Please staple check here

FE-5
11-25-08

Iowa Department of Natural Resources

Construction Permit Application Form

Confinement Feeding Operations

INSTRUCTIONS:

Prior to constructing, modifying or expanding a confinement feeding operation structure[1], complete Item 3,B (page 2), to verify if a construction permit is needed. To calculate the animal unit capacity (AUC) of the operation, complete Table 1 (page 3.) If a construction permit is required, complete the remainder of this form and have the owner(s) sign it on page 4. Mail to the DNR (see address on page 4) the documents and fees requested in Checklist No. 1 or 2 (pages 9 to 15).

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 4 for DNR contact information.

ITEM 1 – Location and Contact Information (for instructions and an example, see page 11 or 14):

A) Owner: James Lilienthal Telephone: 563-893-2347

Name of operation: Jim Lilienthal

Location: NW (1/4 1/4) NW (1/4) 31 (Section) 80 IE (Tier & Range) Liberty (Name of Township) Scott (County)

☒ 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 10 or 12). See example of aerial photo on pages 16 to 17, 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. NOTE: If you check this box, it is recommended that you first contact DNR-AFO Program staff at 515/281-8868 to verify site adjacency requirements.

B) Contact person. All future correspondence about the operation will be sent to this person:

Name: Brian Ritland Title: Telephone: 641-648-7300

Address: 620 Country Club Rd Iowa Falls, IA 50126

E-mail: britland@pinnacleiowa.com Fax: 641-648-7310

ITEM 2 – Siting Information:

A) Karst Determination: Go to www.IowaDNR.com, 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 9 to 15).

☐ 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.com, 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 9 to 15).

☐ 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.

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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 3 – Operation Information

A) This application is for: ☐ a new confinement feeding operation
☒ expansion or modification of an existing confinement feeding operation

Date when first constructed: May '97 (only for existing operations)

Date when the last construction was completed: May '97 (only for previously unpermitted operations)

Is this also an ownership change? ☐ Yes. ☒ No

B) A construction permit is required if any of the following boxes 1 to 8 is checked:

1. ☐ Constructing or modifying an 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 an operation, if after construction, installation or expansion the AUC of the operation is 1,000 animal units (AU) or more. This includes a confinement feeding operation that stores manure exclusively in a dry form.
3. ☐ Initiating a change, even if no construction or physical alteration is necessary, that would result in an increase in the volume of or a modification in the manner in which manure is stored in any unformed manure storage structure[3].
4. ☐ Initiating a change, even if no construction or physical alteration is necessary, that would result in an increase in the volume of 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.
5. ☐ Constructing or modifying an egg washwater storage structure or a confinement building at a confinement feeding operation that includes an egg washwater storage structure.
6. ☐ Initiating a change, even if no construction or physical alteration is necessary, that would result in an increase in the volume of or a modification in the manner in which egg washwater is stored.
7. ☐ Repopulating a confinement feeding operation if it was closed for 24 months or more and if any of the following apply: the confinement feeding operation uses an unformed manure storage structure[3] or egg washwater storage structure; 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 DNR determines that a construction permit is not required.

ITEM 4 – Calculating Animal Unit Capacity and, if applicable, Animal Weight Capacity

A) Calculating Animal Unit Capacity (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 animal units (AU) together on Table 1 (page 3). 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 6), 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 addition, include in Table 1, all animals from any confinement operation that you are the owner or majority owner of or that you manage that is adjacent or that utilizes a common area or system for manure disposal. Two or more operations are "adjacent" if: (a) at least one confinement feeding operation structure[1] is constructed on or after May 21, 1998; and (b) the operations are closer than 1,250 feet to each other at closest point if the operations have a combined AUC of less than 1,000 AU or if the operations are closer than 2,500 feet to each other at closest point and the operations have a combined AUC of 1,000 AU or more. For more information, contact the AFO Program at (515) 281-8941.

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

Table 1. Animal Unit Capacity: (No. HEAD) * (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		0.4			0.4	
Farrowing sows & litter		0.4			0.4	
Boars		0.4			0.4	
Gilts		0.4			0.4	
Finished (Market) hogs	2400	0.4	960	4800	0.4	1920
Nursery pigs 15 lbs to 55 lbs		0.1			0.1	
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	
TOTALS:	**a) Existing AUC:**		960	**b) Total proposed AUC:**		1920

(This is the AUC of the operation)

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)

c) New AU = b) - a): 960

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

The AWC is needed for the modification or expansion of 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: (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						
Farrowing sows & litter						
Boars						
Gilts						
Finished (Market) hogs	2400	130	312000	4800	130	624000
Nursery pigs 15 lbs to 55 lbs						
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:**		312000	**b) Total proposed AWC:**		624000

(This is the AWC of the operation)

c) New AWC = b) - a): 312000

ITEM 5 - Submittal requirements (based on type of confinement feeding operation structure[1] and AUC):
Choose the option below that best fits your proposed operation: Option A, B or C.

A) ☒ The proposed confinement feeding operation structure[1] will be or will use a formed manure storage structure[2]. Proceed to B), below, to verify threshold engineering requirements[4] (whether a Professional Engineer or PE is required) and what additional information is required:

B) ☒ Threshold Engineering Requirements[4]: For operations using formed manure storage structures[2] verify if the operation is required to have a Professional Engineer (PE). Using the "Total proposed AUC" from Table 1 on page 3, check one of the following boxes that best describes your operation (you must check one):

1. ☐ A swine farrowing and gestating operation with an AUC of 1,250 AU or more.
2. ☐ A swine farrow-to-finish operation with an AUC of 2,750 AU or more.
3. ☐ A cattle confinement feeding operation (including dairies) with an AUC of 4,000 AU or more.
4. ☐ Other confinement feeding operations with an AUC of 3,000 AU or more.
5. ☒ None of the above.

If you checked box 5 (above), your operation is below threshold engineering requirements[4] and a Professional Engineer (PE) is not required. Complete and sign this form, and submit all documents and fees required in Checklist No. 1 (pages 9-11) to the address at the bottom of this page.

If you checked any of boxes 1 to 4 (above), the operation meets the threshold engineering requirements[4] and a Professional Engineer (PE) is required. Complete and sign this form, and submit all documents and fees required in Checklist No. 2 (pages 12-14) to the address at the bottom of this page.

C) ☐ 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 is required for any size of operation. Complete and sign this form, and submit all documents and fees required in Checklist No. 2 plus Addendum "A" (pages12-15) to the address at the bottom of this page.

ITEM 6 - Signature

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

Signature of Owner(s): James E Schmidt Date: 10/30/08

To expedite a decision, ensure that page 1 of this application form is the first page of the application package. Then mail 2 or 3 copies of the documents and fees as requested in Checklist No. 1 or 2, respectively, to the following address:

Iowa DNR
AFO Program
Wallace State Office Building
502 East 9th St.
Des Moines, IA 50319

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.com (select the link to "Animal Feeding Operations"). To contact the appropriate DNR Field Office, go to http://www.iowadnr.com/fo/index.html.

[4] Threshold engineering requirements apply to the construction or expansion of a formed manure storage structure[2]. Operations that meet or exceed threshold engineering requirements, as explained in Item 5,C (above) are required to submit an engineering report, engineering plans and technical specifications prepared and signed by a professional engineer licensed in Iowa or by an USDA-NRCS Engineer.

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
James Lilienthal	26865 1st Ave	New Liberty, IA	52765

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): James E Lilienthal Date: 10/30/08

ITEM 8

Manure Storage Indemnity Fee Form for Construction Permits

Credit fees to: James Lilienthal

Name of operation: Jim Lilienthal

NSTRUCTIONS:

1) Use the 'Total Proposed AUC' from column b), Table 1 (page 3), 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 3). 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.

Cashier's Use Only
474-542-474A-0431

- 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	960	x	$ 0.15 =	144
3,000 AU or more	5	Poultry		x	$ 0.08 =	
	6	Other		x	$ 0.20 =	

Filing Fees Form for Construction Permits

Credit fees to: James Lilienthal

Name of operation: Jim Lilienthal

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)

Cashier's Use Only
473-542-473A-0431
474-542-474A-0431

3. Total filing fees: Add the fees paid in items 1 and 2 (above): $ 500

SUMMARY:

- Manure Storage Indemnity Fee (see previous page) $ 144
  to be deposited in the Manure Storage Indemnity Fee Fund (474)

- Total filing fees (see item 3 on this page) $ 500
  to be deposited in the Animal Agriculture Compliance Fund (473)

TOTAL DUE: $ 644

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 9-15.) 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: James Lilienthal Telephone: 563-893-2347

Name of operation: Jim Lilienthal

Location:	NW	NW	31	80 1E	Liberty	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 checklist 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 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 1 or 2)

THIS SECTION IS RESERVED FOR THE COUNTY

s 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: Scott County

NAME: Alex E. Mongiat

TITLE: Operations Manager, Auditor's Office

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

Date: November 7, 2008.

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

Site; 08 (0.58 ac.)

No Public Use within 2751'
No Edu, Religous, or Commercial Ent. within 2751'
No Well within 101'
No Ag Drainage Well, Known Sinkhole, or Major Water within 3501'
No HQ, HQR, or PWA within 1001'

Distance to Right of Way
197.761
Distance to Water
1133.863
2274.27
Distance to Neighbors
2019.747
3057.566
3100.441
3222.447
4749.855
4974.742
(0.6ac.)Field Boundary

Date: Oct 16, 2008
Field Name: Site; 08
Location: Scott Co., Cedar Co., Iowa, U.S.
Farm Name: Jim Lilienthal
Client Name: P-Index Plans
Total Acres: 0.58
Field Boundary Start Location:
Latitude: 41.69521640
Longitude: -90.89813592

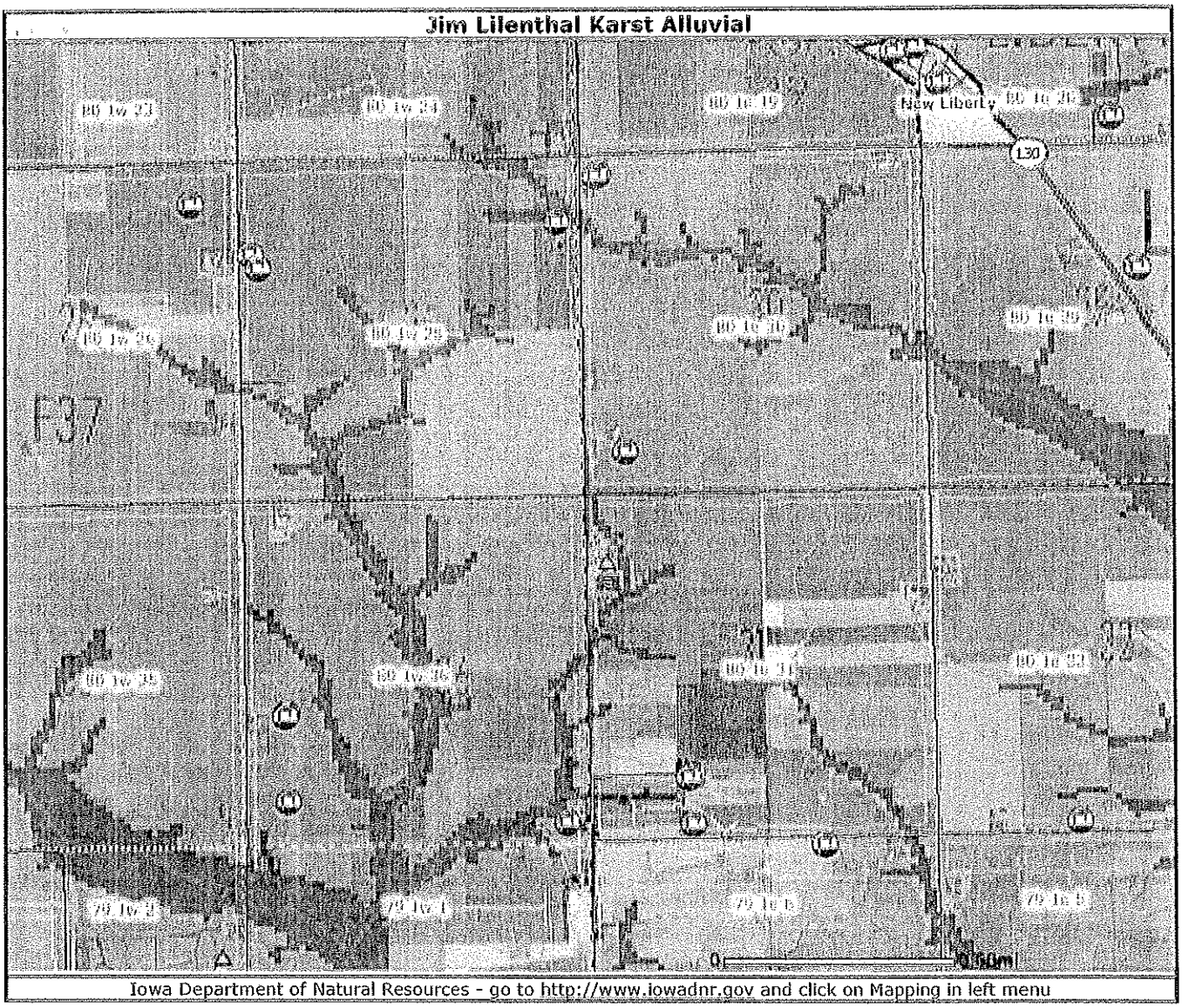
pinnacle
820 Country Club Road
Iowa Falls, Iowa 50126
Office: 641.648.7300
Fax: 641.648.7310
www.pinnacleiowa.com

Site; 08 (0.58 ac.)

Date: Oct 16, 2008
Field Name: Site; 08
Location: Scott Co., Cedar Co., Iowa, U.S.
Farm Name: Jim Lilienthal
Client Name: P-Index Plans
Total Acres: 0.58
Field Boundary Start Location:
Latitude: 41.69521640
Longitude: -90.89813592

pinnacle
620 Country Club Road
Iowa Falls, Iowa 50126
Office: 641.648.7300
Fax: 641.648.7310
www.pinnacleswa.com

Distance to Right of Way
197.761
Driveway
(0.6ac.)Field Boundary


Jim Lilenthal Karst Alluvial
New Liberty
130
0
0.5
1
Miles
Iowa Department of Natural Resources - go to http://www.iowadnr.gov and click on Mapping in left menu

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: Jim Lichtenhal Facility ID No.: 58044

Location:	NW	NW	31	80-N,1-E	Liberty	Scott
	(1/4 1/4)	(1/4)	(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:

71'2" x 277' x 8' Deep, Below Ground, Covered, Concrete

C) Karst Determination: Go to www.IowaDNR.com, select the link to 'Mapping (GIS Interactive)', then check the AFO Siting Atlas. 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. 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.

☐ 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. Complete and sign Section 3,H (page 5).

D) Alluvial Soils Determination: Go to www.IowaDNR.com, select the link to 'Mapping (GIS Interactive)', then check the AFO Siting Atlas. 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. If the site is not in potential alluvial soils, print and enclose the map with the name and location of the site clearly marked.

☐ 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.

Section 2 - Manure management plan:

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

James Lichtenhal — Owner's Name (print)

James C Lichtenhal — Owner's Signature

10/30/08 — 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 www.IowaDNR.com

[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:** Swine Finisher

Dimensions of proposed formed manure storage structure[3]

	Length	Width	Height or depth	Wall thickness	Diameter (circular tanks only)
Feet	277	71	8	0	
Inches	0	2	0	8	

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					12"
Grade 40, No. 5					
Grade 60, No. 4				9"	
Grade 60, No. 5					

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."* 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. If applying for a construction permit, 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 above 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: Jim Cilcenthal County: Scott

Onwer's name: James Cilcenthal

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

☒ Page 2, for each formed manure storage structure[3] that have different dimensions
☒ Pages 3 to 5 (applicable sections)
☒ Other documents (specify): IA DNR ALLUVIAL & KARST SOILS MAP"

ARLAN C. MOHR	Arlan C Mohr	10-14-08
(Print name)	(Signature)	(Date)
CUSTOM BUILDERS, INC	**209 W. South Street, 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)

Jon Hager

From: Hruby, Claire [DNR] [Claire.Hruby@dnr.iowa.gov]
Sent: Monday, October 20, 2008 3:23 PM
To: Jon Hager
Cc: Sievers, Jim [DNR]
Subject: RE: Jim Lilienthal

Attachments: lilienthal.JPG

lilienthal.JPG (191 KB)

Determination #: 1952
Facility #: 58044 (Jim Lilienthal)
Re: proposed confinement expansion
Location: NW 1/4 of the NW 1/4 of Section 31, T80N, R1E, Scott County.

Dear Jon,

I have determined* that the proposed building site that you submitted to the Iowa Department of Natural Resources (IDNR) is not in alluvial soils or karst terrain. This determination is only valid for the area outlined in black on the attached image. Please notify me if I have incorrectly located the facility. If your client chooses to pursue construction at this site, please submit a copy of this email and the attached image with the construction materials.

Let me know if you have any questions.

Sincerely,
Claire Hruby

* - This determination is a service provided to you by the Iowa Geological Survey/IDNR. Please keep in mind that all determinations are based on information available to us at this time. If information obtained from field observations in the future contradict this determination, the IDNR should be notified and all applicable state requirements must be met.

Claire Hruby, Geologist
IDNR - Wallace Building
502 E. 9th St.
Des Moines, IA 50319
ph: 515-242-6848
claire.hruby@dnr.iowa.gov

-----Original Message-----
From: Jon Hager [mailto:jhager@pinnacleiowa.com]
Sent: Tuesday, October 14, 2008 11:40 AM
To: Hruby, Claire [DNR]
Subject: Jim Lilienthal

Claire can you get me a determination on this site. It is and Existing 2400 hd expanding to a 4800 hd site. Here is the legal of the site:
NW,NW,31,80,1E,Liberty,Scott County,

-----Original Message-----
From: scanner
Sent: Tuesday, October 14, 2008 12:32 PM
To: Jon Hager
Subject:

4800 HS → 1920 AUC
BUILT MAY '97

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,
* Nursing home, or
* Licensed or registered child care facility.

2019.750 = 1269'

	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.

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

NOT WITHIN 2751'

	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.

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

NONE WITHIN 2751'

	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.

1153 - 500 = 633'

	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.

NONE WITHIN 3501'

	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.

---

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 one 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 hume

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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.

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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

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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.

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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

Site: Jim Lilienthal

APPENDIX C
MASTER MATRIX

Question	Score	Air	Water	Community	
1	100	65	0	35	
2	30	12	0	12	
3	30	12	0	18	
4	10	0	10	0	
5	0	0	0	0	
6	10	4	0	6	
7	0	0	0	0	
8	50	5	25	20	
9	25	7.5	7.5	10	
10	30	0	22.5	7.5	
11	0	0	0	0	
12	30	27	0	3	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	30	0	27	3	
18	0	0	0	0	
19	20	0	0	20	
20	30	0	0	30	
21	0	0	0	0	
22	25	0	0	25	
23	25	0	0	25	
24	20	0	0	20	
25	25	0	12.5	12.5	
26	30	12	12	6	Only for: "b,c, or d"
27	0	0	0	0	Only for: "a & e"
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	
31	0	0	0	0	
32	0	0	0	0	
33	0	0	0	0	
34	0	0	0	0	
35	0	0	0	0	
36	0	0	0	0	
37	0	0	0	0	
38	0	0	0	0	
39	0	0	0	0	
40	0	0	0	0	
41	0	0	0	0	
42	0	0	0	0	
43	0	0	0	0	
44	0	0	0	0	
Total	**520**	**144.5**	**116.5**	**253**	
Total to Pass	**440**	**53.38**	**67.75**	**101.13**	

Requires: "Design, Operation, and Maitenance Plan"

Requires: "Supporting Documentation"

Design, Operating, & Maintenance Plans & Supporting Documentation

SITE NAME Jim Lilienthal

Master Matrix #1
The swine facility is located an additional **1269 feet**, above the required **750 feet**, away from the closest residence not owned by the owner of the confinement feeding operation, Hospital, Nursing Home, and Licensed or registered child care facility. Refer to site map.
Credits of **100** pts have been counted in the Master Matrix for **Item 1**.

Master Matrix #2
The swine facility is located at least an additional **1501 feet,** above the required **1250 feet**, away from the closest Public Use Area; defined as 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. Refer to site map.
Credits of **30** pts have been counted in the Master Matrix for **Item 2**.

Master Matrix #4
The swine facility is located an additional **633 feet**, above the required **500 feet**, away from the closest water source. Refer to site map.
Credits of **10** pts have been counted in the Master Matrix for **Item 4**.

Master Matrix #3
The swine facility is located at least an additional **1501 feet**, above the required **1,250 feet**, away from the closest Educational Institute, Religious Institution, or Commercial Enterprise. Refer to site map.
Credits of **30** pts have been counted in the Master Matrix for **Item 3**.

Master Matrix #6
The swine facility is located an additional **500 feet**, above the required **2,500 feet**, away from the closest critical public area. Refer to site map.
Credits of **10** pts have been counted in the Master Matrix for **Item 6**.

Master Matrix #8
The swine facility is located an additional **2501 feet**, above the required **1,000 feet**, away from the closest Agricultural drainage well, known sinkhole, or major water source. Refer to site map.
Credits of **50** pts have been counted in the Master Matrix for **Item 8**.

Master Matrix #9
The swine facility is located at least **three-quarters of a mile** away from the nearest confinement facility that has a submitted department manure management plan. Refer to site map.
Credits of **25** pts have been counted in the Master Matrix for **Item 9**.

Master Matrix #10

The swine facility is located at lease two times the minimum separation distance of **500 feet**, from the closest high quality water, high quality resource water, or protected water areas. Refer to site map.

Credits of **30** pts have been counted in the Master Matrix for **Item 10**.

Master Matrix #12

Design: The site will consist of (3) swine finishing buildings housing a maximum of **4800** finishing animals, **1920** AUC. Each building will have an 8'deep formed concrete pit. The construction design specifications will meet the IDNR requirements as verified in the IDNR Construction Design Statement form attached herein.

Operation: Monthly inspections of the building structure roof will be conducted to insure water is not infiltrating the storage pit.

Maintenance: Maintenance of the cover will be minimal, since it is built of steel, and is a main component of the confinement building. However, the roof will be inspected monthly, looking for evidence of any water leaks. If any leaks are found, they will be immediately repaired with appropriate materials to achieve as-built condition.

Credits of 30 points have been counted in the Master Matrix for **Item 12**.

Master Matrix # 17

Design: The site will utilize an 8' deep formed concrete pit. Refer to the Construction Design Statement for specifications of concrete and reinforcement materials to be used in this structure.

Operation: The facility will be operated as a below building concrete pit with periodic inspections to assure the soundness of the structure. Heavy equipment will maintain a safe distance to avoid any stress on the structures.

Maintenance: Due to the concrete design and specifications for the structure, maintenance is expected to be minimal for this structure. However, the exterior of the below building pits will be inspected monthly to look for cracks or any evidence of outside water entering into the pit. If any evidence of cracks is found, grout or another form of sealing agent will be immediately used to seal the cracks to achieve as built conditions. In addition, the integrity of each pit shall be evaluated by observing the perimeter footing tile discharge for signs of contamination such as bad smell, discoloration, excessive liquid in tile during dry times, and dead foliage. If contamination happens a prompt investigation should be conducted to locate the source of the manure leak and necessary remedial measures should be taken and DNR should be notified. Any significant reduction in the discharge rate should be considered an indicator of the footing tile collapse or blockage which should be corrected immediately.

Credits of **30** pts have been counted in the Master Matrix for **Item 17.**

Master Matrix # 19

Design: The site will have a truck turnaround area allowing the trucks to pull in to the site completely off of the road and turn around.
Operation: The driveway will be operated to provide for safe entrance and exit to the property for delivery vehicles and not obstruct the public thoroughfare.
Maintenance: The driveway will be maintained to a level that will support regular truck traffic. The driveway will be constructed with a 2-3 inch base. Road rock gravel will be used as a road surface that will be monitored for the purposes of leveling, filling potholes, and adequate snow removal.
Credits of **20** pts have been counted in the Master Matrix for **Item 19.**

Master Matrix #20

The construction permit applicant has no history of Administrative Orders in the last five years at any site in which the applicant has any interest.
Credits of **30** pts have been counted in the Master Matrix for **Item 20.**

Master Matrix # 22

The construction permit applicant, **James Lilienthal,** is the closest resident to the proposed confinement structure.
Credits of **25** pts have been counted in the Master Matrix for **Item 22**

Master Matrix # 23

The construction permit applicant, **Jim Lilienthal**, can lawfully claim the Family Farm Tax Exemption on the site where the confinement structure is being constructed. The owner, Jim Lilienthal, holds 100% ownership interest and also farms the contiguous farm ground.
Credits of **25** pts have been counted in the Master Matrix for **Item 23.**

Master Matrix #24

The facility has a capacity of **1 to 2000** animal units. Refer to Construction Permit Application, page 3.
Credits of **20** pts have been counted in the Master Matrix for **Item 24.**

Master Matrix #25

Design: The buildings on the site will utilize a wet/dry feeder design or a dry feeder with watering cups. Industry wide accepted data shows significant water savings compared to a gate mounted watering nipple. Please refer to the attached scientific article illustrating the water savings and benefits of utilizing wet/dry feeders.
Operation: Feeders and watering cups will be adjusted to reduce waste and optimize feed efficiency for the facility. The water savings result in reducing the gallons of nutrients in the pit that later have to he hauled out onto farm fields.
Maintenance: The feeders will be inspected on a regular basis and adjusted as needed. Water flow will be monitored and adjusted to control waste and excess manure volume.
Credits of **25** pts have been counted in the Master Matrix for **item 25.**

Master Matrix # 26 "e"

All manure will be injected or incorporated on the same date that it is applied.

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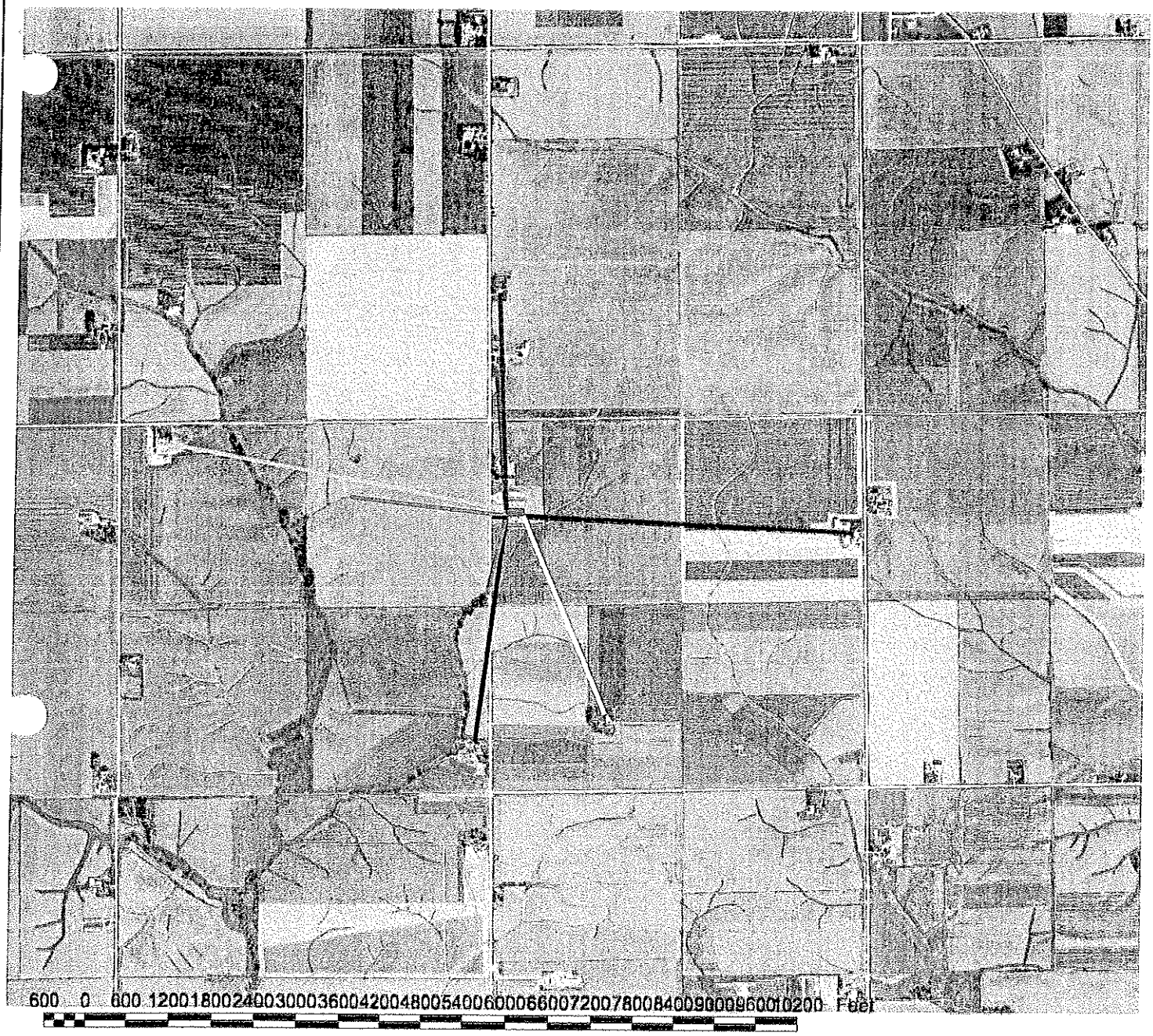
20. Nebraska DEQ. Form WP-42 (6/96), Confined Feeding or Dairy Barn Applications for Permit to Construct and Operate a Livestock Waste Control Facility. Nebraska Dept of Environmental Quality, Lincoln. 1996.

Site; 08 (0.58 ac.)



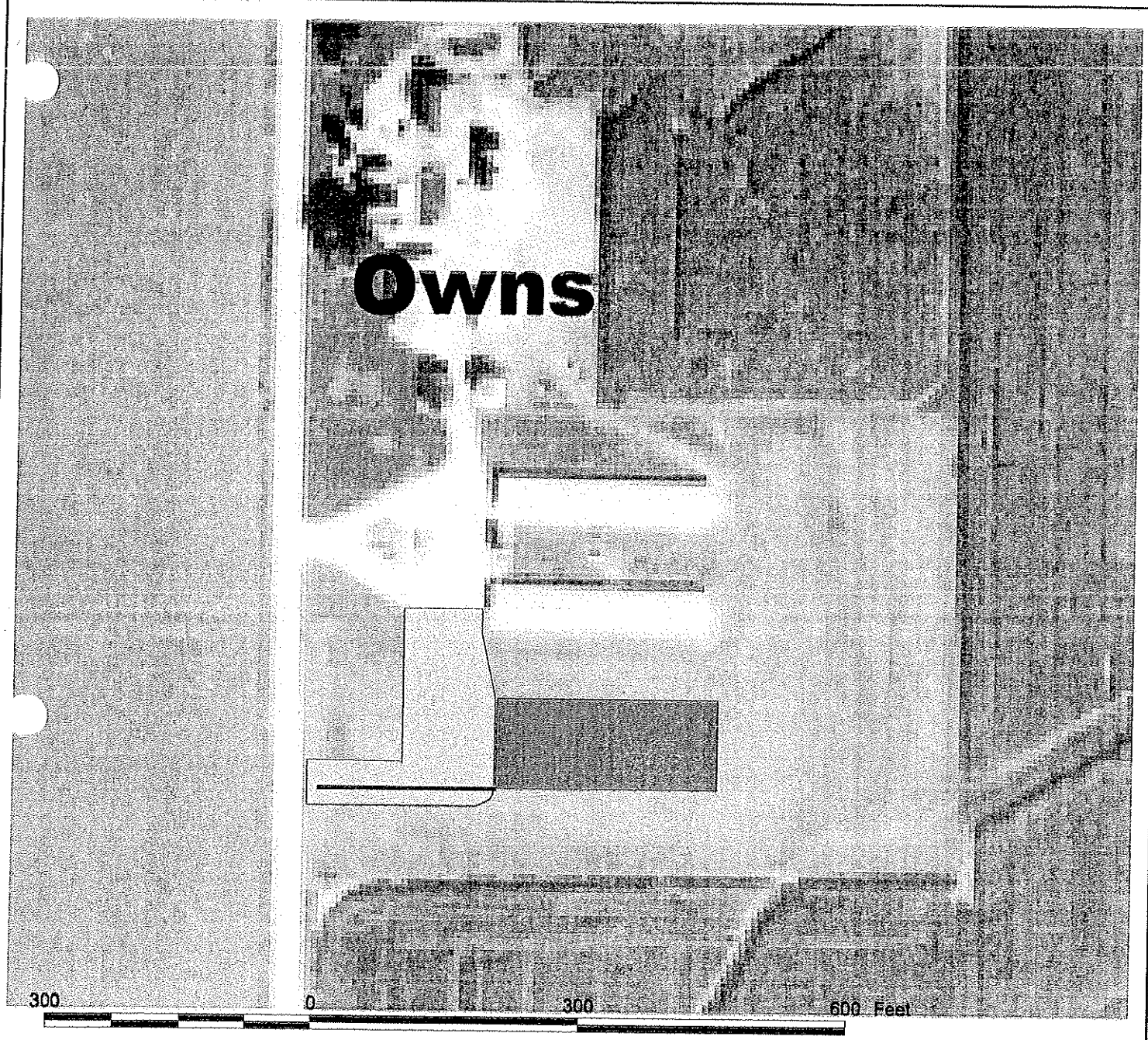
No Public Use within 2751'
No Edu, Religous, or Commercial Ent. within 2751'
No Well within 101'
No Ag Drainage Well, Known Sinkhole, or Major Water within 3501'
No HQ, HQR, or PWA within 1001'

Distance to Right of Way
197.761
Distance to Water
1133.863
2274.27
Distance to Neighbors
2019.747
3057.566
3100.441
3222.447
4749.855
4974.742
(0.6ac.)Field Boundary

Date: Oct 16, 2008
Field Name: Site; 08
Location: Scott Co., Cedar Co., Iowa, U.S.
Farm Name: Jim Lilienthal
Client Name: P-Index Plans
Total Acres: 0.58
Field Boundary Start Location:
Latitude: 41.69521640
Longitude: -90.89813592

pinnacle
520 Country Club Road
Iowa Falls, Iowa 50126
Office: 641.648.7300
Fax: 641.648.7510
www.pinnacleiowa.com

Site; 08 (0.58 ac.)



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Distance to Right of Way
197.761
Driveway
(0.6ac.)Field Boundary

Lilienthal