1.4 welded wire fabric.

9. Minimum footing specifications (check the following box):

☒ The footing or the area where the floor comes in contact with the walls and columns shall have a thickness equal to the wall thickness, but in no case be less than 8 inches, and the width shall be at least twice the thickness of the footing. All exterior walls shall have footings below the frostline. Tolerances shall not exceed -½ inch of the minimum footing dimensions.

10. Requirement to connect walls to footings (check one of the following boxes):

☐ The vertical steel of all walls shall be extended into the footing, and be bent at 90°, **OR**

☒ A separate dowel shall be installed as a #4 rebar that is bent at 90° with at least 20 inches of rebar in the wall and extended into the footing within 3 inches of the bottom of the footing and extended at least 3 inches horizontally, as indicated in Appendix D, Figure D-1 (page 10). Dowel spacing (bend or extended) shall be the same as the spacing for the vertical rebar.

☐ As an alternative to the 90°bend, the dowel may be extended at least 12 inches into the footing, with a minimum concrete cover of 3 inches at the bottom, as indicated in Appendix D, Figure D-1 (page 10). Dowel spacing (bend or extended) shall be the same as the spacing for the vertical rebar.

☐ In lieu of dowels, mechanical means or alternate methods may be used as anchorage of interior walls to footings. Please submit structural calculations and details of this proposal.

11. Concrete forms specifications (check the following box):

☒ All walls shall be formed with rigid forming systems and shall not be earth-formed.

12. Curing of concrete requirements (check the following box):

☒ All concrete shall be cured for at least seven days after placing, in a manner which meets ACI 308, by maintaining adequate moisture or preventing evaporation. Proper curing shall be done by ponding, spraying or fogging water; or by using a curing compound that meets ASTM C 309; or by using wet burlap, plastic sheets or similar materials.

13. Construction joints and waterstops specifications (check the following box):

☒ All construction joints in exterior walls shall be constructed to prevent discontinuity of steel and have properly spliced rebar placed through the joint. Waterstops shall be installed in all areas where fresh concrete will meet hardened concrete as indicated in Appendix D, Figures D-1 and D-2, at the end of this chapter. The waterstops shall be made of plastic, rolled bentonite or similar materials approved by the department.

14. Backfilling of walls specifications (check the following box):

☒ Backfilling of the walls shall not start until the floor slats or permanent bracing have been installed. Backfilling shall be performed with material free of vegetation, large rocks or debris.

15. Additional design requirements (check the following box, if applicable):

☐ A formed manure storage structure with a depth greater than 12 feet shall be designed by a PE or an NRCS engineer.

G) **Construction Certification**: The person responsible for constructing the formed manure storage structure[3] must sign this page. Any change(s) to the specifications of the formed manure storage structure must be first approved by DNR:

"I hereby certify that I have read and understand the minimum design and construction standards of Iowa Code chapter 459, Subchapter III, and the 567 Iowa Administrative Code (IAC) 65.15(14) "Minimum concrete standards" or 567 IAC 65 (if other than concrete). The proposed formed manure storage structure(s)[3] at the operation:

Name of operation: Kirby Farms Inc. County: Scott

Owner's name: Dennis Kirby

will be constructed in accordance with these minimum requirements. Included with this certification are:

- [x] Page 2, for each formed manure storage structure[3] that have different dimensions
- [x] Pages 3 to 5 (applicable sections)
- [x] Other documents (specify): Iowa DNR Alluvial & Karst Soils Map

Darrin Vittetoe	Darrin Vittetoe	12-24-12
(Print name)	(Signature)	(Date)
Custom Builders Inc.	209 W. South St. Tipton, Ia. 52772	563-886-6196
(Company)	(Address)	(Phone No.)

(See page 6 for mailing instructions)

H) **Upgraded Concrete Standards Certification**: If "Yes" was checked in Section 1.C (page 1) --site exhibits karst terrain or drains into a known sinkhole-- the person responsible for constructing the formed manure storage structure must also complete this section:

567 IAC 65.15(14)"c". Karst terrain—upgraded standards. If the site of the proposed formed manure storage structure is located in an area that exhibits karst terrain or an area that drains into a known sinkhole, the minimum concrete standards set forth in 65.15(14)"a" or "b" shall apply. In addition, the following requirements apply to all formed manure storage structures that store nondry or dry manure (check all of the following boxes):

- [ ] (1) A minimum 5-foot vertical separation distance between the bottom of a formed manure storage structure and limestone, dolomite, or other soluble rock is required if the formed manure storage structure is not designed by a PE or an NRCS engineer.
- [ ] (2) If the vertical separation distance between the bottom of the proposed formed manure storage structure and limestone, dolomite, or other soluble rock is less than 5 feet, the structure shall be designed and sealed by a PE or an NRCS engineer who certifies the structural integrity of the structure. A 2-foot-thick layer of compacted clay liner material shall be constructed underneath the floor of the formed manure storage structure. However, it is recommended that any formed manure storage structure be constructed aboveground if the vertical separation distance between the bottom of the structure and the limestone, dolomite, or other soluble rock is less than 5 feet.
- [ ] (3) In addition, in an area that exhibits karst terrain or an area that drains into a known sinkhole, a PE, an NRCS engineer or a qualified organization shall submit a soil exploration study based on the results from soil borings or test pits to determine the vertical separation between the bottom of the formed structure and limestone, dolomite, or other soluble rock. A minimum of two soil borings or two test pits, equally spaced within each formed structure, are required. After soil exploration is completed, each soil boring and pit shall be properly plugged with concrete grout, bentonite, or similar materials.
- [ ] (4) Groundwater monitoring shall be performed as specified by the department.
- [ ] (5) Backfilling shall not start until the floor slats have been placed or permanent bracing has been installed, and shall be performed with material free of vegetation, large rocks, or debris.

"I have read and understand the upgraded concrete standards of IAC 65.15(14)"c", and certify that the proposed formed manure storage structure(s)[3] at the above operation will be constructed according to these standards":

(Print name)	(Signature)	(Date)
(Company)	(Address)	(Phone No.)

(See page 6 for mailing instructions)

Section 4 - Drainage Tile Certification: Required only if applying for a construction permit and constructing three or more confinement feeding operations structures[4]. This page must be completed and signed by the person responsible for excavating the confinement feeding operation structure[4]:

567 IAC 65.15(1) - Drainage tile removal for new construction of a manure storage structure. Prior to constructing a manure storage structure, other than storage of manure in an exclusively dry form, the site for the animal feeding operation structure shall be investigated for drainage tile lines as provided in this subrule. All applicable records of known drainage tiles shall be examined for the existence of drainage tile lines.

c. The applicant for a construction permit for a formed manure storage structure shall investigate for tile lines during excavation for the structure. Drainage tile lines discovered upgrade from the structure shall be rerouted around the formed manure storage structure to continue the flow of drainage. All other drainage tile lines discovered shall be rerouted, capped, plugged with concrete, Portland cement concrete grout or similar materials or reconnected to upgrade tile lines. Drainage tile lines installed at the time of construction to lower a groundwater table may remain where located. A device to allow monitoring of the water in the drainage tile lines installed to lower the groundwater table and a device to allow shutoff of the drainage tile lines shall be installed if the drainage tile lines do not have a surface outlet accessible on the property where the formed manure storage structure is located.

"I certify that I have read and understand the requirements of 567 IAC 65.15(1)"c" and that to the best of my knowledge, information and belief, the proposed confinement feeding operation structures[4] at:

Name of operation: _____ County: _____

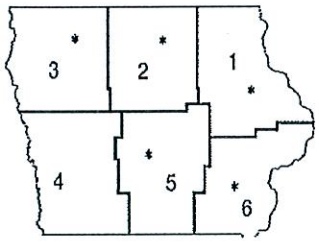
Owner's name: _____

will not impede the drainage of established drainage tile lines which cross their property lines and if construction disturbs drainage tile lines, I will take the necessary measures to reestablish drainage and, upon completion of construction, file a statement that those measures were taken to reestablish drainage."

(Print name)	(Signature)	(Date)
(Company)	(Address)	(Phone No.)

Mailing Instructions: Mail only pages 1 to 5, and page 6 (if applicable) of this CDS according to the following:

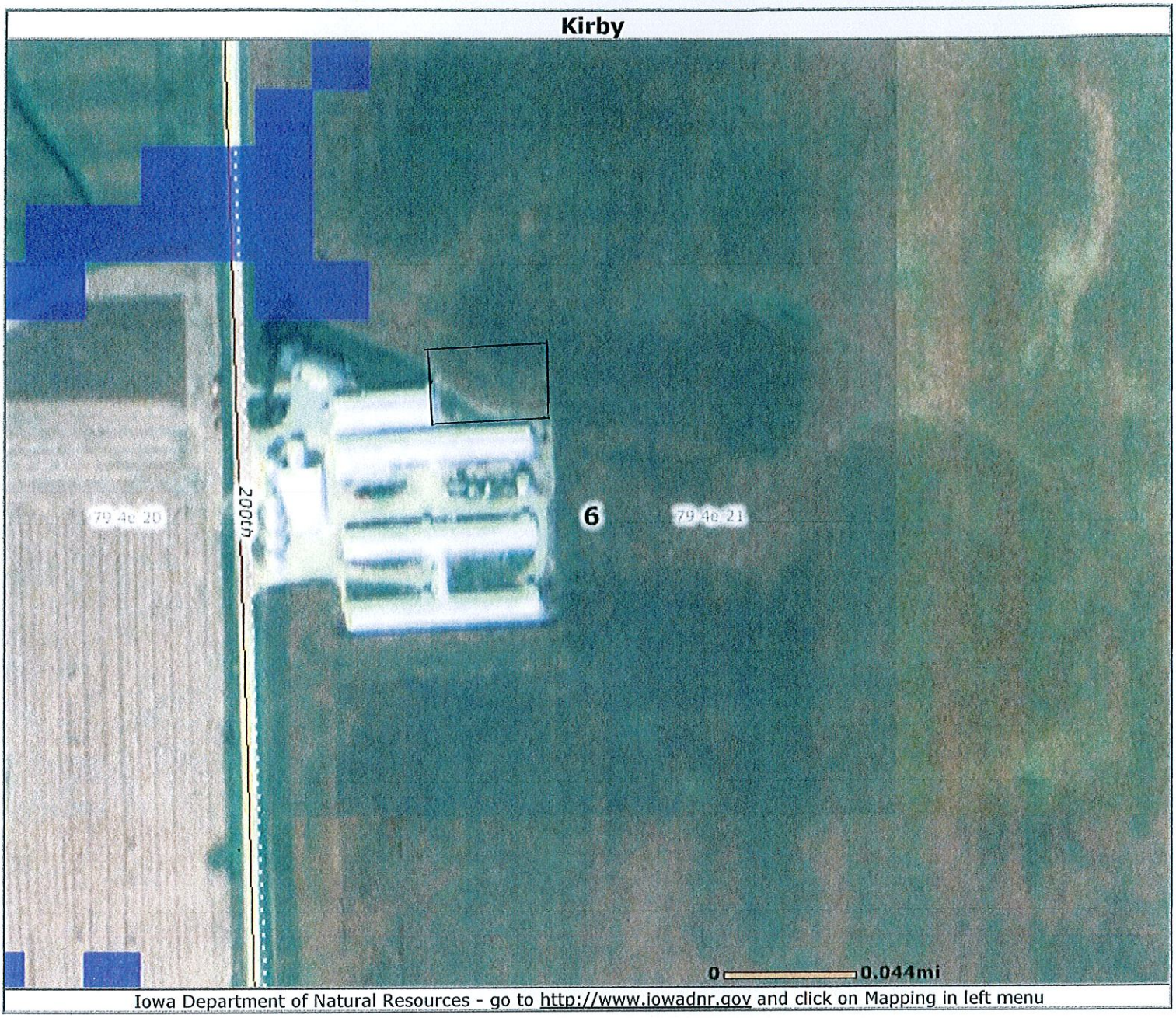
1. Operations not needing a construction permit (AUC[1] between 501 and 999 AU and constructing a formed manure storage structure[3]) but required to submit a manure management plan (MMP), at least **30 days** prior to beginning construction must file this CDS, the required karst and alluvial soils documentation requested in Section 1,C and 1,D (page 1) along with the required MMP documents and fees with the nearest DNR Field Office:



Field Office 1 909 W Main St Ste 4 Manchester, IA 52057 (563) 927-2640	Field Office 3 1900 N Grand Ave Spencer, IA 51301 (712) 262-4177	Field Office 5 401 SW 7th St Ste I Des Moines, IA 50309 (515) 725-0268
Field Office 2 2300 15th St SW Mason City, IA 50401 (641) 424-4073	Field Office 4 1401 Sunnyside Ln Atlantic, IA 50022 (712) 243-1934	Field Office 6 1023 W Madison Washington, IA 52353 (319) 653-2135

2. If a construction permit is required (AUC[1] = 1,000 AU or more and constructing a formed manure storage structure[3]), mail this CDS, the required construction application documents and fees, at least 90 days prior to beginning construction, to allow for all actions required by Iowa law, to the AFO-Program (DNR Field Office 3, 1900 N Grand, Gateway North Ste E17, Spencer IA 51301). You must follow the instructions in the construction application form (DNR Form 542-1428).

If you have any questions regarding the concrete standards requirements and CDS, contact an engineer of the AFO- Program at 712-262-4177, the nearest DNR Field Office, or visit http://www.iowadnr.gov/.



Iowa Department of Natural Resources - go to http://www.iowadnr.gov and click on Mapping in left menu

Iowa Department of Natural Resources
1900 North Grand Ave.
Gateway N Mall, Suite E17
Spencer, Iowa 51301

FAX SHEET

DELIVER TO: Scott County Auditor **PHONE:** 1-563-326-8643

FAX NUMBER: 1-563-326-8257

FROM: Iowa DNR, Paul Petitti

NUMBER OF PAGES (including this cover sheet): 4

MESSAGE: **This is a Courtesy Reminder: Iowa law requires that your board of supervisors publish a notice in the newspaper and submit the board's master matrix scoring and recommendation for the construction permit application of the confinement feeding operation, as explained in the attached letter. Please take note of the deadlines. If you have any questions, please call.**

Our Fax Number is: 712/262-2901

Any problems with transmission call: 712/262-4177

revised 1/2011(lw)

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542-1352.4

Fields of Opportunities

STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

December 28, 2012

Scott County Board of Supervisors
c/o County Auditor
Via facsimile only

REF: Public Notice, Matrix Evaluation and County's Recommendation Required
DNR's Facility ID No. 61851

Dear Board of Supervisors:

The DNR has received a construction permit application for a confinement feeding operation:
Facility name: **Kirby Farms, Inc.**

Under Iowa law, for this application the County is required to complete the following actions:

1. Publish a public notice (see example on page following this letter) in a newspaper having a general circulation in the county no later than 01/15/2013 (within 14 days of DNR's receipt of the application) and furnish proof of publication to the DNR:

   Note: A public hearing is not required, but it is optional. However, if the board chooses to have a public hearing, it is recommended to include in the notice the date, time and place for the hearing.

2. Score the applicant's Master Matrix and submit the board's recommendation regarding this application. The county must submit to the DNR all of the following:

   A) A recommendation to approve or to disapprove the application.
   B) Your scoring of the Matrix, including all supporting calculations.
   C) A copy of the Matrix as approved by the board.
   D) Proof of publication of Public Notice.

Your recommendation and Matrix score must be received by the DNR no later than 1/29/2013 (30 days after DNR received the application).

NOTE: If the County does not submit the Matrix score and recommendation by the deadline, the DNR will not consider any subsequent County's scoring of the Matrix or recommendation until the next time the County is eligible to adopt an evaluation resolution.

3. The board may submit comments or may forward comments from the public, which must be **received** by DNR no later than 01/29/2013. Comments received after that date due will not be considered. Comments may include but are not limited to the following:
   a. The existence of an object or location not included in the application that benefits from a separation distance requirement as provided in section 459.202 or 459.204 or 459.310 of the Code of Iowa.
   b. The suitability of soils and the hydrology of the site where construction of a confinement feeding operation structure is proposed.
   c. The availability of land for the application of manure originating from the confinement feeding operation.
   d. Whether the construction of a proposed confinement feeding operation structure will impede drainage through established tile lines, laterals, or other improvements which are constructed to facilitate the drainage of land not owned by the person applying for the construction permit.

4. The proof of publication, County's recommendation, Matrix scoring, a copy of the Matrix as approved by the board and any public comments must be **received** by IDNR no later than 01/29/2013. To ensure timely submittal, we recommend that you also **fax or scan and email** proof of publication, County's recommendation, Matrix scoring and a copy of the Matrix as approved by the board to:

Send to:

Iowa DNR
Field Office #3
1900 N Grand Ave
Gateway North, Suite E17
Spencer, IA 51301
Attn: Paul Petitti
Paul.Petitti@dnr.iowa.gov

If you have any questions about this process, please contact Paul at (712)262-4177.

Sincerely,

ENVIRONMENTAL SERVICES DIVISION

Paul Petitti

Paul Petitti

Field Services and Compliance Bureau

PUBLIC NOTICE

(This section is to be completed by the applicant)

The Scott County Board of Supervisors, has received a construction permit application for a confinement feeding operation, more specifically described as follows:

Name of Applicant: Dennis Kirby
Location of the operation: Section 21 Lincoln Township.
Type of confinement feeding operation structure‡ proposed: One new deep pit swine gestation barn and conversion of two existing confinement buildings by remodeling at an existing swine confinement facility.

Animal Unit Capacity Of The Operation after Expansion: 2006 animal units.(1265 gestating sows, 240 farrowing sows, 10 boars, 150 gilts, 3200 finishers and 600 nursery swine)

(This section is to be completed by the county)

Examination: The application is on file at the County _____ Office and is available for public inspection during the following days: _____ and hours: _____ am to _____pm.
Comments: Written comments may be filed at the County _____ Office, until the following deadline: _____.

‡ A confinement feeding operation structure = a confinement building with a below the floor concrete pit; confinement building with an earthen basin or anaerobic lagoon; aboveground steel tank, etc. (see definition in footnote 1, page 1 of this application form).

Manure Management Plan Form
Animal Feeding Operation Information

Instructions: Complete this form for your animal feeding operation. Footnotes are provided on page 4.

The information within this form, and the attachments, describes my animal feeding operation, my manure storage and handling system, and my planned manure management system. I (we) will manage the manure, and the nutrients it contains, as described within this manure management plan (MMP) and any revisions of the plan, individual field information, and field summary sheet, and in accordance with current rules and regulations. Deviations permitted by Iowa law will be documented and maintained in my records.

Signed: Dennis P. Kirby (Signature) Dennis P. Kirby (Print name) **Date:** 12/23/12

Name of operation: Kirby Farms Inc. **Facility ID No.** 61851

Location of the operation: 22293 200th Ave (911 address)

Davenport (Town) IA (State) 52804 (Zip)

SW (1/4 1/4) 1/4 of the SW (1/4) 1/4 of Sec 21 (Section) T 79 N (Tier) R 4 E (Range) Lincoln (Township Name) Scott Co. (County)

Owner and contacts of the animal feeding operation:

Owner Dennis Kirby Phone 563-285-7319

Address 22293 200th Ave, Davenport, IA 52804

E-mail address (optional) _____ Cell phone (optional) _____

Contact person (if different than owner) _____ Phone _____

Address _____

E-mail address (optional) _____ Cell phone (optional) _____

Contract company (if applicable) _____ Phone _____

Address _____

This manure management plan is for: (check one)

___ existing operation, not expanding X existing operation, expanding ___ existing operation, new owner ___ new operation

Construction and Expansion Dates:

1991/1992/1993 1995/1998/2000 1990 date of initial construction; 2005 and all expansions

Table 1. Information about livestock production and manure management system

1	2	3	4	5	6	7	8
Animal type/ Production phase[a]	Max # of animals confined	Manure Storage Structure [b]	N[c]	P_2O_5[c]	gal/space/dy[d]	Days/yr Facility occupied	Annual Manure Produced[e]
Wean/finish (wet/dry)	3200	W-F Deep Pits	54	26	0.73	340	794,000
Gestation & Boars	1275	Gest Deep Pits	15	12	3.10	360	1,423,000
Sow and Litter	240	Gest Deep Pits	15	12	3.10	330	246,000
Nursery	600	Gest Deep Pits	15	12	0.2	330	40,000
Gilt Development	150	Gest Deep Pits	15	12	1.5	360	81,000
						Total Gallons	**2,584,000**

Estimated annual animal production[f]: 10,000 animals/year

Source of Manure Nutrient Content Data (standard tables, manure analysis, other): Manure Tests and pumping records

Sow and Nusery manure to be stored together.

Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by filling in blanks, yellow-colored cells, and drop down menus. Gray shaded cells will calculate automatically. Footnotes are given on pages 4, 5 and 6.

Management Identification (Mgt ID)[g] F - Corn1-Corn2-Soybeans Wean to Finish Bldgs

(identify this application scenario by letter)

Method to determine optimum crop yield[h] Iowa Ag Statistic Yields

Method of application[i] Surface-apply liquid or solid (dry) manure with incorporation within 24 h

If spray irrigation is used, identify method[j]

Timing of application Fall

Application loss factor 0.95

Table 2. Manure nutrient concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton)					
Manure Storage Structure(s)[k]	W-F Deep Pits				
Total N[l]	54	P_2O_5	26		
% TN Available 1st year	100%	2nd year		3rd year	
Available N 1st year[m]	51	2nd year[n]	0	3rd year[o]	0

Table 3. Crop usage rates[p]

lb/bu or lb/ton	N	P_2O_5
Corn	1.2	0.375
Soybean	3.8	0.8
Alfalfa	50	12.5
Other crop	0	0

*Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required)

			Corn	Corn	Soybean	Select Crop
1	Applying Manure For (crop to be grown)[q]		Corn	Corn	Soybean	Select Crop
2	Optimum Crop Yield[h]	bu or ton/acre	193	193	59.9	
3	P_2O_5 removed with crop by harvest[r]	lb/acre	72.4	72.4	47.9	0.0
4	Crop N utilization[s]	lb/acre	232	232	228	0
5a	Legume N credit[t]	lb/acre	50.00	0	0	0
5b	Commercial N planned[u]	lb/acre	5	30	0	
5c	Manure N carryover credit[v]	lb/acre	0	0	0	0
6	Remaining crop N need[w]	lb/acre	177	202	228	0
7	Manure rate to supply remaining N[x]	gal or ton/acre	3400	3900	4400	0
8	P_2O_5 applied with N-based rate[y]	lb/acre	88	101	114	0

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	Commercial P_2O_5 planned[z]	lb/acre	0	0	0	
10	Manure rate to supply P removal[aa]	gal or ton/acre	2800	2800	1800	0
11	Manure rate for P based plan[bb]	gal or ton/acre	3700	3700	0	
12	Manure N applied with P-based plan[cc]	lb/acre	190	190	0	0

Table 6. Application rates that will be carried over to page 3

13	Planned manure application rate[dd]	gal or ton/acre	3400	3900	0	

When applicable, manure application rates must be based on the P index value as follows:
(0-2) N-based manure management.
(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.
(>5-10) Until December 31, 2008, P-based manure management while adopting practices to reduce P index to 5 or below.
(>10) No manure application until practices are adopted to reduce P index to 5 or below

Manure Management Plan Form
Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by fillin

Management Identification (Mgt ID)[g] C-C) Corn-Corn Wean to Finish Bldg
(identify this application scenario by letter)

Method to determine optimum crop yield[h] Iowa Ag Statistic Yields
Method of application[i] Surface-apply liquid or solid (dry) manure with incorporation within 24 h
If spray irrigation is used, identify method [j]

Timing of application Fall
Application loss factor 0.95

Table 2. Manure nutrient concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton)					
Manure Storage Structure(s) [k]	Deep Pit				
Total N [l]	54		P_2O_5	26	
% TN Available 1st year	100%	2nd year		3rd year	
Available N 1st year[m]	51	2nd year[n]	0	3rd year[o]	0

Table 3. Crop usage rates[p]

lb/bu or lb/ton	N	P_2O_5
Corn	1.2	0.375
Soybean	3.8	0.8
Alfalfa	50	12.5
Other crop	0	0

*Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required)

			Corn	Corn	Select Crop	Select Crop
1	Applying Manure For (crop to be grown) [q]					
2	Optimum Crop Yield [h]	bu or ton/acre	193	193		
3	P_2O_5 removed with crop by harvest [r]	lb/acre	72.4	72.4	0.0	0.0
4	Crop N utilization [s]	lb/acre	232	232	0	0
5a	Legume N credit [t]	lb/acre	0.00	0	0	0
5b	Commercial N planned[u]	lb/acre	30	30	0	0
5c	Manure N carryover credit [v]	lb/acre	0	0	0	0
6	Remaining crop N need [w]	lb/acre	202	202	0	0
7	Manure rate to supply remaining N [x]	gal or ton/acre	3900	3900	0	0
8	P_2O_5 applied with N-based rate [y]	lb/acre	101	101	0	0

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	Commercial P_2O_5 planned [z]	lb/acre	0	0	0	0
10	Manure rate to supply P removal [aa]	gal or ton/acre	2800	2800	0	0
11	Manure rate for P based plan [bb]	gal or ton/acre	3000	3000	0	0
12	Manure N applied with P-based plan [cc]	lb/acre	154	154	0	0

Table 6. Application rates that will be carried over to page 3

13	Planned manure application rate [dd]	gal or ton/acre	3900	3900	0	0

When applicable, manure application rates must be based on the P index value as follows:
(0-2) N-based manure management.
(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.
(>5-10) Until December 31, 2008, P-based manure management while adopting practices to reduce P index to 5 or below.
(>10) No manure application until practices are adopted to reduce P index to 5 or below

Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by filling in blanks, yellow-colored cells, and drop down menus. Gray shaded cells will calculate automatically. Footnotes are given on pages 4, 5 and 6.

Management Identification (Mgt ID)[g] S - Corn1-Corn2-Soybeans Sow Manure
(identify this application scenario by letter)

Method to determine optimum crop yield[h] Iowa Ag Statistic Yields
Method of application[i] Surface-apply liquid or solid (dry) manure with incorporation within 24 h
If spray irrigation is used, identify method[j]
Timing of application Fall
Application loss factor 0.95

Table 2. Manure nutrient concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton)					
Manure Storage Structure(s)[k]	Deep Pit				
Total N[l]	15	P_2O_5	12		
% TN Available 1st year	100%	2nd year		3rd year	
Available N 1st year[m]	14	2nd year[n]	0	3rd year[o]	0

Table 3. Crop usage rates[p]

lb/bu or lb/ton	N	P_2O_5
Corn	1.2	0.375
Soybean	3.8	0.8
Alfalfa	50	12.5
Other crop	0	0

*Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required)

			Corn	Corn	Soybean	Select Crop
1	Applying Manure For (crop to be grown)[q]		Corn	Corn	Soybean	Select Crop
2	Optimum Crop Yield[h]	bu or ton/acre	193	193	59.9	
3	P_2O_5 removed with crop by harvest[r]	lb/acre	72.4	72.4	47.9	0.0
4	Crop N utilization[s]	lb/acre	232	232	228	0
5a	Legume N credit[t]	lb/acre	50.00	0	0	0
5b	Commercial N planned[u]	lb/acre	60	110	0	0
5c	Manure N carryover credit[v]	lb/acre	0	0	0	0
6	Remaining crop N need[w]	lb/acre	122	122	228	0
7	Manure rate to supply remaining N[x]	gal or ton/acre	8500	8500	16000	0
8	P_2O_5 applied with N-based rate[y]	lb/acre	102	102	192	0

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	Commercial P_2O_5 planned[z]	lb/acre	0	0	0	0
10	Manure rate to supply P removal[aa]	gal or ton/acre	6000	6000	4000	0
11	Manure rate for P based plan[bb]	gal or ton/acre	8000	8000	0	0
12	Manure N applied with P-based plan[cc]	lb/acre	114	114	0	0

Table 6. Application rates that will be carried over to page 3

13	Planned manure application rate[dd]	gal or ton/acre	8500	8500	0	0

When applicable, manure application rates must be based on the P index value as follows:
(0-2) N-based manure management.
(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.
(>5-10) Until December 31, 2008, P-based manure management while adopting practices to reduce P index to 5 or below.
(>10) No manure application until practices are adopted to reduce P index to 5 or below

Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by filling in blanks, yellow-colored cells, and drop down menus. Gray shaded cells will calculate automatically. Footnotes are given on pages 4, 5 and 6.

Management Identification (Mgt ID)[g] SS - Corn1-Corn2-Soybeans Sow Manure-Surface
(identify this application scenario by letter)

Method to determine optimum crop yield[h] Iowa Ag Statistic Yields
Method of application[i] Surface apply liquid manure with no incorporation
If spray irrigation is used, identify method[j]

Timing of application Fall
Application loss factor 0.75

Table 2. Manure nutrient concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton)					
Manure Storage Structure(s)[k]	Deep Pit				
Total N[l]	15	**P_2O_5**		12	
% TN Available 1st year	100%	**2nd year**		**3rd year**	
Available N 1st year[m]	11	**2nd year[n]**	0	**3rd year[o]**	0

Table 3. Crop usage rates[p]

lb/bu or lb/ton	N	P_2O_5
Corn	1.2	0.375
Soybean	3.8	0.8
Alfalfa	50	12.5
Other crop	0	0

*Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required)

			Corn	Corn	Soybean	Select Crop
1	**Applying Manure For** (crop to be grown)[q]					
2	**Optimum Crop Yield[h]**	bu or ton/acre	193	193	59.9	
3	**P_2O_5 removed with crop by harvest[r]**	lb/acre	72.4	72.4	47.9	0.0
4	**Crop N utilization[s]**	lb/acre	232	232	228	0
5a	**Legume N credit[t]**	lb/acre	50.00	0	0	0
5b	**Commercial N planned[u]**	lb/acre	85	135	0	0
5c	**Manure N carryover credit[v]**	lb/acre	0	0	0	0
6	**Remaining crop N need[w]**	lb/acre	97	97	228	0
7	**Manure rate to supply remaining N[x]**	gal or ton/acre	8600	8600	20200	0
8	**P_2O_5 applied with N-based rate[y]**	lb/acre	103	103	242	0

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	**Commercial P_2O_5 planned[z]**	lb/acre	0	0	0	0
10	**Manure rate to supply P removal[aa]**	gal or ton/acre	6000	6000	4000	0
11	**Manure rate for P based plan[bb]**	gal or ton/acre	8000	8000	0	0
12	**Manure N applied with P-based plan[cc]**	lb/acre	90	90	0	0

Table 6. Application rates that will be carried over to page 3

13	**Planned manure application rate[dd]**	gal or ton/acre	8600	8600	0	0

When applicable, manure application rates must be based on the P index value as follows:
(0-2) N-based manure management.
(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.
(>5-10) Until December 31, 2008, P-based manure management while adopting practices to reduce P index to 5 or below.
(>10) No manure application until practices are adopted to reduce P index to 5 or below

Manure Management Plan Form

Year by Year Manure Management Plan Summary

Instructions: Complete this form for each of the next four growing seasons, to demonstrate sufficient land base to apply manure over multiple crop years. If this page is identical for multiple years (e.g. every other year), submit only once for the identical years, and indicate which years the form represents. Footnotes are given on page 6.

Crop year(s): 2013

1	2	3	4	5	6	7	8	9	10	11
Field Designation [ee]	Field Location ___1/4 of the___ 1/4 Sec___ T___ R___ Townsip Name_____, County Name _____	Mgt Id [ff]	Planned Crop	Acres receiving manure[gg]	Own, rent, agreement (include length of agreement) [hh]	P index value [ii]	HEL (Y/N)[jj]	Planned Application gal/acre	Planned Application gal/field [kk]	Correct Soil Test for P[ll] (Yes or No)
Home	SW 1/4 Sec 21 T79N R4E Lincoln Twp Scott County	CC	C-C	135	Owned	2.20	Y	3900	527,000	Yes
Claussen-N	NE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County		Corn2	122	Rented	2.19	Y	0	0	Yes
Claussen-S	SE 1/4 of the NE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County	F	Corn2	29	Rented	3.46	Y	3900	113,000	Yes
Kyles	S 1/2 of the NW 1/4 Sec 28 T79N R4E Lincoln Twp Scott County	S	Corn2	84	Rented	1.81	Y	8500	714,000	Yes
Olsen	E 1/2 of the NE 1/4 Sec 16 T79N R4E Lincoln Twp Scott County		Soybeans	73	Rented	3.11	Y	0	0	Yes
Elliott	N 1/2 of NE 1/4 and E 1/2 of NW 1/4 Sec 17 T79N R4E Lincoln Twp Scott County		Soybeans	158	Rented	0.73	Y	0	0	Yes
Avery S	S 1/2 of SW 1/4 Sec 16 and NW 1/4 Sec 21 T79N R4E Lincoln Twp Scott County	S	Corn1	230	Rented	1.11	Y	8500	1,955,000	Yes
								0	0	
Geottsch	N 1/2 of the SE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County	F	Corn1	59	Rented	1.92	Y	3400	201,000	Yes
	Total acres available for manure application			890	**Total gallons that could be applied**				3,510,000	

Manure Management Plan Form

Year by Year Manure Management Plan Summary

Instructions: Complete this form for each of the next four growing seasons, to demonstrate sufficient land base to apply manure over multiple crop years. If this page is identical for multiple years (e.g. every other year), submit only once for the identical years, and indicate which years the form represents. Footnotes are given on page 6.

Crop year(s): 2014

1	2	3	4	5	6	7	8	9	10	11
Field Designation [ee]	Field Location ___1/4 of the___ 1/4 Sec___ T___ R___ Townsip Name_____, County Name _____	Mgt Id [ff]	Planned Crop	Acres receiving manure[gg]	Own, rent, agreement (include length of agreement) [hh]	P index value [ii]	HEL (Y/N)[jj]	Planned Application		Correct Soil Test for P[ll] (Yes or No)
								gal/acre	gal/field [kk]	
Home	SW 1/4 Sec 21 T79N R4E Lincoln Twp Scott County	S	C-C	135	Owned	2.17	Y	8500	1,148,000	Yes
Claussen-N	NE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County		Soybeans	122	Rented	2.17	Y	0	0	Yes
Claussen-S	SE 1/4 of the NE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County		Soybeans	29	Rented	3.34	Y	0	0	Yes
Kyles	S 1/2 of the NW 1/4 Sec 28 T79N R4E Lincoln Twp Scott County		Soybeans	84	Rented	1.75	Y	0	0	Yes
Olsen	E 1/2 of the NE 1/4 Sec 16 T79N R4E Lincoln Twp Scott County	F	Corn1	73	Rented	3.08	Y	3400	248,000	Yes
Elliott	N 1/2 of NE 1/4 and E 1/2 of NW 1/4 Sec 17 T79N R4E Lincoln Twp Scott County	F	Corn1	158	Rented	0.66	Y	3400	537,000	Yes
Avery S	S 1/2 of SW 1/4 Sec 16 and NW 1/4 Sec 21 T79N R4E Lincoln Twp Scott County	S	Corn2	230	Rented	1.06	Y	8500	1,955,000	Yes
									0	
Geottsch	N 1/2 of the SE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County	F	Corn2	59	Rented	2.68	Y	3400	201,000	Yes
Total acres available for manure application				890	**Total gallons that could be applied**				4,089,000	

Manure Management Plan Form

Year by Year Manure Management Plan Summary

Instructions: Complete this form for each of the next four growing seasons, to demonstrate sufficient land base to apply manure over multiple crop years. If this page is identical for multiple years (e.g. every other year), submit only once for the identical years, and indicate which years the form represents. Footnotes are given on page 6.

Crop year(s): 2015

1	2	3	4	5	6	7	8	9	10	11
Field Designation [ee]	Field Location ___1/4 of the___ 1/4 Sec___ T___ R___ Townsip Name_____, County Name _____	Mgt Id [ff]	Planned Crop	Acres receiving manure[gg]	Own, rent, agreement (include length of agreement) [hh]	P index value [ii]	HEL (Y/N)[jj]	Planned Application gal/acre	Planned Application gal/field [kk]	Correct Soil Test for P[ll] (Yes or No)
Home	SW 1/4 Sec 21 T79N R4E Lincoln Twp Scott County		C-C	135	Owned	2.17	Y	0	0	Yes
Claussen-N	NE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County	S	Corn1	122	Rented	2.17	Y	8500	1,037,000	Yes
Claussen-S	SE 1/4 of the NE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County	F	Corn1	29	Rented	3.34	Y	3400	99,000	Yes
Kyles	S 1/2 of the NW 1/4 Sec 28 T79N R4E Lincoln Twp Scott County	S	Corn1	84	Rented	1.75	Y	8500	714,000	Yes
Olsen	E 1/2 of the NE 1/4 Sec 16 T79N R4E Lincoln Twp Scott County	F	Corn2	73	Rented	3.08	Y	3900	285,000	Yes
Elliott	N 1/2 of NE 1/4 and E 1/2 of NW 1/4 Sec 17 T79N R4E Lincoln Twp Scott County	F	Corn2	158	Rented	0.66	Y	3900	616,000	Yes
Avery S	S 1/2 of SW 1/4 Sec 16 and NW 1/4 Sec 21 T79N R4E Lincoln Twp Scott County		Soybeans	230	Rented	1.06	Y	0	0	Yes
									0	
Geottsch	N 1/2 of the SE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County		Soybeans	59	Rented	2.68	Y	0	0	Yes
Total acres available for manure application				890	**Total gallons that could be applied**				2,751,000	

Manure Management Plan Form

Year by Year Manure Management Plan Summary

Instructions: Complete this form for each of the next four growing seasons, to demonstrate sufficient land base to apply manure over multiple crop years. If this page is identical for multiple years (e.g. every other year), submit only once for the identical years, and indicate which years the form represents. Footnotes are given on page 6.

Crop year(s): 2016

1	2	3	4	5	6	7	8	9	10	11
Field Designation [ee]	Field Location ___1/4 of the___ 1/4 Sec___ T___ R___ Townsip Name_____, County Name _____	Mgt Id [ff]	Planned Crop	Acres receiving manure[gg]	Own, rent, agreement (include length of agreement) [hh]	P index value [ii]	HEL (Y/N)[jj]	Planned Application		Correct Soil Test for P[ll] (Yes or No)
								gal/acre	gal/field [kk]	
Home	SW 1/4 Sec 21 T79N R4E Lincoln Twp Scott County		C-C	135	Owned	2.17	Y	0	0	Yes
Claussen-N	NE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County	F	Corn2	122	Rented	2.17	Y	3900	476,000	Yes
Claussen-S	SE 1/4 of the NE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County	F	Corn2	29	Rented	3.34	Y	3900	113,000	Yes
Kyles	S 1/2 of the NW 1/4 Sec 28 T79N R4E Lincoln Twp Scott County	F	Corn2	84	Rented	1.75	Y	3900	328,000	Yes
Olsen	E 1/2 of the NE 1/4 Sec 16 T79N R4E Lincoln Twp Scott County		Soybeans	73	Rented	3.08	Y	0	0	Yes
Elliott	N 1/2 of NE 1/4 and E 1/2 of NW 1/4 Sec 17 T79N R4E Lincoln Twp Scott County		Soybeans	158	Rented	0.66	Y	0	0	Yes
Avery S	S 1/2 of SW 1/4 Sec 16 and NW 1/4 Sec 21 T79N R4E Lincoln Twp Scott County	S	Corn1	230	Rented	1.06	Y	8500	1,955,000	Yes
									0	
Geottsch	N 1/2 of the SE 1/4 Sec 20 T79N R4E Lincoln Twp Scott County	F	Corn1	59	Rented	2.68	Y	3400	201,000	Yes
	Total acres available for manure application			890	**Total gallons that could be applied**				3,073,000	

\\\\ = Land application ground

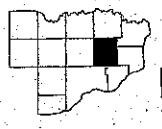
⊗ = site location

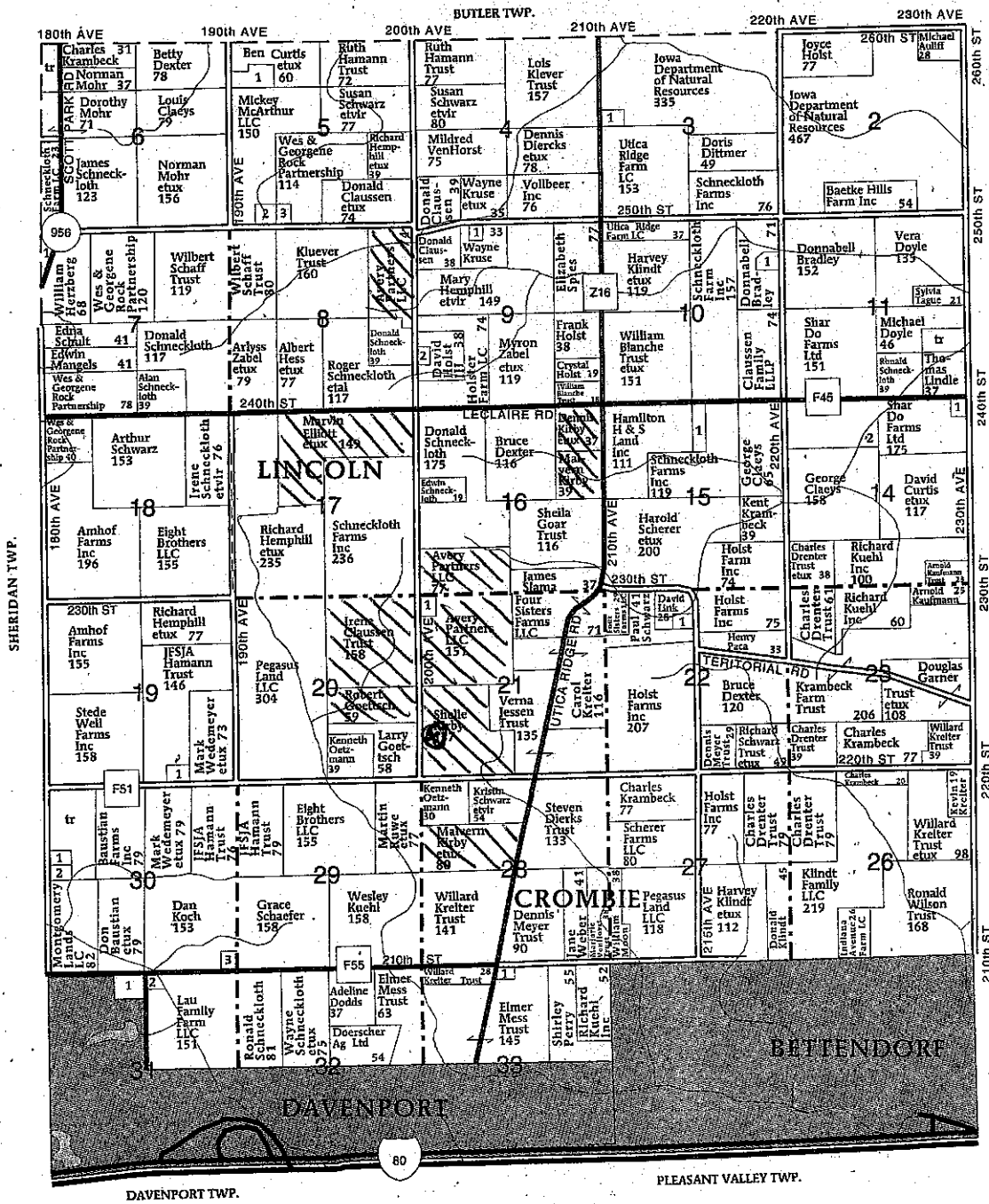
T-79-N

LINCOLN PLAT

(Landowners)

R-4-E





LINCOLN TOWNSHIP

SECTION 3
1. Gehrls, Kent 5

SECTION 5
1. Iowa Illinois Gas & Electric Company 19
2. Peters, Ronald 7
3. Carstens, Matthew 5

SECTION 7
1. Meade, Rosemary 5

SECTION 9
1. ODay, Michael 6
2. Glunz, Dean 6

SECTION 10
1. Langenhan, John 7

SECTION 14
1. Davenport Cellular Telephone 5
2. Knapper, Elmer 7

SECTION 15
1. Claeys, Rita 119

SECTION 19
1. Schwarz, Timothy 12

SECTION 21
1. Luett, Randall 7

SECTION 22
1. Kuhl, Leslie 5

SECTION 30
1. Kaasa, Percy 7
2. Powell, Leotus 7
3. Holst, Brian 5

SECTION 31
1. Baustian Farms Inc 8
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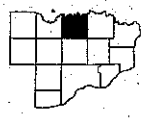
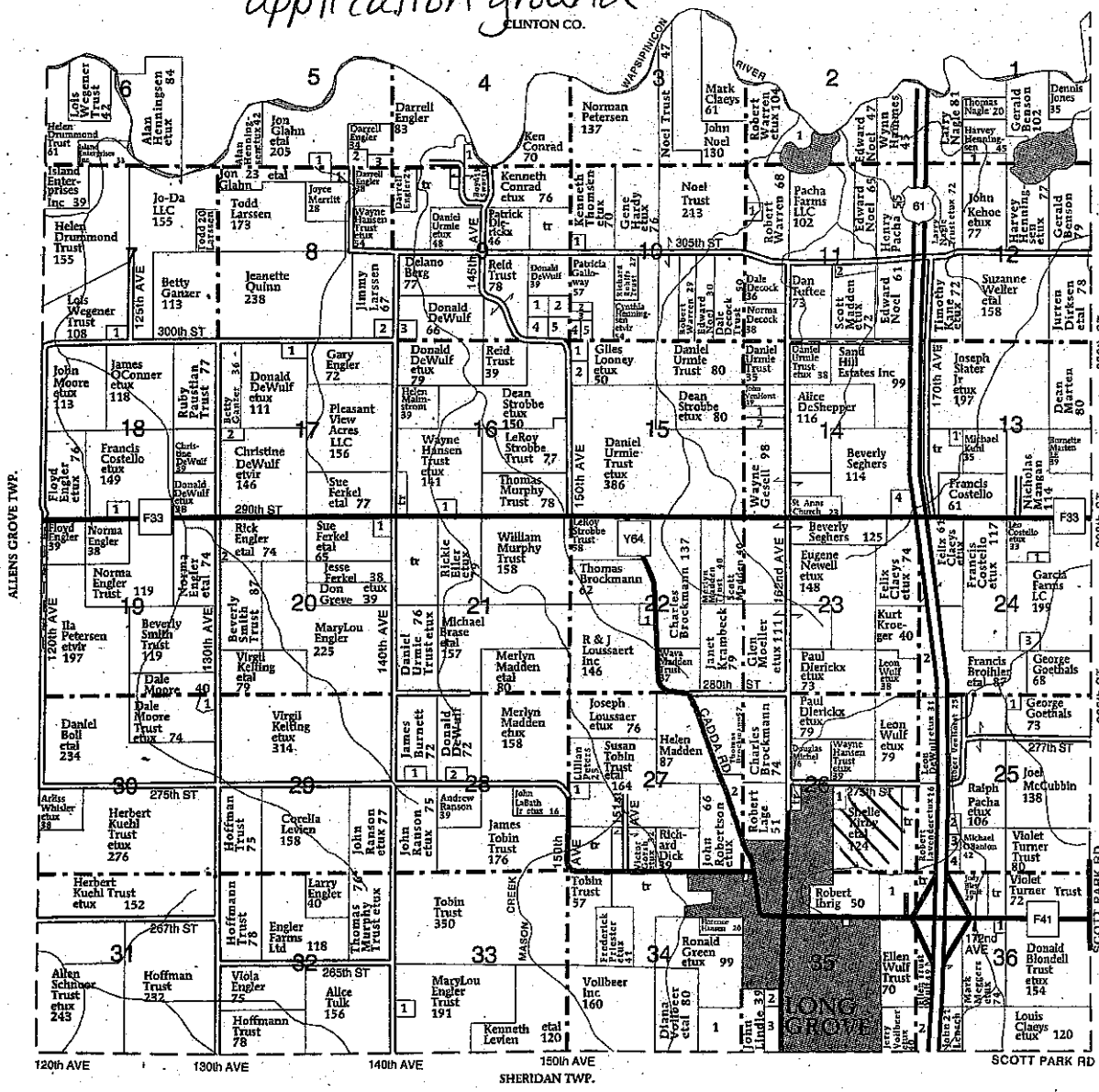


T-80-N \\\ -land application ground WINFIELD PLAT (Landowners) R-3-E



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1. Swinderman, Gene 5

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1. Harrison, Delmar 5
2. Regan, Patrick 10

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4. Woodford Trust 12
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1. Kilburg, Brent 6

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1. Ferkel, Jesse 7
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USDA NRCS
Natural Resources Conservation Service
v. 1/22/2007

Iowa Phosphorus Index

Credits: Iowa State University
USDA National Soil Tilth Laboratory
USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall
	Gross Erosion	x Sediment Trap Factor	x SDR	x Buffer Factor	x Enrichment Factor	x STP Factor	= Erosion PI		RCN Factor	x (STP Factor	+ P App Factor	) = Runoff PI		Flow Factor	x STP Factor	= Tile/Sub PI		P Index
Home --	3.90	1.00	0.44	1.00	1.10	0.88	1.68		1.40	0.27	0.04	0.44		1.00	0.08	0.08		2.20
Claussen 1N --	3.70	1.00	0.48	1.00	1.10	0.87	1.70		1.40	0.25	0.04	0.41		1.00	0.08	0.08		2.19
Claussen 2 --	5.70	1.00	0.56	1.00	1.10	0.86	2.99		1.40	0.24	0.04	0.39		1.00	0.08	0.08		3.46
Kyles --	3.70	1.00	0.43	1.00	1.10	0.81	1.41		1.40	0.19	0.04	0.32		1.00	0.08	0.08		1.81
Elliott --	0.47	1.00	0.40	1.00	1.10	0.90	0.19		1.40	0.29	0.04	0.46		1.00	0.08	0.08		0.73
Avery S --	1.70	1.00	0.41	1.00	1.10	0.85	0.65		1.40	0.23	0.04	0.38		1.00	0.08	0.08		1.11
Goettsch --	3.70	1.00	0.49	1.00	1.10	0.78	1.57		1.40	0.15	0.04	0.27		1.00	0.08	0.08		1.92
Olsen --	6.50	1.00	0.48	1.00	1.10	0.80	2.73		1.40	0.17	0.04	0.30		1.00	0.08	0.08		3.11

TABLE 1. Manure Analysis
Kirby Farms Inc.

		Total N	P2O5	K2O
2011	F1	15.4	17.5	7.9
	NG 1	16.3	6.2	10.7
	NG 2	19.3	23.3	10.6
	SG 1	8.2	2.9	7.1
	SG 2	14.8	11.5	9.4
AVERAGE		**14.8**	**12.3**	**9.1**
	1-3	51.6	31.1	30.4
	3-1	58.3	29.5	32.9
	3-2	58.5	34.1	33.6
	3-3	62.5	29.7	35.5
	1-2	47.9	23	29.9
	1-1	45.5	6.9	8.8
AVERAGE		**54.1**	**25.7**	**28.5**

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: **Dennis Kirby** - Avery N Farm, Olsen Farm

File: profiles\Scott County

Inputs:
Location: Iowa\Scott County
Soil: 120D2 Tama silty clay loam, 9 to 14 percent slopes, moderately eroded\Tama silty clay loam moderately eroded 100%
Slope length (horiz): 150 ft
Avg. slope steepness: 12 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	179.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	179.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Soybean, mw 15 - 20 in rows	bu	48.000

Contouring: b. absolute row grade 5 percent
Adjust res. burial level: Normal res. burial

Outputs:
T value: 5.0 t/ac/yr
Soil loss for cons. plan: 6.5 t/ac/yr
Sediment delivery: 6.5 t/ac/yr

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
11/20/0	Manure injector, liquid low disturb.30 inch		81
5/10/1	Planter, double disk opnr w/fluted coulter	Corn, grain	61
10/20/1	Harvest, killing crop 50pct standing stubble		85
11/10/1	Manure injector, liquid low disturb.30 inch		91
11/11/1	Chisel, st. pt.		67
5/10/2	Cultivator, field 6-12 in sweeps		56
5/10/2	planter, double disk opnr	Corn, grain	56
10/20/2	Harvest, killing crop 50pct standing stubble		86
5/15/3	Planter, double disk opnr w/fluted coulter, 15 inch row spacing	Soybean, mw 15 - 20 in rows	84
10/10/3	Harvest, killing crop 20pct standing stubble		90

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: **Dennis Kirby** - Home

File: profiles\Scott County

Inputs:
Location: Iowa\Scott County
Soil: 120C2 Tama silty clay loam, 5 to 9 percent slopes, moderately eroded\Tama silty clay loam moderately eroded 100%
Slope length (horiz): 200 ft
Avg. slope steepness: 7.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	192.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	192.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Soybean, mw 15 - 20 in rows	bu	52.000

Contouring: a. rows up-and-down hill
Adjust res. burial level: Normal res. burial

Outputs:
T value: 5.0 t/ac/yr
Soil loss for cons. plan: 3.9 t/ac/yr
Sediment delivery: 3.9 t/ac/yr

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
11/20/0	Manure injector, liquid low disturb.30 inch		83
5/10/1	Planter, double disk opnr w/fluted coulter	Corn, grain	63
10/20/1	Harvest, killing crop 50pct standing stubble		87
11/10/1	Manure injector, liquid low disturb.30 inch		93
11/11/1	Chisel, st. pt.		70
5/10/2	Cultivator, field 6-12 in sweeps		59
5/10/2	planter, double disk opnr	Corn, grain	59
10/20/2	Harvest, killing crop 50pct standing stubble		88
5/15/3	Planter, double disk opnr w/fluted coulter, 15 inch row spacing	Soybean, mw 15 - 20 in rows	86
10/10/3	Harvest, killing crop 20pct standing stubble		91

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: **Dennis Kirby** - Avery S

File: profiles\Scott County

Inputs:
Location: Iowa\Scott County
Soil: 120B Tama silty clay loam, 2 to 5 percent slopes\Tama silty clay loam 100%
Slope length (horiz): 200 ft
Avg. slope steepness: 4.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	215.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	215.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Soybean, mw 15 - 20 in rows	bu	58.000

Contouring: a. rows up-and-down hill
Adjust res. burial level: Normal res. burial

Outputs:
T value: 5.0 t/ac/yr
Soil loss for cons. plan: 1.7 t/ac/yr
Sediment delivery: 1.7 t/ac/yr

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
11/20/0	Manure injector, liquid low disturb.30 inch		86
5/10/1	Planter, double disk opnr w/fluted coulter	Corn, grain	67
10/20/1	Harvest, killing crop 50pct standing stubble		90
11/10/1	Manure injector, liquid low disturb.30 inch		94
11/11/1	Chisel, st. pt.		74
5/10/2	Cultivator, field 6-12 in sweeps		63
5/10/2	planter, double disk opnr	Corn, grain	63
10/20/2	Harvest, killing crop 50pct standing stubble		91
5/15/3	Planter, double disk opnr w/fluted coulter, 15 inch row spacing	Soybean, mw 15 - 20 in rows	89
10/10/3	Harvest, killing crop 20pct standing stubble		93

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: **Dennis Kirby** - Elliots

File: profiles\Scott County

Inputs:
Location: Iowa\Scott County
Soil: 119 Muscatine silty clay loam, 0 to 2 percent slopes\Muscatine silty clay loam 95%
Slope length (horiz): 200 ft
Avg. slope steepness: 1.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	222.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	222.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Soybean, mw 15 - 20 in rows	bu	60.000

Contouring: a. rows up-and-down hill
Adjust res. burial level: Normal res. burial

Outputs:
T value: 5.0 t/ac/yr
Soil loss for cons. plan: 0.47 t/ac/yr
Sediment delivery: 0.47 t/ac/yr

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
11/20/0	Manure injector, liquid low disturb.30 inch		86
5/10/1	Planter, double disk opnr w/fluted coulter	Corn, grain	68
10/20/1	Harvest, killing crop 50pct standing stubble		90
11/10/1	Manure injector, liquid low disturb.30 inch		95
11/11/1	Chisel, st. pt.		75
5/10/2	Cultivator, field 6-12 in sweeps		64
5/10/2	planter, double disk opnr	Corn, grain	64
10/20/2	Harvest, killing crop 50pct standing stubble		91
5/15/3	Planter, double disk opnr w/fluted coulter, 15 inch row spacing	Soybean, mw 15 - 20 in rows	90
10/10/3	Harvest, killing crop 20pct standing stubble		94

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: **Dennis Kirby** – Claussen-2 and Geottsch

File: profiles\Scott County

Inputs:
Location: Iowa\Scott County
Soil: 20D2 Killduff silty clay loam, 9 to 14 percent slopes, moderately eroded\Killduff silty clay loam moderately eroded 100%
Slope length (horiz): 97 ft
Avg. slope steepness: 12 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	172.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	172.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Soybean, mw 15 - 20 in rows	bu	46.000

Contouring: b. absolute row grade 5 percent
Adjust res. burial level: Normal res. burial

Outputs:
T value: 5.0 t/ac/yr
Soil loss for cons. plan: 5.7 t/ac/yr
Sediment delivery: 5.7 t/ac/yr
Surf. cover after planting: -- %

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
11/20/0	Manure injector, liquid low disturb.30 inch		80
5/10/1	Planter, double disk opnr w/fluted coulter	Corn, grain	59
10/20/1	Harvest, killing crop 50pct standing stubble		84
11/10/1	Manure injector, liquid low disturb.30 inch		90
11/11/1	Chisel, st. pt.		66
5/10/2	Cultivator, field 6-12 in sweeps		55
5/10/2	planter, double disk opnr	Corn, grain	55
10/20/2	Harvest, killing crop 50pct standing stubble		85
5/15/3	Planter, double disk opnr w/fluted coulter, 15 inch row spacing	Soybean, mw 15 - 20 in rows	83
10/10/3	Harvest, killing crop 20pct standing stubble		89

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: **Dennis Kirby** – Claussen-1, Kyles,

File: profiles\Scott County

Inputs:
Location: Iowa\Scott County
Soil: 20C2 Killduff silty clay loam, 5 to 9 percent slopes, moderately eroded\Killduff silty clay loam moderately eroded 100%
Slope length (horiz): 150 ft
Avg. slope steepness: 7.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	186.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Corn, grain	bushels	186.00
CMZ 04\c.Other Local Mgt Records\CCBcorn grain;NT, Manure, corn grain; FC, st pt, anhyd, fcult, soybean, nr, NT single z4	Soybean, mw 15 - 20 in rows	bu	50.000

Contouring: a. rows up-and-down hill
Adjust res. burial level: Normal res. burial

Outputs:
T value: 5.0 t/ac/yr
Soil loss for cons. plan: 3.7 t/ac/yr
Sediment delivery: 3.7 t/ac/yr
Surf. cover after planting: -- %

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
11/20/0	Manure injector, liquid low disturb.30 inch		82
5/10/1	Planter, double disk opnr w/fluted coulter	Corn, grain	62
10/20/1	Harvest, killing crop 50pct standing stubble		86
11/10/1	Manure injector, liquid low disturb.30 inch		92
11/11/1	Chisel, st. pt.		69
5/10/2	Cultivator, field 6-12 in sweeps		58
5/10/2	planter, double disk opnr	Corn, grain	58
10/20/2	Harvest, killing crop 50pct standing stubble		87
5/15/3	Planter, double disk opnr w/fluted coulter, 15 inch row spacing	Soybean, mw 15 - 20 in rows	85
10/10/3	Harvest, killing crop 20pct standing stubble		91

Report Number

11-340-5051

Midwest Laboratories, Inc.®

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053822
Description: MANURE ANALYSIS

Sample Id: F1

Account Number: 26759

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.12 %	9.9	10
Organic Nitrogen(N)	0.06 %	5.5	2
Total Nitrogen(N)	0.18 %	15.4	12
Phosphorus(P2O5)	0.21 %	17.5	12
Potassium(K2O)	0.09 %	7.9	7
Sulfur(S)	0.02 %	1.8	1
Calcium(Ca)	0.07 %	5.6	4
Magnesium(Mg)	0.04 %	3.6	3
Sodium(Na)	0.03 %	2.2	2
Copper(Cu)	6 ppm	0.05	0.04
Iron(Fe)	103 ppm	0.87	0.61
Manganese(Mn)	16 ppm	0.14	0.09
Zinc(Zn)	48 ppm	0.41	0.28
Moisture	99.0 %		
Total Solids	1.0 %	84.5	
Total Salts		29.2	
pH	8.4		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

Rob Ferris
Client Service Representative
rob@midwestlabs.com (402)829-9871

Report Number

11-340-5054

Midwest Laboratories, Inc.®

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053825
Description: MANURE ANALYSIS

Sample Id: NG 1

Account Number: 26759

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.16 %	13.3	13
Organic Nitrogen(N)	0.03 %	3.0	1
Total Nitrogen(N)	0.19 %	16.3	14
Phosphorus(P2O5)	0.07 %	6.2	4
Potassium(K2O)	0.13 %	10.7	10
Sulfur(S)	0.02 %	1.6	1
Calcium(Ca)	0.02 %	1.7	1
Magnesium(Mg)	0.01 %	0.5	0
Sodium(Na)	0.04 %	3.4	2
Copper(Cu)	3 ppm	0.03	0.02
Iron(Fe)	38 ppm	0.32	0.22
Manganese(Mn)	4 ppm	0.03	0.02
Zinc(Zn)	20 ppm	0.17	0.12
Moisture	99.4 %		
Total Solids	0.6 %	50.7	
Total Salts		29.6	
pH	8.4		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

Rob Ferris
Client Service Representative
rob@midwestlabs.com (402)829-9871

The result(s) issued on this report only reflect the analysis of the sample(s) submitted. For applicable test parameters, Midwest Laboratories is in compliance with NELAC requirements.

Report Number

11-340-5055

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053826
Description: MANURE ANALYSIS

Sample Id: NG 2

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Account Number: 26759

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.17 %	14.8	15
Organic Nitrogen(N)	0.06 %	4.5	2
Total Nitrogen(N)	0.23 %	19.3	16
Phosphorus(P2O5)	0.28 %	23.3	16
Potassium(K2O)	0.13 %	10.6	10
Sulfur(S)	0.03 %	2.6	1
Calcium(Ca)	0.08 %	7.1	5
Magnesium(Mg)	0.06 %	4.9	3
Sodium(Na)	0.04 %	3.2	2
Copper(Cu)	8 ppm	0.07	0.05
Iron(Fe)	141 ppm	1.19	0.83
Manganese(Mn)	19 ppm	0.16	0.11
Zinc(Zn)	69 ppm	0.58	0.41
Moisture	98.7 %		
Total Solids	1.3 %	109.8	
Total Salts		40.6	
pH	8.6		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

Rob Ferris
Client Service Representative
rob@midwestlabs.com (402)829-9871

Report Number

11-340-5056

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053827
Description: MANURE ANALYSIS

Sample Id: SG 1

Account Number: 26759

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.09 %	7.9	8
Organic Nitrogen(N)	0.01 %	0.3	0
Total Nitrogen(N)	0.10 %	8.2	8
Phosphorus(P2O5)	0.03 %	2.9	2
Potassium(K2O)	0.08 %	7.1	6
Sulfur(S)	0.01 %	0.8	0
Calcium(Ca)	0.01 %	0.6	0
Magnesium(Mg)	0.00 %	0.2	0
Sodium(Na)	0.03 %	2.2	2
Copper(Cu)	0 ppm	0.00	0.00
Iron(Fe)	8 ppm	0.07	0.05
Manganese(Mn)	1 ppm	0.01	0.01
Zinc(Zn)	3 ppm	0.03	0.02
Moisture	99.7 %		
Total Solids	0.3 %	25.3	
Total Salts		18.0	
pH	8.5		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

Rob Ferris
Client Service Representative
rob@midwestlabs.com (402)829-9871

The result(s) issued on this report only reflect the analysis of the sample(s) submitted. For applicable test parameters, Midwest Laboratories is in compliance with NELAC requirements.

Report Number

11-340-5057

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053828
Description: MANURE ANALYSIS

Sample Id: SG 2

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Account Number: 26759

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.12 %	9.9	10
Organic Nitrogen(N)	0.05 %	4.9	2
Total Nitrogen(N)	0.17 %	14.8	12
Phosphorus(P2O5)	0.14 %	11.5	8
Potassium(K2O)	0.11 %	9.4	8
Sulfur(S)	0.02 %	1.4	1
Calcium(Ca)	0.06 %	4.7	3
Magnesium(Mg)	0.03 %	2.6	2
Sodium(Na)	0.02 %	1.8	1
Copper(Cu)	11 ppm	0.09	0.07
Iron(Fe)	84 ppm	0.71	0.50
Manganese(Mn)	12 ppm	0.10	0.07
Zinc(Zn)	73 ppm	0.62	0.43
Moisture	99.0 %		
Total Solids	1.0 %	84.5	
Total Salts		28.4	
pH	8.5		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

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Report Number

11-340-5060

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053831
Description: MANURE ANALYSIS

Sample Id: 1-3

Account Number: 26759

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.40 %	34.1	34
Organic Nitrogen(N)	0.21 %	17.5	6
Total Nitrogen(N)	0.61 %	51.6	40
Phosphorus(P2O5)	0.37 %	31.1	22
Potassium(K2O)	0.36 %	30.4	27
Sulfur(S)	0.06 %	4.9	2
Calcium(Ca)	0.09 %	7.3	5
Magnesium(Mg)	0.09 %	7.5	5
Sodium(Na)	0.09 %	7.5	5
Copper(Cu)	14 ppm	0.12	0.08
Iron(Fe)	107 ppm	0.90	0.63
Manganese(Mn)	24 ppm	0.20	0.14
Zinc(Zn)	62 ppm	0.52	0.37
Moisture	98.8 %		
Total Solids	1.2 %	101.4	
Total Salts		86.8	
pH	8.7		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

Rob Ferris
Client Service Representative
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The result(s) issued on this report only reflect the analysis of the sample(s) submitted. For applicable test parameters, Midwest Laboratories is in compliance with NELAC requirements.

Report Number

11-340-5061

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053832
Description: MANURE ANALYSIS

Sample Id: 3-1

Account Number: 26759

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.46 %	38.8	39
Organic Nitrogen(N)	0.23 %	19.5	7
Total Nitrogen(N)	0.69 %	58.3	46
Phosphorus(P2O5)	0.35 %	29.5	21
Potassium(K2O)	0.39 %	32.9	30
Sulfur(S)	0.06 %	4.9	2
Calcium(Ca)	0.07 %	6.0	4
Magnesium(Mg)	0.09 %	7.2	5
Sodium(Na)	0.10 %	8.2	6
Copper(Cu)	10 ppm	0.08	0.06
Iron(Fe)	103 ppm	0.87	0.61
Manganese(Mn)	22 ppm	0.19	0.13
Zinc(Zn)	62 ppm	0.52	0.37
Moisture	96.4 %		
Total Solids	3.6 %	304.2	
Total Salts		93.1	
pH	8.8		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

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Report Number

11-340-5062

Midwest Laboratories, Inc.®

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053833
Description: MANURE ANALYSIS

Sample Id: 3-2

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Account Number: 26759

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.47 %	40.1	40
Organic Nitrogen(N)	0.22 %	18.4	6
Total Nitrogen(N)	0.69 %	58.5	47
Phosphorus(P2O5)	0.40 %	34.1	24
Potassium(K2O)	0.40 %	33.6	30
Sulfur(S)	0.07 %	5.8	2
Calcium(Ca)	0.12 %	9.8	7
Magnesium(Mg)	0.10 %	8.2	6
Sodium(Na)	0.10 %	8.6	6
Copper(Cu)	10 ppm	0.08	0.06
Iron(Fe)	119 ppm	1.01	0.70
Manganese(Mn)	27 ppm	0.23	0.16
Zinc(Zn)	64 ppm	0.54	0.38
Moisture	96.0 %		
Total Solids	4.0 %	338.0	
Total Salts		100.3	
pH	8.7		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

Rob Ferris
Client Service Representative
rob@midwestlabs.com (402)829-9871

The result(s) issued on this report only reflect the analysis of the sample(s) submitted. For applicable test parameters, Midwest Laboratories is in compliance with NELAC requirements.

Report Number

11-340-5063

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053834
Description: MANURE ANALYSIS

Sample Id: 3-3

Account Number: 26759

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.49 %	41.4	41
Organic Nitrogen(N)	0.25 %	21.1	7
Total Nitrogen(N)	0.74 %	62.5	49
Phosphorus(P2O5)	0.35 %	29.7	21
Potassium(K2O)	0.42 %	35.5	32
Sulfur(S)	0.08 %	6.6	3
Calcium(Ca)	0.08 %	6.6	5
Magnesium(Mg)	0.08 %	7.0	5
Sodium(Na)	0.11 %	9.1	6
Copper(Cu)	11 ppm	0.09	0.07
Iron(Fe)	110 ppm	0.93	0.65
Manganese(Mn)	23 ppm	0.19	0.14
Zinc(Zn)	66 ppm	0.56	0.39
Moisture	95.8 %		
Total Solids	4.2 %	354.9	
Total Salts		99.6	
pH	8.7		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

Rob Ferris
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Report Number

11-340-5059

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053830
Description: MANURE ANALYSIS

Sample Id: 1-2

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Account Number: 26759

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.39 %	32.7	33
Organic Nitrogen(N)	0.18 %	15.2	5
Total Nitrogen(N)	0.57 %	47.9	38
Phosphorus(P2O5)	0.27 %	23.0	16
Potassium(K2O)	0.35 %	29.9	27
Sulfur(S)	0.05 %	4.0	2
Calcium(Ca)	0.07 %	5.7	4
Magnesium(Mg)	0.06 %	5.0	4
Sodium(Na)	0.09 %	7.4	5
Copper(Cu)	12 ppm	0.10	0.07
Iron(Fe)	90 ppm	0.76	0.53
Manganese(Mn)	18 ppm	0.15	0.11
Zinc(Zn)	58 ppm	0.49	0.34
Moisture	98.8 %		
Total Solids	1.2 %	101.4	
Total Salts		80.7	
pH	8.6		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

Rob Ferris
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The result(s) issued on this report only reflect the analysis of the sample(s) submitted. For applicable test parameters, Midwest Laboratories is in compliance with NELAC requirements.

Report Number

11-340-5058

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KIRBY FARMS

22293 200TH AVE
DAVENPORT IA 52807

Lab Number: 10053829
Description: MANURE ANALYSIS

Sample Id: 1-1

Account Number: 26759

Report Date: Dec 06, 2011
Received Date: Dec 02, 2011
Sampled Date: Dec 01, 2011
P.O. Number:

Parameters	Analysis as Received	Nutrients lbs/1000 gals	Est. First Year Availability lbs/1000 gals
Ammonium Nitrogen(N)	0.38 %	31.9	32
Organic Nitrogen(N)	0.16 %	13.6	5
Total Nitrogen(N)	0.54 %	45.5	37
Phosphorus(P2O5)	0.08 %	6.9	5
Potassium(K2O)	0.10 %	8.8	8
Sulfur(S)	0.01 %	1.1	0
Calcium(Ca)	0.02 %	1.5	1
Magnesium(Mg)	0.02 %	1.6	1
Sodium(Na)	0.03 %	2.2	2
Copper(Cu)	3 ppm	0.03	0.02
Iron(Fe)	27 ppm	0.23	0.16
Manganese(Mn)	5 ppm	0.04	0.03
Zinc(Zn)	16 ppm	0.14	0.09
Moisture	97.1 %		
Total Solids	2.9 %	245.1	
Total Salts		46.0	
pH	8.7		

First year availability of nitrogen is calculated based on preplant application with incorporation. Nitrogen available from previous years application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered. Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations! Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulation. These regulations vary from state to state.

Rob Ferris
Client Service Representative
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The result(s) issued on this report only reflect the analysis of the sample(s) submitted. For applicable test parameters, Midwest Laboratories is in compliance with NELAC requirements.

Midwest Report Number: 11-340-5052

Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807

Sample ID: CLAUSSEN 1 & 2 South

Project PO :

MIDWEST Soil Testing Water Environmental & Database for Interactive Midwest

Date Reported: Dec 06, 2011

Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053823

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability	
Parameters	as Received	lbs/1000gals	lbs/1000gals	
Ammonium Nitrogen (N)	0.60 %	50.9	51	50.75 51
Organic Nitrogen (N)	0.31 %	26.4	9	
Total Nitrogen (N)	0.91 %	77.3	60	
Phosphorus (P_2O_5)	0.42 %	35.1	25	34.8 35
Potassium (K_2O)	0.55 %	46.4	42	46.25 46
Sulfur (S)	0.07 %	6.2	2	
Calcium (Ca)	0.16 %	13.2	9	
Magnesium (Mg)	0.09 %	7.9	6	
Sodium (Na)	0.10 %	8.6	6	
Copper (Cu)	27 ppm	0.23	0.16	
Iron (Fe)	166 ppm	1.40	0.98	
Manganese (Mn)	30 ppm	0.25	0.18	
Zinc (Zn)	156 ppm	1.32	0.92	
Moisture	93.8 %			
Total Solids	6.2 %	523.9		
Total Salts		127.0		
pH	8.6			

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5053

Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807

Sample ID: CLAUSSEN 3 & 4 North

Project PO :

MIDWEST Soil Testing Water Environmental & Database for Interactive Midwest

Date Reported: Dec 06, 2011

Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053824

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability	
Parameters	as Received	lbs/1000gals	lbs/1000gals	
Ammonium Nitrogen (N)	0.63 %	55.3	53	53
Organic Nitrogen (N)	0.35 %	29.9	10	
Total Nitrogen (N)	0.98 %	83.2	64	
Phosphorus (P_2O_5)	0.43 %	36.7	26	37
Potassium (K_2O)	0.59 %	50.2	45	49
Sulfur (S)	0.08 %	7.1	3	
Calcium (Ca)	0.17 %	14.6	10	
Magnesium (Mg)	0.10 %	8.4	6	
Sodium (Na)	0.11 %	9.6	7	
Copper (Cu)	29 ppm	0.25	0.17	
Iron (Fe)	162 ppm	1.37	0.96	
Manganese (Mn)	32 ppm	0.27	0.19	
Zinc (Zn)	148 ppm	1.25	0.88	
Moisture	94.2 %			
Total Solids	5.8 %	490.1		
Total Salts		136.1		
pH	8.6			

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5058

Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807

Sample ID: 1-1

Project PO :

MIDWEST
Soil Testing Water Environmental & Database for Interactive Midwest

Date Reported: Dec 06, 2011

Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053829

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/1000gals	lbs/1000gals
Ammonium Nitrogen (N)	0.38 %	31.9	32
Organic Nitrogen (N)	0.16 %	13.6	5
Total Nitrogen (N)	0.54 %	45.5	37
Phosphorus (P_2O_5)	0.08 %	6.9	5
Potassium (K_2O)	0.10 %	8.8	8
Sulfur (S)	0.01 %	1.1	0
Calcium (Ca)	0.02 %	1.5	1
Magnesium (Mg)	0.02 %	1.6	1
Sodium (Na)	0.03 %	2.2	2
Copper (Cu)	3 ppm	0.03	0.02
Iron (Fe)	27 ppm	0.23	0.16
Manganese (Mn)	5 ppm	0.04	0.03
Zinc (Zn)	16 ppm	0.14	0.09
Moisture	97.1 %		
Total Solids	2.9 %	245.1	
Total Salts		46.0	
pH	8.7		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5063
Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807
Sample ID: 3-3

MIDWEST
Midwest Interactive Database for Water Soil Testing Environmental &

Date Reported: Dec 06, 2011
Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053834

Project PO :

Bio-Solids Analysis Report
VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/1000gals	lbs/1000gals
Ammonium Nitrogen (N)	0.49 %	41.4	41
Organic Nitrogen (N)	0.25 %	21.1	7
Total Nitrogen (N)	0.74 %	62.5	49
Phosphorus (P_2O_5)	0.35 %	29.7	21
Potassium (K_2O)	0.42 %	35.5	32
Sulfur (S)	0.08 %	6.6	3
Calcium (Ca)	0.08 %	6.6	5
Magnesium (Mg)	0.08 %	7.0	5
Sodium (Na)	0.11 %	9.1	6
Copper (Cu)	11 ppm	0.09	0.07
Iron (Fe)	110 ppm	0.93	0.65
Manganese (Mn)	23 ppm	0.19	0.14
Zinc (Zn)	66 ppm	0.56	0.39
Moisture	95.8 %		
Total Solids	4.2 %	354.9	
Total Salts		99.6	
pH	8.7		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5062
Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807
Sample ID: 3-2

MIDWEST
Midwest Interactive Database for Water Soil Testing Environmental &

Date Reported: Dec 06, 2011
Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053833

Project PO :

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/1000gals	lbs/1000gals
Ammonium Nitrogen (N)	0.47 %	40.1	40
Organic Nitrogen (N)	0.22 %	18.4	6
Total Nitrogen (N)	0.69 %	58.5	47
Phosphorus (P_2O_5)	0.40 %	34.1	24
Potassium (K_2O)	0.40 %	33.6	30
Sulfur (S)	0.07 %	5.8	2
Calcium (Ca)	0.12 %	9.8	7
Magnesium (Mg)	0.10 %	8.2	6
Sodium (Na)	0.10 %	8.6	6
Copper (Cu)	10 ppm	0.08	0.06
Iron (Fe)	119 ppm	1.01	0.70
Manganese (Mn)	27 ppm	0.23	0.16
Zinc (Zn)	64 ppm	0.54	0.38
Moisture	96.0 %		
Total Solids	4.0 %	338.0	
Total Salts		100.3	
pH	8.7		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5061
Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807

Date Reported: Dec 06, 2011
Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053832

Sample ID: 3-1

Project PO :

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/1000gals	lbs/1000gals
Ammonium Nitrogen (N)	0.46 %	38.8	39
Organic Nitrogen (N)	0.23 %	19.5	7
Total Nitrogen (N)	0.69 %	58.3	46
Phosphorus (P_2O_5)	0.35 %	29.5	21
Potassium (K_2O)	0.39 %	32.9	30
Sulfur (S)	0.06 %	4.9	2
Calcium (Ca)	0.07 %	6.0	4
Magnesium (Mg)	0.09 %	7.2	5
Sodium (Na)	0.10 %	8.2	6
Copper (Cu)	10 ppm	0.08	0.06
Iron (Fe)	103 ppm	0.87	0.61
Manganese (Mn)	22 ppm	0.19	0.13
Zinc (Zn)	62 ppm	0.52	0.37
Moisture	96.4 %		
Total Solids	3.6 %	304.2	
Total Salts		93.1	
pH	8.8		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5060
Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807
Sample ID: 1-3

MIDWEST Soil Testing Water Environmental & Database for Interactive Midwest

Date Reported: Dec 06, 2011
Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053831

Project PO :

Bio-Solids Analysis Report
VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/1000gals	lbs/1000gals
Ammonium Nitrogen (N)	0.40 %	34.1	34
Organic Nitrogen (N)	0.21 %	17.5	6
Total Nitrogen (N)	0.61 %	51.6	40
Phosphorus (P_2O_5)	0.37 %	31.1	22
Potassium (K_2O)	0.36 %	30.4	27
Sulfur (S)	0.06 %	4.9	2
Calcium (Ca)	0.09 %	7.3	5
Magnesium (Mg)	0.09 %	7.5	5
Sodium (Na)	0.09 %	7.5	5
Copper (Cu)	14 ppm	0.12	0.08
Iron (Fe)	107 ppm	0.90	0.63
Manganese (Mn)	24 ppm	0.20	0.14
Zinc (Zn)	62 ppm	0.52	0.37
Moisture	98.8 %		
Total Solids	1.2 %	101.4	
Total Salts		86.8	
pH	8.7		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5059
Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807
Sample ID: 1-2

Project PO :

MIDWEST Soil Testing Water Environmental & Database for Midwest Interactive

Date Reported: Dec 06, 2011
Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053830

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/1000gals	lbs/1000gals
Ammonium Nitrogen (N)	0.39 %	32.7	33
Organic Nitrogen (N)	0.18 %	15.2	5
Total Nitrogen (N)	0.57 %	47.9	38
Phosphorus (P_2O_5)	0.27 %	23.0	16
Potassium (K_2O)	0.35 %	29.9	27
Sulfur (S)	0.05 %	4.0	2
Calcium (Ca)	0.07 %	5.7	4
Magnesium (Mg)	0.06 %	5.0	4
Sodium (Na)	0.09 %	7.4	5
Copper (Cu)	12 ppm	0.10	0.07
Iron (Fe)	90 ppm	0.76	0.53
Manganese (Mn)	18 ppm	0.15	0.11
Zinc (Zn)	58 ppm	0.49	0.34
Moisture	98.8 %		
Total Solids	1.2 %	101.4	
Total Salts		80.7	
pH	8.6		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5057

Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807

Sample ID: SG 2

Project PO :

MIDWEST Soil Testing Water Environmental & Database for Interactive Midwest

Date Reported: Dec 06, 2011

Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053828

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/1000gals	lbs/1000gals
Ammonium Nitrogen (N)	0.12 %	9.9	10
Organic Nitrogen (N)	0.05 %	4.9	2
Total Nitrogen (N)	0.17 %	14.8	12
Phosphorus (P_2O_5)	0.14 %	11.5	8
Potassium (K_2O)	0.11 %	9.4	8
Sulfur (S)	0.02 %	1.4	1
Calcium (Ca)	0.06 %	4.7	3
Magnesium (Mg)	0.03 %	2.6	2
Sodium (Na)	0.02 %	1.8	1
Copper (Cu)	11 ppm	0.09	0.07
Iron (Fe)	84 ppm	0.71	0.50
Manganese (Mn)	12 ppm	0.10	0.07
Zinc (Zn)	73 ppm	0.62	0.43
Moisture	99.0 %		
Total Solids	1.0 %	84.5	
Total Salts		28.4	
pH	8.5		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5055
Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807
Sample ID: NG 2

MIDWEST Soil Testing Water Environmental & Database for Interactive Midwest

Date Reported: Dec 06, 2011
Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053826

Project PO :

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/1000gals	lbs/1000gals
Ammonium Nitrogen (N)	0.17 %	14.8	15
Organic Nitrogen (N)	0.06 %	4.5	2
Total Nitrogen (N)	0.23 %	19.3	16
Phosphorus (P_2O_5)	0.28 %	23.3	16
Potassium (K_2O)	0.13 %	10.6	10
Sulfur (S)	0.03 %	2.6	1
Calcium (Ca)	0.08 %	7.1	5
Magnesium (Mg)	0.06 %	4.9	3
Sodium (Na)	0.04 %	3.2	2
Copper (Cu)	8 ppm	0.07	0.05
Iron (Fe)	141 ppm	1.19	0.83
Manganese (Mn)	19 ppm	0.16	0.11
Zinc (Zn)	69 ppm	0.58	0.41
Moisture	98.7 %		
Total Solids	1.3 %	109.8	
Total Salts		40.6	
pH	8.6		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5056
Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807
Sample ID: SG 1

MIDWEST Soil Testing Environmental & Water Database for Midwest Interactive

MANURE ANALYSIS

Date Reported: Dec 06, 2011
Date Received: Dec 02, 2011
Lab Number: 10053827

Project PO :

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

Parameters	Analysis as Received	Nutrients lbs/1000gals	Est. First Year Availability lbs/1000gals
Ammonium Nitrogen (N)	0.09 %	7.9	8
Organic Nitrogen (N)	0.01 %	0.3	0
Total Nitrogen (N)	0.10 %	8.2	8
Phosphorus (P_2O_5)	0.03 %	2.9	2
Potassium (K_2O)	0.08 %	7.1	6
Sulfur (S)	0.01 %	0.8	0
Calcium (Ca)	0.01 %	0.6	0
Magnesium (Mg)	n.d. %	0.2	0
Sodium (Na)	0.03 %	2.2	2
Copper (Cu)	n.d. ppm	0.00	0.00
Iron (Fe)	8 ppm	0.07	0.05
Manganese (Mn)	1 ppm	0.01	0.01
Zinc (Zn)	3 ppm	0.03	0.02
Moisture	99.7 %		
Total Solids	0.3 %	25.3	
Total Salts		18.0	
pH	8.5		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5054
Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807
Sample ID: NG 1

MIDWEST Soil Testing Water Environmental & Database for Interactive Midwest

Date Reported: Dec 06, 2011
Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053825

Project PO :

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/1000gals	lbs/1000gals
Ammonium Nitrogen (N)	0.16 %	13.3	13
Organic Nitrogen (N)	0.03 %	3.0	1
Total Nitrogen (N)	0.19 %	16.3	14
Phosphorus (P_2O_5)	0.07 %	6.2	4
Potassium (K_2O)	0.13 %	10.7	10
Sulfur (S)	0.02 %	1.6	1
Calcium (Ca)	0.02 %	1.7	1
Magnesium (Mg)	0.01 %	0.5	0
Sodium (Na)	0.04 %	3.4	2
Copper (Cu)	3 ppm	0.03	0.02
Iron (Fe)	38 ppm	0.32	0.22
Manganese (Mn)	4 ppm	0.03	0.02
Zinc (Zn)	20 ppm	0.17	0.12
Moisture	99.4 %		
Total Solids	0.6 %	50.7	
Total Salts		29.6	
pH	8.4		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest Report Number: 11-340-5051

Reported to: KIRBY FARMS
22293 200TH AVE
DAVENPORT
IA, 52807

Sample ID: F1

Project PO :

MIDWEST
Soil Testing Water Environmental & Database for Interactive Midwest

Date Reported: Dec 06, 2011

Date Received: Dec 02, 2011

MANURE ANALYSIS

Lab Number: 10053822

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/1000gals	lbs/1000gals
Ammonium Nitrogen (N)	0.12 %	9.9	10
Organic Nitrogen (N)	0.06 %	5.5	2
Total Nitrogen (N)	0.18 %	15.4	12
Phosphorus (P_2O_5)	0.21 %	17.5	12
Potassium (K_2O)	0.09 %	7.9	7
Sulfur (S)	0.02 %	1.8	1
Calcium (Ca)	0.07 %	5.6	4
Magnesium (Mg)	0.04 %	3.6	3
Sodium (Na)	0.03 %	2.2	2
Copper (Cu)	6 ppm	0.05	0.04
Iron (Fe)	103 ppm	0.87	0.61
Manganese (Mn)	16 ppm	0.14	0.09
Zinc (Zn)	48 ppm	0.41	0.28
Moisture	99.0 %		
Total Solids	1.0 %	84.5	
Total Salts		29.2	
pH	8.4		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

IOWA MASTER MATRIX SUPPLEMENT

Kirby Farms Inc.
SCOTT COUNTY

December 2012

This document will provide documentation, design information along with operation and maintenance (O&M) plans for items in the Master Matrix where points were gained.

Table 1. Summary table of matrix questions receiving points

Question #	Description	Actual
	Site Separation Distances	
2	public use area	1900'
3	school, church, business	~13000'
4	Closest water source > 500'	~2200' to west
5	Proposed structure to thoroughfare >300'	~308'
6	critical public area	
7	Distance to wells	>200'
8	drainage wells, sinkholes, major water sources	Mt. Joy
9	Distance to nearest MMP site	~15000'
10	high quality/protected waters	Mississippi
12	covered manure storage	design / O&M, CDS
17	formed manure storage structure	design / O&M, CDS
19	Truck turnaround	design / O&M
20	No administrative orders	personal statement
22	Homestead Tax Exemption	personal statement
23	Family Farm tax credit	personal statement
24	Facility Size	2006 au
32	Manure inject 200 ft or more from school, church or business	
	Land Application Separation Distances	
35	HQW or PWA	

12. Covered Manure Storage
This facility has deep pits for manure storage which are formed manure storages structures directly beneath a floor where animals are housed in a confinement feeding operation. The design is based upon the attached building drawings and specs from the builder. The structure will be maintained to ensure its structural integrity for its useful life.

17. Formed Manure Storage Structure
The deep pit manure storage is designed to be below floor storage. The concrete design for the structure will adhere to the specs outlined in the building plans to insure the integrity of the structure.

- The storage structure will be measured for manure volume monthly to monitor the amount of manure being produced.
- The volume of manure will be recorded and records maintained on site.
- A visual inspection of the outer above ground perimeter will be made on a semi-annual basis to check for any structural challenges to the storage structure.
- The perimeter tile outside of the storage structure will be monitored monthly over 3 years to determine the average amount of water present.
- The drainage tile outside of the storage structure will be visually checked on a monthly basis to monitor for potential manure contamination by checking color.
- A sample of the water will be taken during the monthly check if the depth is significantly higher than average (1.5 times the average for the month).
- Foreign materials will not be added to the manure storage structure purposefully.
- Durable lids and caution signs will be used to cover the manure pumpouts located along the sides of the structure.
- Proper fit and placement of lids will be checked monthly.

19. Truck Turnaround
The truck turnaround has a diameter of at least 120 ft to allow for safe truck turnaround. The turnaround is located over 300 ft from the thoroughfare and therefore creates a safer environment for the truck driver and others on the road.

- When there has been significant snowfall, the snow will be removed from the drive and turnaround to allow for safe entrance and exit of trucks.
- The structure of the turnaround will be maintained with aggregate 2" to 5" thick.

20. I have no history of Administrative Orders in the last five years related to environmental and worker protection.

22. We are the closest residents to the site.

23. I can lawfully claim a Family Farm Tax Credit for agricultural land where the proposed confinement operation is to be located pursuant to Iowa Code chapter 425A. I believe the statements here to be true and agree to adhere to the specifications.

Dennis Kirby of Kirby Farms Inc.

Daily Checks

Feeders: _____ Checked and working appropriately
_____ Checked and adjustments made

Waterers: _____ Checked and working appropriately
_____ Checked and adjustments made

Monthly Checks

Date _____

Manure Depth _____

Drain Tile: Is water present? YES or NO
Approximate depth? _____ inches

Pumpout lids: Condition? GOOD FAIR NEEDS ATTENTION

Semi-annual Check

The outer above ground perimeter of manure storage:

_____ Normal as built
_____ Normal aging no problems
_____ Evidence of potential problems**
_____ Manure leakage**

**If either of these situations should occur, an engineer will be contacted to inspect for potential structural integrity issues. If there is evidence of manure leakage, DNR will be contacted.

APPENDIX C
MASTER MATRIX

Proposed Site Characteristics

The following scoring criteria apply to the site of the proposed confinement feeding operation. Mark <u>one</u> score under each criterion selected by the applicant. The proposed site must obtain a minimum overall score of 440 and a score of 53.38 in the "air" subcategory, a score of 67.75 in the "water" subcategory and a score of 101.13 in the "community impacts" subcateogry.

(1) Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:
* Residence not owned by the owner of the confinement feeding operation,
* Hospital, 1000ft required
* Nursing home, or
* Licensed or registered child care facility.

	Score	Air	Water	Community
→ 250 feet to 500 feet	25	16.25		8.75
501 feet to 750 feet	45	29.25		17.50
751 feet to 1,000 feet	65	42.25		22.75
1,001 feet to 1,250 feet	85	55.25		29.75
1,251 feet or more	100	65.00		35.00

(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.
(B) The department will award points only for the single building, of the four listed above, closest to the proposed confinement feeding operation.
(C) "Licensed child care center" – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.
(D) "Registered child development homes" - child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for providers caring for five or fewer children and mandatory for providers caring for six or more children.
(E) A full listing of licensed and registered child care facilities is available at county offices of the department of human services.

(2) Additional separation distance, above minimum requirements, from proposed confinement structure to the closest public use area. 1875 ft required

	Score	Air	Water	Community
250 feet to 500 feet	5	2.00		3.00
501 feet to 750 feet	10	4.00		6.00
751 feet to 1,000 feet	15	6.00		9.00
→ 1,001 feet to 1,250 feet	20	8.00		12.00
1,251 feet to 1,500 feet	25	10.00		15.00

1,501 feet or more	30	12.00		18.00

(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.
(B) "Public use area" - a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Facilities include, but are not limited to, picnic grounds, campgrounds, cemeteries, lodges, shelter houses, playground equipment, lakes as listed in Table 2 of 567--Chapter 65, and swimming beaches. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through, but does not congregate or remain in the area for significant periods of time.

---

3 Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:
* Educational institution,
* Religious institution, or
* Commercial enterprise.

1875ft required.

	Score	Air	Water	Community
250 feet to 500 feet	5	2.00		3.00
501 feet to 750 feet	10	4.00		6.00
751 feet to 1,000 feet	15	6.00		9.00
1,001 feet to 1,250 feet	20	8.00		12.00
1,251 feet to 1,500 feet	25	10.00		15.00
→ 1,501 feet or more	30	12.00		18.00

(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.
(B) The department will award points only for the single building, of the three listed above, closest to the proposed confinement feeding operation.
(C) "Educational institution" - a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.
(D) "Religious institution" - a building in which an active congregation is devoted to worship.
(E) "Commercial enterprise" - a building which is used as a part of a business that manufactures goods, delivers services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

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4 Additional separation distance, above minimum requirement of 500 feet, from proposed confinement structure to the closest water source.

	Score	Air	Water	Community
250 feet to 500 feet	5		5.00	
501 feet to 750 feet	10		10.00	
751 feet to 1,000 feet	15		15.00	
1,001 feet to 1,250 feet	20		20.00	
1,251 feet to 1,500 feet	25		25.00	
→ 1,501 feet or more	30		30.00	

"Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.

5 Separation distance of 300 feet or more from the proposed confinement structure to the nearest thoroughfare.

	Score	Air	Water	Community
→ 300 feet or more	30	9.00		21.00

(A) "Thoroughfare" - a road, street, bridge, or highway open to the public and constructed or maintained by the state or a political subdivision.
(B) The 300-foot distance includes the 100-foot minimum setback plus additional 200 feet.

6 Additional separation distance, above minimum requirements, from proposed confinement structure to the closest critical public area.

	Score	Air	Water	Community
→ 500 feet or more	10	4.00		6.00

(A) All critical public areas as defined in 567--65.1(455B), are public use areas, and therefore subject to public use area minimum separation distances.
(B) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.

7 Proposed confinement structure is at least two times the minimum required separation distance from all private and public water wells.

	Score	Air	Water	Community
→ Two times the minimum separation distance	30		24.00	6.00

Refer to Table 6 of 567--Chapter 65 for minimum required separation distances to wells.

8 Additional separation distance, above the minimum requirement of 1,000 feet, from proposed confinement structure to the closest:
* Agricultural drainage well,
* Known sinkhole, or
* Major water source.

	Score	Air	Water	Community
250 feet to 500 feet	5	0.50	2.50	2.00
501 feet to 750 feet	10	1.00	5.00	4.00
751 feet to 1,000 feet	15	1.50	7.50	6.00
1,001 feet to 1,250 feet	20	2.00	10.00	8.00
1,251 feet to 1,500 feet	25	2.50	12.50	10.00
1,501 feet to 1,750 feet	30	3.00	15.00	12.00
1,751 feet to 2,000 feet	35	3.50	17.50	14.00
2,001 feet to 2,250 feet	40	4.00	20.00	16.00
2,251 feet to 2,500 feet	45	4.50	22.50	18.00
→ 2,501 feet or more	50	5.00	25.00	20.00

(A) The department will award points only for the single item, of the three listed above, that is closest to the proposed confinement feeding operation.
(B) "Agricultural drainage wells" - include surface intakes, cisterns and wellheads of agricultural drainage wells.
(C) "Major water source" - a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567--Chapter 65.

9 Distance between the proposed confinement structure and the nearest confinement facility that has a submitted department manure management plan.

	Score	Air	Water	Community
→ Three-quarter of a mile or more (3,960 feet)	25	7.50	7.50	10.00

Confinement facilities include swine, poultry, and dairy and beef cattle.

10 Separation distance from proposed confinement structure to closest:
*High quality (HQ) waters,
* High quality resource (HQR) waters, or
* Protected water areas (PWA)
is at least two times the minimum required separation distance

	Score	Air	Water	Community
→ Two times the minimum separation distance	30		22.50	7.50

(A) The department will award points only for the single item, of the three listed above, closest to the proposed confinement feeding operation.
(B) HQ waters are identified in 567--Chapter 61.
(C) HQR waters are identified in 567--Chapter 61.
(D) A listing of PWAs is available at http://www.state.ia.us/government/dnr/organiza/ppd/prowater.htm#Location%20of%20PWA's%20in.

11 Air quality modeling results demonstrating an annoyance level less than 2 percent of the time for residences within two times the minimum separation distance.

	Score	Air	Water	Community
University of Minnesota OFFSET model results demonstrating an annoyance level less than 2 percent of the time	10	6.00		4.00

(A) OFFSET can be found at http://www.extension.umn.edu/distribution/livestocksystems/DI7680.html. For more information, contact Dr. Larry Jacobson, University of Minnesota, (612) 625-8288, jacob007@tc.umn.edu .
(B) A residence that has a signed waiver for the minimum separation distance cannot be included in the model.
(C) Only the OFFSET model is acceptable until the department recognizes other air quality models.

12 Liquid manure storage structure is covered.

	Score	Air	Water	Community
→ Covered liquid manure storage	30	27.00		3.00

(A) "Covered" - organic or inorganic material, placed upon an animal feeding operation structure used to store manure, which significantly reduces the exchange of gases between the stored manure and the outside air. Organic materials include, but are not limited to, a layer of chopped straw, other crop residue, or a naturally occurring crust on the surface of the stored manure. Inorganic materials include, but are not limited to, wood, steel, aluminum, rubber, plastic, or Styrofoam. The materials shall shield at least 90 percent of the surface area of the stored manure from the outside air. Cover shall include an organic or inorganic material which current scientific research shows reduces detectable odor by at least 75 percent. A formed manure storage structure directly beneath a floor where animals are housed in a confinement feeding operation is deemed to be covered.
(B) The design, operation and maintenance plan for the manure cover must be in the construction permit application and made a condition in the approved construction permit.

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13 Construction permit application contains design, construction, operation and maintenance plan for emergency containment area at manure storage structure pump-out area.

	Score	Air	Water	Community
Emergency containment	20		18.00	2.00

(A) The emergency containment area must be able to contain at least 5 percent of the total volume capacity of the manure storage structure.
(B) The emergency containment area must be constructed on soils that are fine-grained and have low permeability.
(C) If manure is spilled into the emergency containment area, the spill must be reported to the department within six hours of onset or discovery.
(D) The design, construction, operation and maintenance plan for the emergency containment area must be in the construction permit application and made a condition in the approved construction permit.

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14 Installation of a filter(s) designed to reduce odors from confinement building(s) exhaust fan(s).

	Score	Air	Water	Community
Installation of filter(s)	10	8.00		2.00

The design, operation and maintenance plan for the filter(s) must be in the construction permit application and made a condition in the approved construction permit.

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15 Utilization of landscaping around confinement structure.

	Score	Air	Water	Community
Utilization of landscaping	20	10.00		10.00

The design, operation and maintenance plan for the landscaping must be in the construction permit application and made a condition in the approved construction permit. The design should contain at least three rows of trees and shrubs, of both fast and slow-growing species that are well suited for the site.

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16 Enhancement, above minimum requirements, of structures used in stockpiling and composting activities, such as an impermeable pad and a roof or cover.

	Score	Air	Water	Community
Stockpile and compost facility enhancements	30	9.00	18.00	3.00

(A) The design, operation and maintenance plan for the stockpile or compost structure enhancements must be in the construction permit application and made a condition in the approved construction permit.
(B) The stockpile or compost structures must be located on land adjacent or contiguous to the confinement building.

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17 Proposed manure storage structure is formed

Score	Air	Water	Community

Formed manure storage structure	30		27.00	3.00

(A) "Formed manure storage structure" - a covered or uncovered impoundment used to store manure from an animal feeding operation, which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials. Similar materials may include, but are not limited to, plastic, rubber, fiberglass, or other synthetic materials. Materials used in a formed manure storage structure shall have the structural integrity to withstand expected internal and external load pressures.
(B) The design, operation and maintenance plan for the formed manure storage structure must be in the construction permit application and made a condition in the approved construction permit.

18 Manure storage structure is aerated to meet departmental standards as an aerobic structure, if aeration is not already required by the department.

	Score	Air	Water	Community
Aerated manure storage structure(s)	10	8.00		2.00

(A) Aerobic structure - an animal feeding operation structure other than an egg washwater storage structure which relies on aerobic bacterial action which is maintained by the utilization of air or oxygen and which includes aeration equipment to digest organic matter. Aeration equipment shall be used and shall be capable of providing oxygen at a rate sufficient to maintain an average of 2 milligrams per liter dissolved oxygen concentration in the upper 30 percent of the depth of manure in the structure at all times.
(B) The design, operation and maintenance plan for the aeration equipment must be in the construction permit application and made a condition in the approved construction permit.

19 Proposed confinement site has a suitable truck turnaround area so that semitrailers do not have to back into the facility from the road

	Score	Air	Water	Community
Truck turnaround	20			20.00

(A) The design, operation and maintenance plan for the truck turn around area must be in the construction permit application and made a condition in the approved construction permit.
(B) The turnaround area should be at least 120 feet in diameter and be adequately surfaced for traffic in inclement weather.

20 Construction permit applicant's animal feeding operation environmental and worker protection violation history for the last five years at all facilites in which the applicant has an interest.

	Score	Air	Water	Community
No history of Administrative Orders in last five years	30			30.00

(A) "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.
(B) An environmental violation is a final Administrative Order (AO) from the department of natural resources or final court ruling against the construction permit applicant for environmental violations related to an animal feeding operation. A Notice of Violation (NOV) does not constitute a violation.

21 Construction permit applicant waives the right to claim a Pollution Control Tax Exemption for the life of the proposed confinement feeding operation structure.

	Score	Air	Water	Community

Permanent waiver of Pollution Control Tax Exemption	5			5.00

(A) Waiver of Pollution Control Tax Exemption is limited to the proposed structure(s) in the construction permit application.
(B) The department and county assessor will maintain a record of this waiver, and it must be in the construction permit application and made a condition in the approved construction permit.

22 Construction permit applicant can lawfully claim a Homestead Tax Exemption on the site where the proposed confinement structure is to be constructed

- OR -

the construction permit applicant is the closest resident to the proposed confinement structure.

	Score	Air	Water	Community
Site qualifies for Homestead Tax Exemption or permit applicant is closest resident to proposed structure	25			25.00

Proof of Homestead Tax Exemption is required as part of the construction permit application.
(A) Applicant include persons who have ownership interests."Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

23 Construction permit applicant can lawfully claim a Family Farm Tax Credit for agricultural land where the proposed confinement feeding operation is to be located pursuant to Iowa Code chapter 425A.

	Score	Air	Water	Community
Family Farm Tax Credit qualification	25			25.00

(A) Applicant include persons who have ownership interests. "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

24 Facility size.

	Score	Air	Water	Community
1 to 2,000 animal unit capacity	20			20.00
2,001 to 3,000 animal unit capacity	10			10.00
3,001 animal unit capacity or more	0			0.00

(A) Refer to the construction permit application package to determine the animal unit capacity of the proposed confinement structure at the completion of construction.
(B) If the proposed structure is part of an expansion, animal unit capacity (or animal weight capacity) must include all animals confined in adjacent confinement structures.
(C) Two or more animal feeding operations under common ownership or management are deemed to be a single animal feeding operation if they are adjacent or utilize a common area or system for manure disposal. In addition, for purposes of determining whether two or more confinement feeding operations are adjacent, all of the following must apply:
(a) At least one confinement feeding operation structure must be constructed on and after May 21, 1998.
(b) A confinement feeding operation structure which is part of one confinement feeding operation is separated by less than a minimum required distance from a confinement feeding operation structure which is part of the other confinement feeding operation. The minimum required distance shall be as follows:
(1) 1,250 feet for confinement feeding operations having a combined animal unit capacity of less than 1,000 animal units.
(2) 2,500 feet for confinement feeding operations having a combined animal unit capacity of 1,000 animal units or more.

25 Construction permit application includes livestock feeding and watering systems that significantly reduce manure volume.

	Score	Air	Water	Community
Wet/dry feeders or other feeding and watering systems that significantly reduce manure volume	25		12.50	12.50

The design, operation and maintenance plan for the feeding system must be in the construction permit application and made a condition in the approved construction permit.

Proposed Site Operation and Manure Management Practices

The following scoring criteria apply to the operation and manure management characteristics of the proposed confinement feeding operation. Mark <u>one</u> score under each criterion that best reflects the characteristics of the submitted manure management plan.

26 Liquid or dry manure *(choose only one subsection from subsections "a" - "e" and mark one*

		Score	Air	Water	Community
a.	Bulk dry manure is sold under Iowa Code chapter 200A and surface-applied	15		15.00	
	Bulk dry manure is sold under Iowa Code chapter 200A and incorporated on the same date it is land-applied	30	12.00	12.00	6.00
b.	Dry manure is composted and land-applied under the requirements of a department manure management plan	10	4.00	4.00	2.00
	Dry manure is composted and sold so that no manure is applied under the requirements of a department manure management plan	30	12.00	12.00	6.00

c.	Methane digester is used to generate energy from manure and remaining manure is surface-applied under the requirements of an approved department manure management plan	10	3.00	3.00	4.00
	After methane digestion is complete, manure is injected or incorporated on the same date it is land-applied under the requirements of an approved department manure management plan	30	12.00	12.00	6.00
d.	Dry manure is completely burned to generate energy and no remaining manure is applied under the requirements of a manure management plan	30	9.00	9.00	12.00
	Some dry manure is burned to generate energy, but remaining manure is land-applied and incorporated on the same date it is land-applied	30	12.00	12.00	6.00
e.	Injection or incorporation of manure on the same date it is land-applied	30	12.00	12.00	6.00

(A) Choose only ONE line from subsection "a", "b," "c," "d," or "e" above and mark only one score in that subsection.
(B) The injection or incorporation of manure must be in the construction permit application and made a condition in the approved construction permit.
(C) If an emergency arises and injection or incorporation is not feasible, prior to land application of manure the applicant must receive a written approval for an emergency waiver from a department field office to surface-apply manure.
(D) Requirements pertaining to the sale of bulk dry manure under pursuant to Iowa Code chapter 200A must be incorporated into the construction permit application and made a condition of the approved construction permit.
(E) The design, operation and maintenance plan for utilization of manure as an energy source must be in the construction permit application and made a condition in the approved construction permit.
(F) The design, operation and maintenance plan for composting facilities must be in the construction permit application and made a condition in the approved construction permit.

27 Land application of manure is based on a two-year crop rotation phosphorus uptake level.

	Score	Air	Water	Community
Two-year phosphorus crop uptake application rate	10		10.00	

(A) Land application of manure cannot exceed phosphorus crop usage levels for a two-year crop rotation cycle.
(B) The phosphorus uptake application rates must be in the construction permit application and made a condition in the approved construction permit.

28 Land application of manure to farmland that has USDA Natural Resources Conservation Service (NRCS) approved buffer strips contiguous to all water sources traversing or adjacent to the fields listed in the manure management plan.

	Score	Air	Water	Community
Manure application on farmland with buffer strips	10		8.00	2.00

(A) The department may request NRCS maintenance agreements to ensure proper design, installation and maintenance of filter strips. If a filter strip is present but not designed by NRCS, it must meet NRCS standard specifications.
(B) The application field does not need to be owned by the confinement facility owner to receive points.
(C) On current and future manure management plans, the requirement for buffer strips on all land application areas must be in the construction permit application and made a condition in the approved construction permit.

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29 Land application of manure does not occur on highly erodible land (HEL), as classified by the USDA NRCS.

	Score	Air	Water	Community
No manure application on HEL farmland	10		10.00	

Manure application on non-HEL farmland must be in the construction permit application and made a condition in the approved construction permit.

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30 Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:
*Residence not owned by the owner of the confinement feeding operation,
* Hospital,
* Nursing home, or
*Licensed or registered child care facility.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	3.25		1.75
Additional separation distance of 500 feet	10	6.50		3.50

(A) The department will award points only for the single building, of the four listed above, closest to the proposed confinement feeding operation.
(B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.
(C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.
(E) "Licensed child care center" – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.
(F) "Registered child development homes" - child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for providers caring for five or fewer children and mandatory for providers caring for six or more children.
(G) A full listing of licensed and registered child care facilities is available at county offices of the department of huma

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31 Additional separation distance, above minimum requirements (0 or 750 feet, see below), for land application of manure to closest public use area.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	2.00		3.00

(A) "Public use area" - a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Facilities include, but are not limited to, picnic grounds, campgrounds, cemeteries, lodges, shelter houses, playground equipment, lakes as listed in Table 2 in 567--Dhapter 65, and swimming beaches. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through, but does not congregate or remain in the area for significant periods of time.
(B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.
(C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

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32 Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:
* Educational institution,
* Religious institution, or
* Commercial enterprise.

	Score	Air	Water	Community
→ Additional separation distance of 200 feet	5	2.00		3.00

(A) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
(B) Minimum separation distance for land application of manure injected or incorporated on same date as application: 0 feet.
(C) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.
(D) "Educational institution" - a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.
(E) "Religious institution" - a building in which an active congregation is devoted to worship.
(F) "Commercial enterprise" - a building which is used as a part of a business that manufactures goods, delivers services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

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33 Additional separation distance of 50 feet, above minimum requirements (0 or 200 feet, see below), for the land application of manure to the closest private drinking water well or public drinking water well
- OR -
well is properly closed under supervision of county health officials.

	Score	Air	Water	Community
Additional separation distance of 50 feet or well is properly closed	10		8.00	2.00

(A) Minimum separation distance for land application of manure injected or incorporated on the same date as application or 50-foot vegetation buffer exists around well and manure is not applied to the buffer: 0 feet.
(B) Minimum separation distance for land application of manure broadcast on soil surface: 200 feet.
(C) If applicant chooses to close the well, the well closure must be incorporated into the construction permit application and made a condition in the approved construction permit.

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34 Additional separation distance, above minimum requirements, for the land application of manure to the closest:
* Agricultural drainage well,
* Known sinkhole,
* Major water source, or
* Water source.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	0.50	2.50	2.00
Additional separation distance of 400 feet	10	1.00	5.00	4.00

(A) "Agricultural drainage wells" - include surface intakes, cisterns and wellheads of agricultiral drainage wells.
(B) "Major water source" - a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state, which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567--Chapter 65.
(C) "Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.
(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

35 Additional separation distance above minimum requirements, for the land application of manure, to the closest:
* High quality (HQ) water,
* High quality resource (HQR) water, or
* Protected water area (PWA).

	Score	Air	Water	Community
Additional separation distance of 200 feet	5		3.75	1.25
Additional separation distance of 400 feet	10		7.50	2.50

(A) HQ waters are identified in 567--Chapter 61.
(B) HQR waters are identified in 567--Chapter 61.
(C) A listing of PWAs is available at http://www.state.ia.us/government/dnr/organiza/ppd/prowater.htm#Location%20of%20PWA's%20in

36 Demonstrated community support.

	Score	Air	Water	Community
Written approval of 100% of the property oweners within a one mile radius.	20			20.00

37 Worker safety and protection plan is submitted with the construction permit application.

	Score	Air	Water	Community
Submission of worker safety and protection plan	10			10.00

(A) The worker safety and protection plan must be in the construction permit application and made a condition in the approved construction permit.
(B) The worker safety and protection plan and subsequent records must be kept on site with the manure management plan records.

38 Applicant signs a waiver of confidentiality allowing public to view confidential manure management plan land application records

	Score	Air	Water	Community
Manure management plan confidentiality waiver	5			5.00

The waiver of confidentiality must be in the construction permit application and made a condition in the approved construction permit. The applicant may limit public inspection to reasonable times and places.

39 Added economic value based on quality job development (number of full time equivalent (FTE) positions), and salary equal to or above Iowa department of workforce development median (45-2093)

- OR -

the proposed structure increases commercial property tax base in the county.

	Score	Air	Water	Community
Economic value to local community	10			10.00

The Iowa department of workforce development regional profiles are available at http://www.iowaworkforce.org/centers/regionalsites.htm. Select the appropriate region and then select "Regional Profile."

40 Construction permit application contains an emergency action plan.

	Score	Air	Water	Community
Emergency action plan	5		2.50	2.50

(A) Iowa State University Extension publication PM 1859 lists the components of an emergency action plan. The emergency action plan submitted should parallel the components listed in the publication.
(B) The posting and implementation of an emergency action plan must be in the construction permit application and made a condition in the approved construction permit.
(C) The emergency action plan and subsequent records must be kept on site with the manure management plan records.

41 Construction permit application contains a closure plan.

	Score	Air	Water	Community
Closure plan	5		2.50	2.50

(A) The closure plan must be in the construction permit application and made a condition in the approved construction permit.
(B) The closure plan must be kept on site with the manure management plan records.

42 Adoption and implementation of an environmental management system (EMS) recognized by the department.

	Score	Air	Water	Community
EMS	15	4.50	4.50	6.00

(A) The EMS must be in the construction permit application and made a condition in the approved construction permit.
(B) The EMS must be recognized by the department as an acceptable EMS for use with confinement operations.

43 Adoption and implementation of NRCS approved Comprehensive Nutrient Management Plan (CNMP).

	Score	Air	Water	Community
CNMP	10	3.00	3.00	4.00

The implementation and continuation of a CNMP must be in the construction permit application and made a condition in the approved construction permit.

44 Groundwater monitoring wells installed near manure storage structure), and applicant agrees to provide data to the department.

	Score	Air	Water	Community
Groundwater monitoring	15		10.50	4.50

(A) Monitoring well location, sampling and data submission must meet department requirements.
(B) The design, operation and maintenance plan for the groundwater monitoring wells, and data transfer to the department, must be in the construction permit application and made a condition in the approved construction permit.

	Total Score	Air	Water	Community
	880	213.50	271.00	404.50
Score to pass	440	53.38	67.75	101.13

Total Scores for Kirby Farms Inc.

465	90.75	143.5	230.75