

# STATE OF COLORADO

Bill Ritter, Jr., Governor  
Martha E. Rudolph, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department  
of Public Health  
and Environment

September 21, 2010

Michael R. Faulkner, Registered Agent  
Faulkner Dairy II, LLC/ Galeton Dairy Land Company, LLC  
300 East 16<sup>th</sup> Street, Suite 301  
Greeley, Colorado 80631

Certified Mail Number: 7007 0220 0001 0159 6314

**RE: Expedited Settlement Agreement, Number: EC-100920-3**

Dear Mr. Faulkner:

Enclosed for your records you will find Faulkner Dairy II, LLC / Galeton Dairy Land Company, LLC's ("Faulkner/ Galeton Dairy") copy of the recently executed Expedited Settlement Agreement ("ESA"). Please be advised that the first page of the ESA was changed in order to place the correct ESA Number on the final document. The ESA is now fully enforceable and constitutes a final agency action.

As specified in the enclosed ESA, Faulkner/ Galeton Dairy must, within fifteen (15) calendar days, submit a certified or cashier's check for the amount specified in the ESA to the Water Quality Control Division in order for this matter to be resolved.

If you have any questions, please do not hesitate to contact Kelly Morgan at (303) 692-3634 or by electronic mail at [kelly.morgan@state.co.us](mailto:kelly.morgan@state.co.us).

Sincerely,

Russell Zigler, Legal Assistant  
Water Quality Protection Section  
WATER QUALITY CONTROL DIVISION

cc: Weld County Dept of Public Health & Environment

ec: Aaron Urdiales, EPA Region VIII  
Erin Kress, Environmental Agriculture Program, CDPHE



Colorado Department of Public Health & Environment

## EXPEDITED SETTLEMENT AGREEMENT

Number: EC-100920-3

The Colorado Department of Public Health and Environment (the "Department"), through the Water Quality Control Division (the "Division"), issues this Expedited Settlement Agreement ("ESA"), pursuant to the Division's authority under §§25-8-602 and 25-8-605, C.R.S. of the Colorado Water Quality Control Act (the "Act") §§25-8-101 to 703, C.R.S., and its implementing regulations, with the express consent of Faulkner Dairy II/ Galeton Dairy Land Company, LLC ("Faulkner/ Galeton Dairy"). The Division and Faulkner/ Galeton Dairy may be referred to collectively as "the Parties."

1. Faulkner/ Galeton Dairy is a "person" as defined under the Water Quality Control Act, §25-8-103(13), C.R.S. and 5 CCR 1002-81, §81.3(24).
2. Faulkner/ Galeton Dairy operates a Concentrated Animal Feeding Operation ("CAFO") as defined by 5 CCR 1002-81, §81.3(5) in the vicinity of 37430 Weld County Road 51, in Weld County, Colorado.
3. Pursuant to 5 CCR 1002-81, §81.8(2)(b), CAFO operators shall have available documentation prepared by a professional engineer, registered in Colorado, certifying that the impoundment liner provisions of 5 CCR 1002-81, §81.8(2) have been met, and stating what constitutes each constructed liner (e.g., synthetic, clay). For impoundments constructed prior to June 30, 2004, such documentation shall be available no later than April 13, 2006. *(See Attachment A)*
4. In documentation gathered by a Department inspection dated October 23, 2009, the Department concluded that the Faulkner/ Galeton Dairy impoundments do not meet the seepage rate standards of 5 CCR 1002-81, §81.8(2). Faulkner/ Galeton Dairy's failure to construct and maintain its impoundments to comply with the seepage rate standards by no later than April 13, 2006 constitutes violation(s) of 5 CCR 1002-81, §81.8(2). *(See Attachment B)*
5. The parties enter into this ESA in order to outline an enforceable compliance schedule to resolve the violations identified herein and to resolve the matter of civil penalties associated with the alleged violations for a civil penalty in the amount of five thousand dollars (\$5,000.00).
6. By accepting this ESA, Faulkner/ Galeton Dairy neither admits nor denies the violation specified herein.
7. Faulkner/ Galeton Dairy agrees to the terms and conditions of this ESA. Faulkner/ Galeton Dairy agrees that this ESA constitutes a notice of alleged violation and an order issued pursuant to §§25-8-602 and 25-8-605, C.R.S., and is an enforceable requirement of the Act. By signing the ESA, Faulkner/ Galeton Dairy waives: (1) the right to contest the finding(s) specified herein; and (2) the opportunity for a public hearing pursuant to §25-8-603, C.R.S.

8. Faulkner/ Galeton Dairy agrees to submit to the Department within two hundred and ten (210) calendar days of receipt of the final signed ESA documentation prepared by a professional engineer, registered in Colorado, certifying that the impoundment liner provisions of 5 CCR 1002-81, §81.8(2) have been met, and stating what constitutes each constructed liner (e.g., synthetic, clay).
9. This ESA is subject to the Division's "Public Notification of Administrative Enforcement Actions Policy," which includes a thirty-day public comment period. The Division and Faulkner/ Galeton Dairy each reserve the right to withdraw consent to this ESA if comments received during the thirty-day period result in any proposed modification to the ESA.
10. This ESA constitutes a final agency order or action upon the date when the Department's Executive Director or his designee signs the ESA and effectively imposes the civil penalty.
11. Nothing in this ESA shall preclude the Department from imposing additional requirements in the event that new information is discovered that indicates such requirements are necessary to protect human health or the environment.
12. Faulkner/ Galeton Dairy agrees that, within fifteen (15) calendar days of receiving the signed and final ESA from the Division, Faulkner/ Galeton Dairy shall submit a certified or cashier's check drawn to the order of the "Colorado Department of Public Health and Environment," for the civil penalty amount specified in paragraph 5 above, to:

Ms. Kelly Morgan  
Colorado Department of Public Health and Environment  
Water Quality Control Division  
Mail Code: WQCD-CADM-B2  
4300 Cherry Creek Drive South  
Denver, Colorado 80246-1530

13. Notwithstanding paragraph 6 above, the violations described in this ESA will constitute part of Faulkner/ Galeton Dairy's compliance history for purposes where such history is relevant. This includes considering the violations described above in assessing a penalty for any subsequent violations against Faulkner/ Galeton Dairy. Faulkner/ Galeton Dairy agrees not to challenge the use of the cited violations for any such purpose.
14. This ESA, when final, is binding upon Faulkner/ Galeton Dairy and its corporate subsidiaries or parents, their officers, directors, employees, successors in interest, and assigns. The undersigned warrant that they are authorized to legally bind their respective principals to this ESA.

ACCEPTED BY FAULKNER DAIRY II/ GALETON DAIRY LAND COMPANY, LLC:

Mike Faulkner Date: 6/25/10  
Signature

MIKE FAULKNER Title: Pres.  
Name (printed)

FOR THE COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT:

Lori M. Gerzina Date: 9/20/10  
Lori M. Gerzina, Section Manager  
Compliance Assurance and Data Management Section  
WATER QUALITY CONTROL DIVISION

Attachment A

*Excerpt from Animal Feeding Operations Control Regulation 81 (5 CCR 1002-81)*

**81.8 GROUND WATER PROTECTION REQUIREMENTS - CONCENTRATED ANIMAL FEEDING OPERATIONS (PERMITTED AND NON-PERMITTED)**

(1) Tanks at concentrated animal feeding operations shall be operated and maintained so as not to discharge wastewater to ground water.

**(2) Impoundment liners**

**(a) An impoundment at a concentrated animal feeding operation shall be constructed and maintained to comply with one of the following standards, as applicable:**

**(i) The seepage rate from an impoundment shall not exceed  $1 \times 10^{-6}$  cm/sec; or**

**(ii) Where approved by the Division for an impoundment with an earthen liner, the seepage rate from the impoundment shall not exceed  $7.35 \times 10^{-6}$  cm/sec. The operator of the impoundment shall submit to the Division a request that the impoundment be approved to meet this seepage standard. Such a request shall include, but not be limited to, information documenting that only open-lot wastewater will be diverted to the impoundment, that the impoundment is not designed as an evaporation impoundment, and that the ten (10) foot soil depth zone immediately beneath the impoundment has a cation exchange capacity of at least 15 meq/100 g of soil. Demonstration of compliance with the cation exchange capacity criteria requires the following:**

- (A) At least seven soil samples shall be acquired from below the entire surface area of the impoundment and analyzed for cation exchange capacity.**
- (B) The soil samples shall be reasonably equidistant from each other, with five locations being within ten feet of, and downslope of, the two-foot freeboard elevation of the impoundment, and two locations from the middle of the impoundment.**
- (C) The operator shall have available a map of the impoundment and soil sampling locations.**
- (D) Where soil samples were taken below existing impoundments, the operator shall have available documentation from a professional engineer registered in the State of Colorado of how the core locations were sealed to meet a  $1 \times 10^{-6}$  cm/sec maximum seepage rate.**

**(b) CAFO operators shall have available documentation, including the supporting information required by section 81.8(2)(b)(iii), prepared by a professional engineer registered in Colorado certifying that the provisions of section 81.8(2) have been met, and stating what constitutes each constructed liner (e.g., synthetic, clay).**

**(i) For impoundments constructed prior to June 30, 2004, the liner certification shall be available no later than April 13, 2006.**

**(ii) For any impoundment constructed by an operator on or after June 30, 2004 and before February 27, 2009, the liner certification shall be available prior to wastewater entering the impoundment.**

Attachment A

***Excerpt from Animal Feeding Operations Control Regulation 81 (5 CCR 1002-81)***

**(iii) For any impoundment constructed by an operator on or after February 27, 2009, the liner certification and, where applicable, the seepage rate calculations using Darcy's Law shall be available prior to wastewater entering the impoundment.**

**(iv) Copies of the liner certification and supporting information shall be made available to the Division and its designee, upon request. In addition, these documents shall be submitted to the Division as follows:**

**(A) For impoundments constructed after February 1, 2007, and before December 30, 2008, submit the documents by February 27, 2009.**

**(B) For an impoundment constructed after December 30, 2008, submit the documents by no later than 30 days after construction of the impoundment is complete.**

**(c) A CAFO operator shall visually inspect the exposed liner of an impoundment weekly to identify physical changes or deficiencies that may affect the integrity of the liner. Such deficiencies and physical changes shall be corrected within thirty (30) days of having been identified.**

**(i) The operator shall record the date of the inspection, deficiencies identified, corrective actions taken, and dates that corrective action was completed.**

**(ii) Deficiencies not corrected within 30 days shall be accompanied by an explanation of the factors preventing completion of corrective actions within this time period.**

**(iii) The records shall be maintained on-site for five years from the date of creation and shall be made available to the Division upon request.**

**(3) Removal of manure or wastewater from an impoundment shall be accomplished in a manner that does not damage the integrity of the liner. The operator shall submit to the Division for approval a Standard Operating Procedure ("SOP") that demonstrates how manure, including sludge, will be removed such that the liner integrity of impoundments is not damaged. The SOP also shall indicate the expected frequency with which manure will be removed from impoundments.**

**(a) The approved SOP must be available on-site and be submitted to the Division upon request.**

**(b) The operator shall follow the approved SOP whenever manure, including sludge, is removed. Where the SOP was not followed, the Division may require that the operator make the liner available for inspection. Where the Division has just cause as a result of the inspection, the Division may require re-certification of the liner by a professional engineer registered in Colorado.**

**(c) An existing CAFO shall submit the SOP no later than December 31, 2004.**

**(i) A CAFO that comes into existence after December 31, 2004 shall submit the SOP no later than 120 days after animals are placed on the production area.**

**(ii) The operator shall submit a revised SOP for approval within 30 days of a change having been made to the impoundment(s) at the facility that requires a revision of the SOP, such as a new impoundment or different liner having been constructed.**

**(d) The operator shall certify after each manure or sludge removal event that the manure or sludge was removed in accordance with the approved SOP.**

Attachment A

**Excerpt from Animal Feeding Operations Control Regulation 81 (5 CCR 1002-81)**

(i) For a concrete-lined impoundment, where a certification for each removal event is not completed, the operator shall:

(A) Drain and clean the impoundment every five years and use best professional judgment to determine whether the liner integrity is damaged such that the impoundment is no longer capable of having a maximum seepage rate of  $1 \times 10^{-6}$  cm/sec.

(B) Where the operator determines that the liner integrity is such that the impoundment remains capable of having a maximum seepage rate of  $1 \times 10^{-6}$  cm/sec, the operator shall so certify within five days of the liner inspection. The certification shall include photographs supporting the determination.

(C) Where the operator determines that the liner integrity is damaged such that the impoundment is no longer capable of having a maximum seepage rate of  $1 \times 10^{-6}$  cm/sec, the operator shall:

(I) Repair the impoundment within 30 days of the liner inspection so that the liner integrity is such that the impoundment is capable of having a maximum seepage rate of  $1 \times 10^{-6}$  cm/sec.

(II) Within 14 days of the impoundment having been repaired, submit to the Division evidence of the repair having been properly completed. The evidence shall consist either of photographs with accompanying written documentation or of other evidence approved by the Division.

(ii) The certifications must be available on-site and be submitted to the Division upon request.

(e) Where the SOP is not followed the operator shall provide notice to the Division within 30 days of the date of manure removal.

(4) Any depth marker in an impoundment shall be installed in a manner that maintains the integrity of the liner and maintains the required seepage rate standard.

(5) **Earthen Wastewater Conveyance Structures** - Earthen conveyance structures shall be maintained to minimize ponding of wastewater. In addition, such structures shall be constructed and maintained as follows for the purpose of limiting seepage of wastewater in the structures:

(a) Conveyance structures that carry open-lot wastewater

(i) Where constructed in soils that have 35-60 percent gravel, a conveyance structure shall be constructed by sufficiently compacting the existing soil material (less than 60 percent gravel) in place with at least two passes of rubber-tired construction equipment, four passes of track-type equipment, or equivalent, over the entire surface of the conveyance structure. Moisture content of the soil material during compaction shall be maintained to promote sufficient compaction of the in-place materials. The soil should be wet to the touch and leave a stain on the hand when squeezed.

(ii) Where constructed in soils that have greater than 60 percent gravel, or in loamy sand or sandy soils with greater than 35 percent gravel, a conveyance structure shall be constructed by placing a compacted liner over the entire surface of the conveyance structure. A conveyance structure liner shall be constructed of soils having less than 60 percent gravel, shall be twelve (12) inches thick, and shall be compacted with at least two passes of rubber-tired construction equipment, four passes of track-type equipment, or equivalent, over the entire surface of the conveyance structure. Moisture content of the soil material during compaction shall be maintained to promote sufficient compaction of the soil

Attachment A

***Excerpt from Animal Feeding Operations Control Regulation 81 (5 CCR 1002-81)***

liner material. The soil should be wet to the touch and leave a stain on the hand when squeezed. In addition, the constructed liner shall be maintained to retain these standards.

(iii) Where constructed in soils having less than 35 percent gravel, a conveyance structure does not need to be lined or compacted.

(b) Conveyance structures that carry process-generated wastewater intermittently (greater than 48 hours between conveyance events) – Earthen conveyance structures that carry process-generated wastewater intermittently shall be constructed and maintained in accordance with the standards specified in section 81.8(5)(a)(ii), above.

(c) Conveyance structures that carry process-generated wastewater non-intermittently (48 hours or less between conveyance events) – Earthen and non-earthen (e.g., pipe or concrete) conveyance structures that carry process-generated wastewater non-intermittently shall be constructed and maintained to have a maximum seepage rate of  $1 \times 10^{-5}$  cm/sec.

(d) Where upon inspection the Division has just cause to determine that the required liner is not in place, the Division may require that the operator submit to the Division a certification that the conveyance structure meets the requirements of section 81.8(5)(b) or (c), or 81.8(5)(a)(ii). The certification shall be made by a professional engineer registered in the State of Colorado.

(6) Setbacks for New and Expanded Impoundments – A completely new impoundment constructed after June 30, 2008, and an existing impoundment that is expanded by 50 percent or more of existing storage capacity after June 30, 2008, shall not be located:

(a) Except as provided below, where the seasonally high ground water level is located within four (4) feet of the bottom of the impoundment liner; and

(i) Where the seasonally high ground water level is located within four (4) feet of the bottom of the impoundment liner, the impoundment shall be constructed and maintained in accordance with the design by a professional engineer registered in the state of Colorado that prevents ground water from contacting the impoundment's liner.

(b) Within 150 feet of a private domestic water supply well or within 300 feet of a community domestic water supply well.

(7) Ground Water Monitoring - Where an impoundment is not in compliance with section 81.8(2), or where the Division determines that an impoundment liner is not being properly maintained, the Division may require the operator to conduct site-specific ground water quality monitoring of, but not limited to, total nitrogen, ammonia-nitrogen, nitrate-nitrogen, and fecal coliform. In making a determination of whether ground water monitoring is required, the Division shall consider all pertinent factors, including but not limited to: whether the impoundment poses a significant potential risk to beneficial uses of ground water, whether there is suspected contamination of ground water attributable to the facility, whether early detection of ground water contamination is essential to protect valuable drinking water sources, and whether there has been a significant failure on the part of the operator to comply with Section 81.8(2), (3), (4), (6), or (7).

(8) Ground Water Remediation - When the Division determines that non-compliance with Section 81.8(2), (3), (4), (6), or (7) has caused, or contributed to, the exceedance of established ground water quality standards, the operator shall:

(a) Submit, in consultation with the Division, an approvable investigation plan (IP) within 60 days of being notified by the Division of the exceedance, unless an extension of time is granted by the Division based on good faith efforts made by the operator.

Attachment A

**Excerpt from Animal Feeding Operations Control Regulation 81 (5 CCR 1002-81)**

(i) The IP must indicate how the nature and extent of the contamination will be delineated and shall include the following, at minimum:

- (A) A plan to determine the full vertical and horizontal extent of ground water contamination.
- (B) All potential human and environmental receptors, including: 1) all surface water features including springs, streams, and lakes that could be impacted; and 2) all municipal, agricultural, and domestic ground water users.
- (C) A plan to obtain other site-specific hydrogeologic data necessary to fully determine the nature and extent of the contamination. These shall include, as appropriate, but not be limited to, the hydraulic conductivity of all hydrogeologic units, associated porosity values, ground water flow directions, regional and local hydraulic gradients, and pumping rates associated with all wells. The Division may require that the operator install additional monitoring wells for the purpose of fully determining the nature and extent of the contamination.
- (D) A reasonable timeline for completing the investigation.

(ii) The operator shall implement the IP within 30 days of it being approved by the Division.

(b) The operator shall submit the following information by no later than 60 days after completion of the approved IP, unless an extension of time is granted by the Division based on good faith efforts made by the operator:

(i) A summary report of the findings of the investigation conducted pursuant to section 81.8(8)(a).

(ii) A comparison of all appropriate and applicable remediation alternatives, including innovative technologies, the associated performance and costs of each alternative, the estimated timelines to achieve the required remediation goals, and the monitoring that will be done until the remediation goal(s) is reached. The Division shall review remediation alternatives based on technological, economic, and environmental risk factors. In determining economic reasonableness, the Division shall take into account such factors as costs of the various alternatives, the potential impact of the alternatives on a project's profitability or competitive position, and any long-term energy impacts. In determining environmental risk factors the Division will include potential exposures of sensitive human and environmental receptors. In cases where sensitive human and environmental impacts could occur, the Division may require interim, or emergency, remedial activities.

(c) The operator shall submit an approvable remediation plan (RP) by no later than 60 days of being notified of the Division's preferred remediation alternative, unless an extension of time is granted by the Division based on good faith efforts made by the operator. The RP shall contain designs and plans for implementation of the preferred alternative.

(i) The operator shall implement the RP within 30 days of it being approved by the Division.

(9) Impoundment Closure – The operator of a facility shall remove manure and wastewater from a closed impoundment, to the fullest extent practicable within 60 days of the impoundment being closed, unless an alternative timeline is approved by the Division. Within one hundred twenty (120) days of an impoundment being closed, an impoundment shall be backfilled with soil that is graded to blend with surface topography and





**COLORADO DEPT. OF PUBLIC HEALTH & ENVIRONMENT  
ENVIRONMENTAL AGRICULTURE PROGRAM**

4300 Cherry Creek Drive South — Denver, CO 80246-1530  
303-692-3523 — <http://www.cdphe.state.co.us/oeis/eap>

Colorado Department  
of Public Health  
and Environment

**NON-PERMITTED CAFO SITE INSPECTION**  
*—Ground & Surface Water Protection—*

Facility Name: <u>Faulkner/Galeton Dairy</u> Facility Owner: <u>Mike Faulkner, Joe Pelz</u> Facility Operator: <u>Joe Pelz</u> Mailing Address: <u>300 East 16th St, Suite 301</u> City, State, ZIP: <u>Greelev, CO 80631</u> Physical Address: <u>37430 Weld County Road 51, Eaton CO, 80615</u> County: <u>Weld</u> Contact Person: <u>Joe Pelz</u> Phone (office): <u>(970) 356-3693</u> Cell: <u>(970) 381-1904</u> Fax: <u>(970) 356-7969</u> Email: <u>none given</u>	Date: <u>10/23/2009</u> Time in: <u>12:30 PM</u> Time out: <u>3:00 PM</u> Weather: <u>Sunny, approximately 50 degrees, windy.</u> GPS Reading (at gate): North: <u>40.54187</u> West: <u>104.58277</u> Section: <u>29 and 30</u> Township: <u>7 N</u> Range: <u>64 W</u> Max. Animals Confined per Month: <u>7,000</u>
Does the facility owner/operator own and/or operate any other livestock operations in Colorado? <u>No</u> If yes, provide name(s) and address(es) and indicate whether facility is an AFO or CAFO:	Consultant Name: <u>AgPro</u> Persons present: <u>Lindsay Sartorius (AgPro), Caitlin Kontak (Tt), Jennifer Ferrando (Tt)</u>
Lead Inspector: <u>Caitlin Kontak (Tt)</u>	

Location and name of nearest surface water and description of flowpath: Willow Creek  
Willow Creek flows along the eastern boundary of the main production area. Based on map evidence Willow Creek appears to flow south and split into Greelev Canal No. 2 and Lone Tree Creek. Lone Tree Creek flows into the South Platte River approximately 4 miles south of its junction with Willow Creek.

Number of animals in production area: <u>6,200</u>				Number of animal units in production area: <u>6.931</u>			
		<u>1.0</u>			<u>0.4</u>		<u>2.0</u>
	<u>1,700</u>	<u>1.43</u>	<u>2,431</u>		<u>0.1</u>		
	<u>1,700</u>	<u>1.0</u>	<u>1,700</u>		<u>0.018</u>		
	<u>2,800</u>	<u>1.0</u>	<u>2,800</u>		<u>0.01</u>		
		<u>0.1</u>			<u>0.01</u>		

\*Animal units rounded to nearest whole value

## Facility Description (All CAFOs)

The main portion of the production area is located to the east of County Road 51 and is bordered on the east by Willow Creek. This area consists of the newly built heifer pens and the North Heifer Pond at the northern end of the facility (Photos 5, 6 and 7), a secondary silage storage area (Photo 27), a milking barn and corrals with shades to the south of the heifer pens, and four barns with push pits to the south of the milking barn (Photo 13). A calf area and a row of additional pens are located at the south end of the facility along County Road 76 (Photos 18 and 20). A manure storage area and Ponds 5, 6, 7 and 8 are located to the east of Willow Creek (Photos 25 and 26). Crop fields separate the manure storage area and Ponds 5-8 from Willow Creek (Photo 24). Hay and silage are stored on the western side of County Road 51. Hay is stored on the north end and runoff is caught by Pond 11 (Photos 3 and 4), while silage is stored on the southern end with Pond 10 catching runoff (Photos 1 and 2). The facility is bordered on the south by County Road 76.

The inspectors met with Lindsay Sartorius (AgPro) upon arriving at the facility. Neither Mr. Faulkner (co-owner) nor Mr. Pelz (co-owner/operator) were available at the time of the inspection.

The facility has twelve wastewater ponds: Ponds 1-8 (Photos 10, 12, 14, 15, 16, 17, and 26), North Heifer Pond (Photo 7), and Ponds 10, 11, and B (Photos 1, 3, 19, and 20), a settling basin (Pond C) (Photo 11), and a freshwater pond used for irrigation. Pond 1 was listed as Pond 1 and A on site plans. The facility utilizes four pivots to irrigate land; the northeast pivot (Ley pivot) is the only one of these that can receive wastewater. The East Field and Pelz Field are flood irrigated. Of these only the East Field receives wastewater. Facility land application records indicate that wastewater was pumped from ponds A, 1, 2, 3, and 4 to the Ley Pivot in 2009. The facility does not spread manure, but can distribute slurry on any of the fields. Significant amounts of manure were observed in the compost area (active composting was not evident). The final disposition of the manure was not determined at the time of the inspection.

New heifer pens were constructed over the past year on the north end of the facility and a new pond was installed to catch runoff from them (North Heifer Pond). Ponds 10 and 11 were also recently installed. A new pond is also proposed to be installed between the compost/manure storage area and Willow Creek to simplify water management on the facility and allow for more efficient land application of wastewater if desired. The proposed pond would be used to catch runoff from the manure storage area. Runoff from the manure stockpiles currently pools at the northwest corner of the storage area and is pumped to Pond 8.

Process wastewater is piped from the milking barn into Pond C (settling basin), which was in need of cleaning at the time of the inspection (Photo 11). From Pond C wastewater is piped to Pond 1 (Photo 12). Wastewater can be pumped from Pond 1 to Pond 5, which feeds Ponds 6 through 8 in series, via overflow pipes (Photo 26). The barns and corrals on the south end of the facility drain eastward into Ponds 2, 3, 4, and B (Photos 14 - 20). Pond 2 also collects runoff from the pens to the north of Pond 1. The heifer pens slope east to a ditch that carries wastewater south to the North Heifer Pond (Photo 7). Runoff from the compost/manure storage area flows west and north toward Pond 8, but may pool within the storage area.

The facility was not permitted at the time of the inspection as it was in the process of expanding to confine approximately 9,000 head. Ms. Sartorius stated that the facility would apply for coverage under the CAFO permit once the expansion is complete and a county permit has been obtained.

Copies of the following records, obtained during the inspection, are provided to the Ag Program with this report:

- Percent gravel explanation and documentation for conveyance structures (4 pages: 1 text, 2 supporting tables, 1 table of soil types)
- Liquid Manure Nutrient Report (1 page, Date Reported: 9/4/08)
- AgPro rate determination sheet for NE Pivot field (1 page, Date: 11/11/08)
- Storm/Process Wastewater Application Form (5 pages)
- Solid Manure/Compost Application Log (1 page)



# I. Ground Water Protection Requirements (All CAFOs)

## 1. Impoundment Seepage [81.8(2)(b)]

Documentation by P.E. certifying what the constructed liner is and that the impoundment has a maximum seepage rate of  $1 \times 10^{-6}$  cm/sec or  $7.35 \times 10^{-6}$  cm/sec. Compliance dates:

Impoundment constructed:	Before 6/30/04	6/30/04 - 2/1/07	2/1/07 - 12/30/08	12/30/08 - 2/27/09	After 2/27/09
Requirement(s):	Due Date				
Liner cert. on site	4/13/2006	Prior to wastewater entering impoundment			
Liner cert. submitted to Ag Program	--	--	2/27/2009	Within 30 days after construction is complete	
Seepage rate calcs on site (Darcy's Law)	--	--	--	--	Prior to ww entering impoundment
Seepage rate calcs submitted to Ag Program	--	--	--	--	Within 30 days after construction

## Liner Documentation

Pond 1	Clay	Yes	
Pond 2	Clay	Yes	
Pond 3	Clay	Yes	
Pond 4	Clay	Yes	
Pond 5	Clay	Yes	
Pond 6	Clay	Yes	
Pond 7	Clay	Yes	
Pond 8	Clay	Yes	
North Heifer Pond	Clay	Yes	
Pond B	Clay	Yes	
Pond C	Clay	Yes	
Pond 10	Clay	No	
Pond 11	Clay	No	
Push Pit 1	Concrete	No	
Push Pit 2	Concrete	No	
Push Pit 3	Concrete	No	
Push Pit 4	Concrete	No	
Push Pit 5	Concrete	No	
Push Pit 6	Concrete	No	
Push Pit 7	Concrete	No	

## Wastewater Level

Pond 1	6 ft	4.5 ft	not recorded	
Pond 2	4 ft	2.5 ft	not recorded	
Pond 3	3 ft	1.5 ft	not recorded	
Pond 4	3 ft	undetermined	not recorded	
Pond 5	4 ft	undetermined	not recorded	
Pond 6	4 ft	undetermined	not recorded	
Pond 7	3 ft	undetermined	not recorded	
Pond 8	3 ft	6 in	not recorded	
North Heifer Pond	N end: 3.5, S end: 5.0	undetermined	not recorded	

Pond B	5 ft	3 ft	not recorded
Pond C	5 ft	undetermined	not recorded
Pond 10	not certified	undetermined	not recorded
Pond 11	not certified	undetermined	not recorded
Push Pit 1	not certified	Empty	
Push Pit 2	not certified	Empty	
Push Pit 3	not certified	Empty	
Push Pit 4	not certified	Empty	
Push Pit 5	not certified	Empty	
Push Pit 6	not certified	Empty	
Push Pit 7	not certified	Empty	

**Yes (1a) Non-Permitted CAFOs:** Impoundment certification included in facility management plan (FMP)?

Notes:

Ponds 10 and 11 are located on the west side of County Road 51 and collect runoff from the hay and silage storage areas, respectively (Photos 1 - 4). The liners for these ponds were tested for seepage but did not meet the seepage rate requirement. Ms. Sartorius indicated that the owners are deciding how to resolve the issue. Wastewater was observed in Ponds 10 and 11 at the time of the inspection (Photos 1 and 3).

The inspectors did not determine whether the liner certification for the North Heifer Pond had been submitted to the Ag Program.

Seven concrete push pits are located on the eastern ends of the barns (Photo 13). The pits are cleaned daily and were not certified at the time of the inspection.

A result of 'undetermined' for the pond level at the time of the indicates that a depth marker was not present in the impoundment. Freeboard was estimated to be approximately 1.5 feet for Pond 5 and 3 feet for the North Heifer Pond.

**2. Impoundment Inspection and Maintenance [81.8(2)(c)]**

A CAFO operator shall visually inspect the exposed liner (earthen or synthetic) of an impoundment weekly to identify physical changes or deficiencies that may affect the integrity of the liner. Such deficiencies and physical changes shall be corrected within thirty (30) days of having been identified. The operator shall record the date of inspection, deficiencies identified, corrective actions taken, and dates that corrective action was completed.

**Yes (2a)** Weekly inspection reports available?

**No (2b)** Records kept properly?

**No (2c)** Upon CDPHE inspection, ALL impoundments maintained properly?

Notes:

Dense vegetation was observed on the berms of Pond 1 (Photo 12). Heavy weed growth was also observed around Ponds 6 - 8 and on the berms of Pond 2 (Photo 14).

Wastewater depth should be recorded for all ponds where the maximum level to meet the seepage rate is less than total pond depth to ensure that seepage does not occur.

### 3. Manure Removal [81.8(3)]

Removal of manure or wastewater from an impoundment shall be accomplished in a manner that does not damage the integrity of the liner. The operator shall submit to the Division for approval [existing CAFOs, by 12/31/2004; CAFOs constr. after 12/31/2004, by 120 days after animals confined] a Standard Operating Procedure (SOP) that demonstrates how manure, including sludge, will be removed such that the liner integrity of impoundments is not damaged. The operator shall certify after each manure or sludge removal event that the manure or sludge was removed in accordance with the approved SOP.

No (3a) SOP submitted by due date? submittal date: **03/08/2005**

Yes (3b) Approved SOP on-site? **revised SOP approved June 17, 2009**

Yes (3c) *Non-permitted CAFOs*: Approved SOP included in FMP?

Yes (3d) Has manure/sludge been removed from an impoundment?

Pond 1	1/15 years		
Pond 2	1/15 years		
Pond 3	1/15 years		
Pond 4	1/15 years		
Pond 5	1/15 years		
Pond 6	1/15 years		
Pond 7	1/15 years		
Pond 8	1/15 years		
Pond B	1/15 years		
Pond C	1/4 months	10/10/2009	Yes
North Heifer Pond	1/15 years		
Pond 10	1/15 years		
Pond 11	1/15 years		
Push Pit 1	Daily		No
Push Pit 2	Daily		No
Push Pit 3	Daily		No
Push Pit 4	Daily		No
Push Pit 5	Daily		No
Push Pit 6	Daily		No
Push Pit 7	Daily		No

Notes:

Manure is removed from the settling area (Pond C) approximately every 6 months. The SOP indicates Pond C's cleaning frequency is every 4 months, and the amount of solids present suggest that a frequency of four months or even less is necessary to maintain proper function. Other ponds had not been cleaned since the SOP was re-approved. The inspectors discussed manure removal certification requirements for the concrete push pits with Ms. Sartorius.

**4. Depth Marker Installation [81.8(4)]**

**Yes (4a)** Depth markers installed in a manner that maintains the integrity of the liner?

• Describe how:

Depth markers were present in Ponds 1, 2, 3, B, and 8 (Photos 14, 15 and 19). Markers are constructed of PVC pipe on a free-standing weighted base.

**Yes (4b)** Non-permitted CAFOs: FMP includes documentation of depth marker installation in a manner that maintains liner integrity (e.g., description of marker installation)?

• If yes, describe:

A document from AgPro describing installation of the depth markers was in the FMP.

**5. Conveyance Structures [81.8(5)]**

- Earthen conveyance structures shall be maintained to minimize wastewater ponding. Such structures shall be constructed and maintained to limit seepage of wastewater in the structures.
- Soils with 35%-60% gravel, compact the soil in-place
- Soils with >60% gravel, or in loamy sand or sandy soils with >35% gravel, install a compacted liner 12" thick
- Soils with <35% gravel, no liner or compacted soil needed
- Non-intermittent process-generated wastewater flows: construct and maintain conveyance structures to have maximum seepage rate of  $1 \times 10^{-6}$  cm/sec
- Intermittent process-generated wastewater flows (>48 hrs between flows): install a compacted liner 12" thick

Open lot wastewater	Yes	Yes	Yes
Non-intermittent process wastewater	Yes	Yes	Yes
Intermittent process wastewater	Yes	Yes	Yes

*Notes:*

The FMP included a list of soils found at the facility along with grain size definitions to show what percent of the soil is smaller than the accepted diameter for gravel. These documents showed that the soils on site contained less than 35% gravel. The explanation sheet along with an example of the grain size table was copied at the facility and submitted to the Ag Program.

A statement that lists site-specific soils and asserts that none contain more than 35% gravel according to the Engineering Properties Table should be added to facility records.

**6. Impoundment Setbacks - New and Expanded Impoundments [81.8(6)]**

CAFOs that were new sources from June 30, 2004 to June 30, 2008 shall not be located:

- Where seasonally high ground water is located within 20 feet of the soil surface
- Where seasonally high ground water is located within 4 feet of an impoundment liner
- Within 150' of a private domestic water supply well or within 300' of a community domestic supply well

Impoundments that are newly constructed or expanded by 50% or more of existing capacity after June 30, 2008 shall not be located:

- Where the seasonally high ground water level is located within 4 feet of an impoundment liner, except where constructed and maintained in accordance with a design by a P.E. registered in Colorado that prevents ground water from contacting the liner
- Within 150 feet of a private domestic water supply well or within 300 feet of a community domestic water supply well

No (6a) Was the facility a new source from 6/30/2004 to 6/30/2008?

Yes (6b) Were any impoundments constructed and/or expanded (by 50% or more) after 6/30/2008?

If yes to 6a or 6b:

N/A (6c) Depth to ground water or distance from impoundment liner see below

N/A (6d) Impoundments in compliance with setback requirements?

No (6e) *Non-permitted CAFOs:* Documentation of setback compliance included in FMP (e.g., maps showing well locations relative to impoundments, engineer's site-specific hydrogeology report)

Notes:

**Ponds 10 and 11 and the North Heifer Pond were constructed during the previous year. Depth to groundwater had not been determined for Ponds 10 and 11. Ms. Sartorius stated that the depth to groundwater for the North Heifer Pond had been determined, but the results could not be found. A 385-foot deep well is located on the property and a map showing the location of the well and setbacks from it was included in the FMP documentation.**

Additional Comments/Observations: Ground Water Protection Requirements

None.

## II. Surface Water Protection Requirements (Non-Permitted Large CAFOs)

### 7. Requirement to Register with the Division [81.5] – No later than February 27, 2009

Unknown (7a) Has the facility registered with the Division?

N/A (7b) Changes to the registration information?

Notes:

It was unknown if the facility had registered with the Division; facility records did not include a registration form.

### 8. Facility Management Plan [81.6] – Compile a facility management plan (FMP) that includes, to the extent applicable:

- Surface water protection elements – Production Area [81.6(1)]: See Section III, Compliance Assistance
- Surface water protection elements – Land Application Sites [81.6(2)]: See below
- Ground water protection elements – Production Area [81.6(3)]: See Section I

Yes (8) FMP available at the facility in one discrete location (e.g., one office or filing cabinet)

### 9. Surface Water Protection Elements – Land Application Sites [81.6(2)]:

Due February 27, 2009, or upon being defined as a CAFO for CAFOs that come into existence after February 27, 2009

Yes (9) Are conservation practices identified in the FMP and implemented as appropriate?

- Incorporation of solid manure as soon as possible after application
- Application of wastewater to furrow- or flood-irrigation sites to prevent any wastewater runoff into surface water
- No discharge to surface water from land application on frozen or saturated ground
- No land application within 150 feet of domestic water supply wells and 300 feet of community domestic water supply wells

100' setback	Pelz Field, Magnuson Pivot, Cecil Pivot, Bruener Pivot	Map of practices available, but no other records
35' buffer	Ley Pivot, East Field	Map of practices available but no other records. Also, wastewater is watched to make sure it does not reach the end of the East Field.

Notes:

Metal culverts are present at the west side of the East Field leading directly into Willow Creek (Photos 22 and 23). These culverts did not have gates or any other blocking mechanism installed. The East Field may receive wastewater via flood irrigation and is located on a grade which would make preventing runoff difficult (Photo 24). On October 28, Ms. Sartorius informed the inspectors, by phone, that the East Field had not received wastewater in the last few years as the owners had found it too difficult to manage the runoff and prevent discharge into Willow Creek.

**Required Practices and Procedures**

Yes	Yes	10. Sample and analyze manure and wastewater at least annually for N and P content; use the results in determining application rates
Yes	Yes	11. Sample and analyze the top 1 foot of soil for P at least every 5 years; use the results in determining application rates
Yes	No	12. Establish protocols for land applying manure and wastewater in accordance with practices that ensure appropriate agricultural utilization of the nutrients <ul style="list-style-type: none"> <li>• No land application at a rate that exceeds the capacity of the soil and planned crops to assimilate plant available N within 12 months</li> <li>• Apply manure and wastewater uniformly with properly calibrated equipment</li> <li>• Calculate application rates using (1) Colorado or adjacent states Cooperative Extension current published fertilizer suggestions, (2) a method provided in a CNMP that meets USDA-NRCS standards, (3) the current nutrient management guidelines for Colorado as published by USDA-NRCS, or (4) a method approved by the Division</li> </ul>
Yes	Yes	13. Maintain for 5 years records to document the required practices and procedures in #9 - #12, above. If no, describe:
Yes	No	14. Was manure/wastewater applied in accordance with #9 - #12 above? (spot check records for one field) If no, describe: <u>Facility records documented wastewater over-application to the Ley Pivot.</u>

NE Pivot (Ley)	102	11 - Medium	<input checked="" type="radio"/> N <input type="radio"/> P
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Application Rates:	Liquid	7,150,710	gallons	67	10,230,000	gallons	92
	Slurry						
	Solid		tons			tons	
				67			92

\*If rates are calculated for more than one form, the rates are  Additive (e.g., slurry AND solid) or  Exclusive (e.g., slurry OR solid)

Yes	Yes	15. For each field, conduct a phosphorus transport risk assessment; conduct initial assessment prior to land application of manure or wastewater after the FMP is implemented
Yes	N/A	16. Perform additional phosphorus and nitrogen transport risk assessment at appropriate intervals: <ul style="list-style-type: none"> <li>• Prior to land application after FMP is implemented</li> <li>• Every 5 years</li> <li>• Where a crop management change has occurred, within one year</li> <li>• Where a phosphorus transport risk assessment score was 'very high' within six months of intending to apply</li> <li>• Where a nitrogen transport risk assessment reveals that transport is not minimized, within six months of intending to apply</li> </ul>

**Required Practices and Procedures (continued)**

Yes	Yes	17. Land application in accordance with the results of the phosphorus transport risk assessment. (If risk is 'high' a phosphorus-based approach should be used, if 'very high' NO manure application should occur. Manure/wastewater may be applied at P- or N-based rate for 3 years after initial 'very high' score during which period operator will manage the site to lower rating to 'high' or less.)
Yes	N/A	18. No additional manure application after a multi-year P application until the applied P has been removed from the site
Yes	No	19. Periodically inspect land application equipment for leaks, at least (1) annually and within the 6 month period prior to the first application of manure or wastewater and (2) daily during wastewater application
Yes	Yes	20. Setbacks from down-gradient surface waters or conduits to surface water – Select type(s) used and identify location(s): <input checked="" type="checkbox"/> 100-foot setback: <u>see conservation practices</u> <input checked="" type="checkbox"/> 35-foot vegetated buffer: <u>see conservation practices</u> <input type="checkbox"/> Division-approved alternative (describe):
Yes	No	21. Do not dispose of mortalities in a wastewater storage system not designed to treat mortalities
Yes	Yes	22. Prevent direct contact of confined animals with surface water
Yes	Yes	23. Do not dispose of chemicals and other contaminants in any system that is not specifically designed to treat such chemicals or contaminants

**Overall comments on implementation of FMP surface water protection elements for****Land Application Sites:**

The facility FMP stated that mortalities are composted on-site. Upon inspection the composting area appeared to be a manure storage area with no BMPs in use. A dead animal was observed on top of a manure pile. The piles did not appear to have been turned or otherwise maintained to compost manure or animals, and the animal was not properly buried.

Animals are confined in pens with no access to surface water.

Chemicals are stored in the shop and are not disposed of at the facility.

The land application records for the Ley Pivot showed that over-application had occurred. The inspectors initially calculated application based on wastewater records and one record of slurry applied in October of 2008. Ms. Sartorius informed the inspectors on October 28, by phone, that the record of slurry application had been re-dated improperly during a previous records review performed by AgPro, and was actually from an application for the 2008 crop season. However, after re-calculating application rates for only wastewater it was still apparent that the facility had over-applied wastewater by approximately 25 lbs of nitrogen per acre on the Ley Pivot.

Facility records did not include records of land application equipment inspection.

### III. Compliance Assistance (Non-permitted Large CAFOs, Production Area FMP)

Non-permitted Large CAFOs must develop and implement the required production area surface water protection elements of the FMP by May 30, 2011. Use this section to review the requirements with the operator and determine the facility's progress toward compliance at the time of the inspection.

No	24. Impoundment designed, constructed, operated, and maintained to store all liquid manure and wastewater, including the runoff from the greater of the 25-year, 24-hour storm or Chronic Storm plus 2 feet of freeboard
No	25. Conveyance structure(s) designed, constructed, and maintained to carry flow expected from the greater of the 25-year, 24-hour storm or Chronic Storm
No	26. For open lot wastewater, an impoundment as described in 25 above OR a solid/liquid separation facility in conjunction with a wastewater treatment strip designed, constructed, and maintained to manage the flow from a 25-year, 24-hour or Chronic Storm OR a method approved by the Division
No	27. Depth marker installed in all impoundments necessary to contain a 25-year, 24-hour or Chronic Storm, clearly marked in 1-foot increments and the minimum capacity necessary to contain the greater storm event
No	28. Weekly inspect depth markers, record wastewater level in each impoundment requiring a depth marker
No	29. Design, construct, and maintain structures sized to divert stormwater from running onto a production area as a result of a 25-year, 24-hour or Chronic Storm
No	30. Procedures to ensure proper O&M of the impoundments, including dewatering to restore storage capacity required to store runoff from the designed storm event

31. Describe the facility's documentation of surface water protection elements for the production area, including (1) design, operation and maintenance of impoundments, conveyance structures, diversion structures, diversion structures, solid/liquid waste separation facilities, and/or wastewater treatment strips; (2) weekly depth marker inspection records; and (3) written procedures for proper operation and maintenance of impoundments.

**No documentation was found on site; however, Ms. Sartorius stated that she believed some of the documentation was at the AgPro office.**

## IV. Other Observations

No 32. Was manure or wastewater observed in the waterway?

• *If yes, describe:*

33. Is runoff from the following contained:

Yes (33a) Manure stockpiles?

Yes (33b) Compost areas?

No 34. Were any uncontained areas identified?

• *If yes, describe:*

### Additional Comments:

The berm between the east side of the main production area and Willow Creek was compromised in several locations (Photo 9).

Pond C (setting basin) was filled with solids, indicating that more frequent cleaning may be needed (Photo 11). Substantial solids accumulation was also observed in Pond 5, indicating that the settling area was not functioning properly (Photo 26).

Pond 3 appeared to be nearing capacity.

An issue regarding the depth marker accuracy was observed during the inspection. The depth marker in Pond 2 is clearly marked at the 2 feet of freeboard level, but this level was observed to be above the top of the pond berm. Ms. Sartorius stated that the depth marker is accurate for the designed size of the pond, but was installed after the pond was in use and is sitting atop a few feet of sludge. This inaccuracy should be accounted for during all weekly inspections (wastewater level observations are required by May 11, 2011) and any decisions regarding dewatering.

Manure was spilling into the road along the eastern edge of the manure storage/composting area (Photo 25). It was not clear whether runoff from the road would flow back into the composting area or down the road toward County Road 76.

## ***NON-PERMITTED CAFO SITE INSPECTION***

### **Expected Corrective Actions:**

*The department's Environmental Agriculture Program expects that the corrective action(s) listed below be completed within 120 days of the date of the inspection. By no later than five days after completion of all corrective action(s), please submit documentation, including labeled photographs as applicable, that demonstrate the corrective actions have been completed.*

*Submit all documentation to:*

*Colorado Department of Public Health and Environment*

*Attn: Erin Kress, OEIS-B2*

*4300 Cherry Creek Drive South*

*Denver, CO 80246-1530*

1. Submit completed liner certifications for Ponds 10 and 11 to the Ag Program.
2. Obtain and submit seepage rate certifications for the push pits. Add push pits to the SOP and re-submit to the Ag Program for approval.
3. Manage vegetation on the banks of all ponds so that excessive growth does not occur and the berms of the impoundments can be easily seen.
4. Register with the Ag Program.
5. Ensure that the agronomic rate of application is calculated correctly and that this rate is not exceeded.
6. Begin documenting the inspection of application equipment (daily during application for wastewater; annually and within 6 months of using for manure/slurry).
7. Update mortality management practices if no longer composting, or keep documentation of BMPs used in composting.
8. Determine the seasonally high ground water level for the impoundments constructed after June 30, 2008, and whether the bottom of the impoundment liners are located more than four feet above the applicable seasonally high ground water level. Keep a record of this information on file with the facility's FMP.
9. Establish protocols for land applying manure and wastewater in accordance with practices that ensure appropriate agricultural utilization of the nutrients.
10. Ensure wastewater is removed from the manure storage area and other ponding areas promptly or establish ponding areas as permanent impoundments (including obtaining liner seepage rate certifications, developing and submitting SOPs for manure removal, and conducting weekly visual inspections).
11. Install depth markers and record wastewater levels weekly for all ponds where the maximum depth to meet the seepage rate (specified on the liner certifications) is less than the pond capacity.
12. Reconstruct and maintain the berm along the west side of Willow Creek to prevent runoff from the main production area discharging to the creek.
13. Ensure that no manure or wastewater is discharged to Willow Creek, utilizing practices including, but not limited to:
  - a. Maintain the required setbacks for all land application areas including the East Field.
  - b. Do not allow return flow from freshwater irrigation to enter Willow Creek from any field where slurry,

manure, or wastewater has been applied. For example, if fresh water is applied to the East Field following application of manure, slurry or wastewater, install a structure that prevents return flows from entering Willow Creek, such as a gate or other blocking device, in the culverts to Willow Creek.

C. Prevent runoff from production areas from entering Willow Creek.

### **Recommendations:**

1. Begin activities necessary to ensure the facility will comply with the requirements for the production area due on May 30, 2011 (as described in section 81.6(a) of Regulation No. 81 and Part III of this report).
2. Assess the adequacy of Pond C for managing the increasing herd size at the facility. A more frequent cleaning schedule, basin enlargement, or addition of another basin may be necessary to ensure the wastewater management system is sufficient to prevent discharge.
3. By May 30, 2011, maintain at least 2 feet of freeboard in all ponds. Many of the ponds appeared to be at or near capacity.
4. Install depth markers in all ponds by May 30, 2011 and maintain documentation of installation on-site. Also, install depth markers so the reading is accurate (i.e. before the pond has received wastewater or after the pond is cleaned).
5. Assess the current depth markers for accuracy and make note of where 2 feet of freeboard is in actuality (not as marked due to solids build up beneath the marker) for accuracy in weekly records. Reinstall the depth marker in Pond 2 after solids are removed from the pond.
6. Ensure that all manure in the composting area is stored such that runoff from the stockpiled manure will be contained on site.

**Photo Log: Faulkner/Galeton Dairy**



Photo 1: Looking north over Pond 10, located west of County Road 51. The main production area, east of County Road 51, is shown on the right side of the photo.

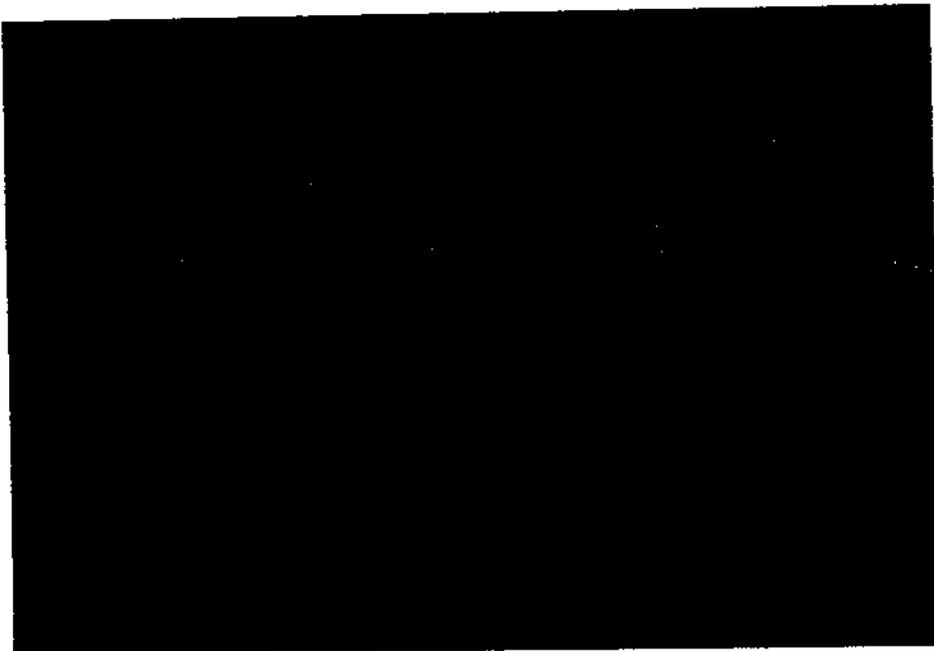


Photo 2: Looking north to the berm surrounding the area that drains to Pond 10. The silage storage area is to the left (west) of the photo.

**Photo Log: Faulkner/Galeton Dairy**

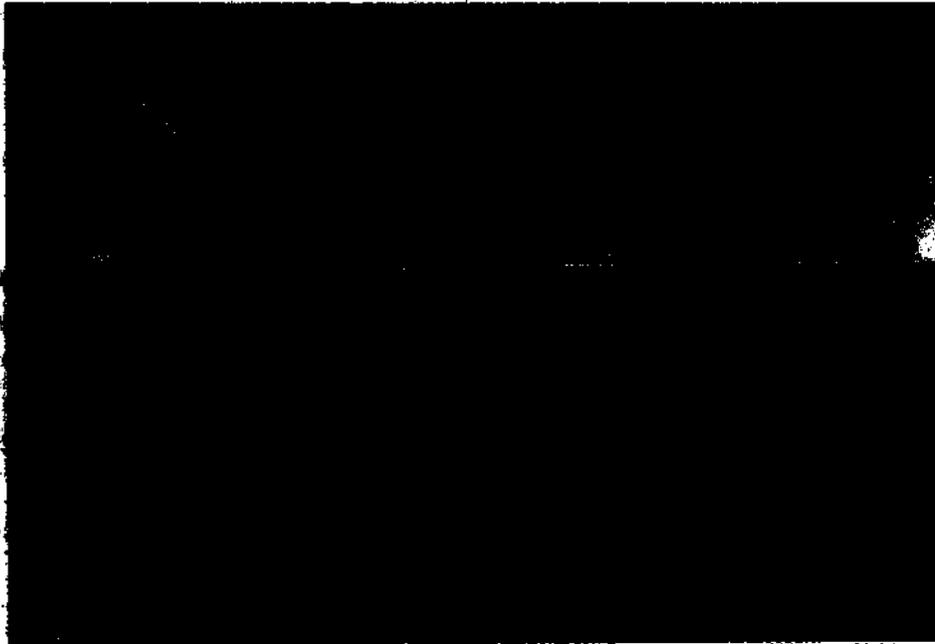


Photo 3: Pond 11 collects runoff from the hay storage area shown in Photo 4, view looking south.



Photo 4: Hay storage area west of County Road 51, view looking north.

**Photo Log: Faulkner/Galeton Dairy**



Photo 5: Looking east over the new heifer pens at the northern end of the main production area.



Photo 6: Looking north over the east end of the heifer pens shown in Photo 5.

**Photo Log: Faulkner/Galeton Dairy**



Photo 7: The North Heifer Pond, view looking north.



Photo 8: Looking north along the east edge of the main production area. New manure stockpiles are to the left and a berm is present along Willow Creek to the right.

**Photo Log: Faulkner/Galeton Dairy**

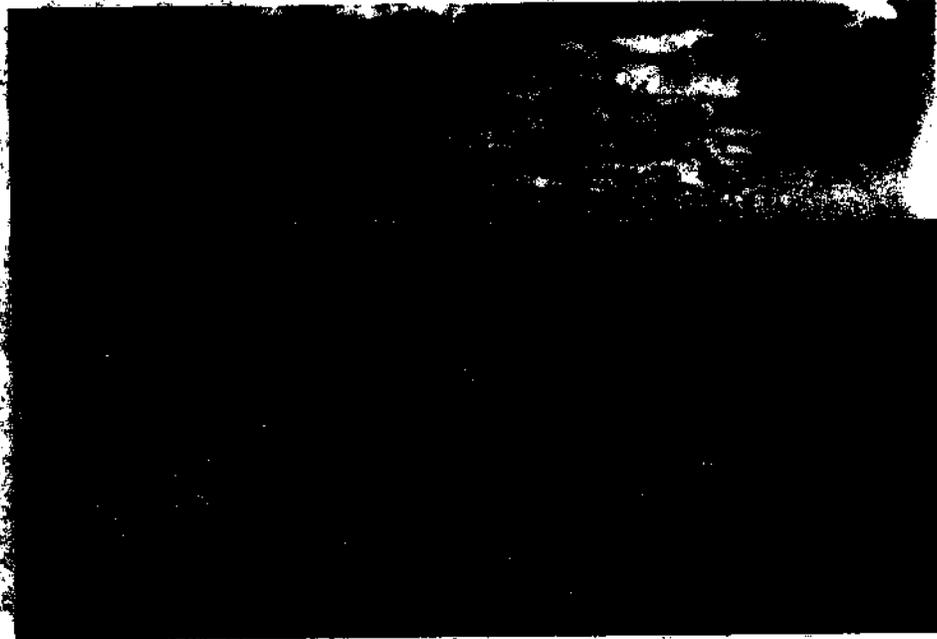


Photo 9: The berm along Willet Creek was observed to be compromised in several locations, view looking south.

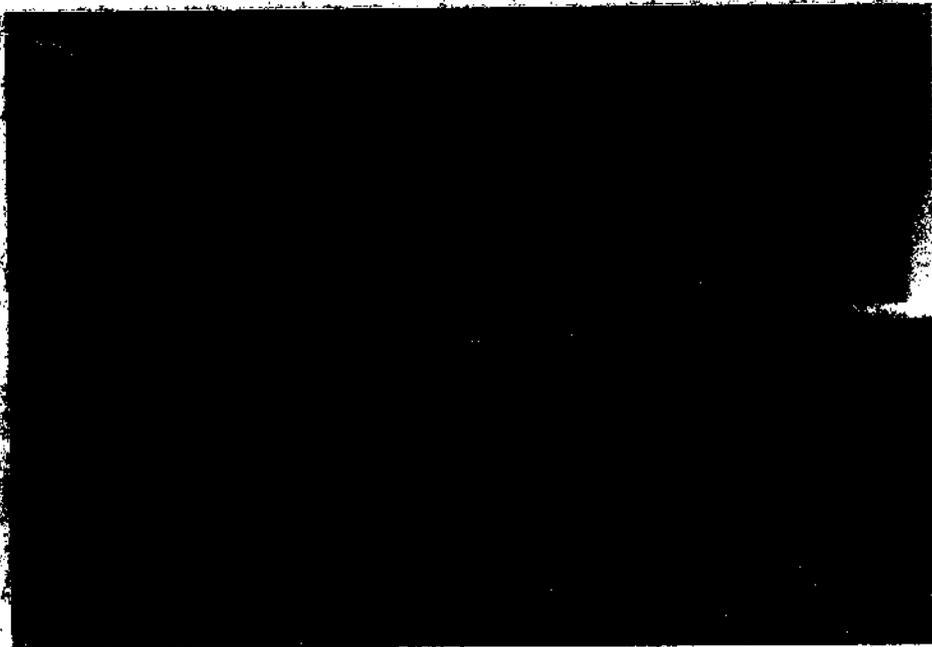


Photo 10: View looking south at the 'back side' of Pond 2.

**Photo Log: Faulkner/Galeton Dairy**



Photo 11: Looking west over the settling basin (Pond C).

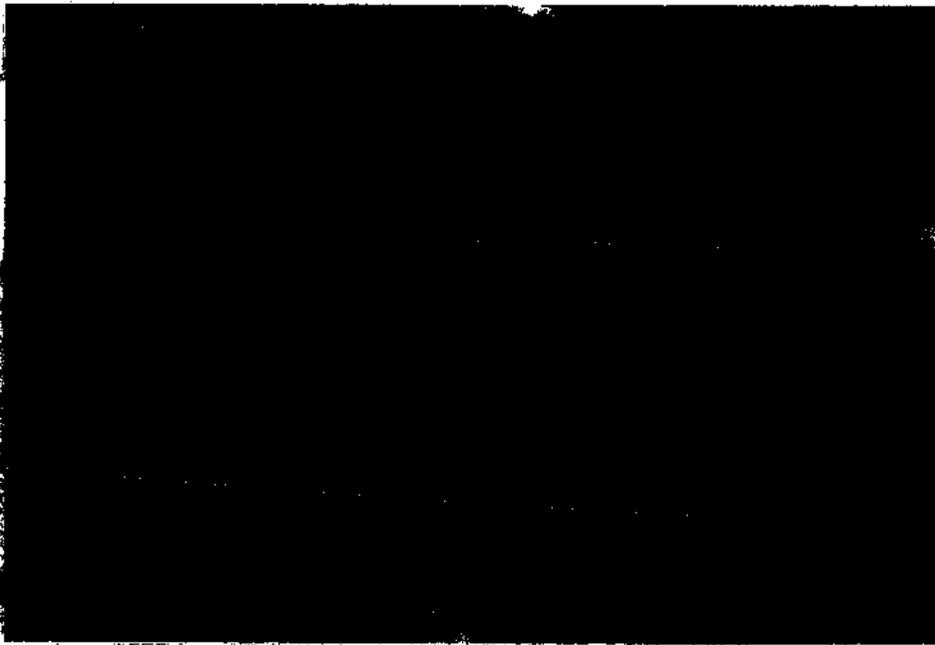


Photo 12: Pond 1, view looking south. The pond appeared to have less than 2 feet of freeboard and weed control along the banks is needed.

**Photo Log: Faulkner/Galeton Dairy**



Photo 13: View of one of the seven push pits.

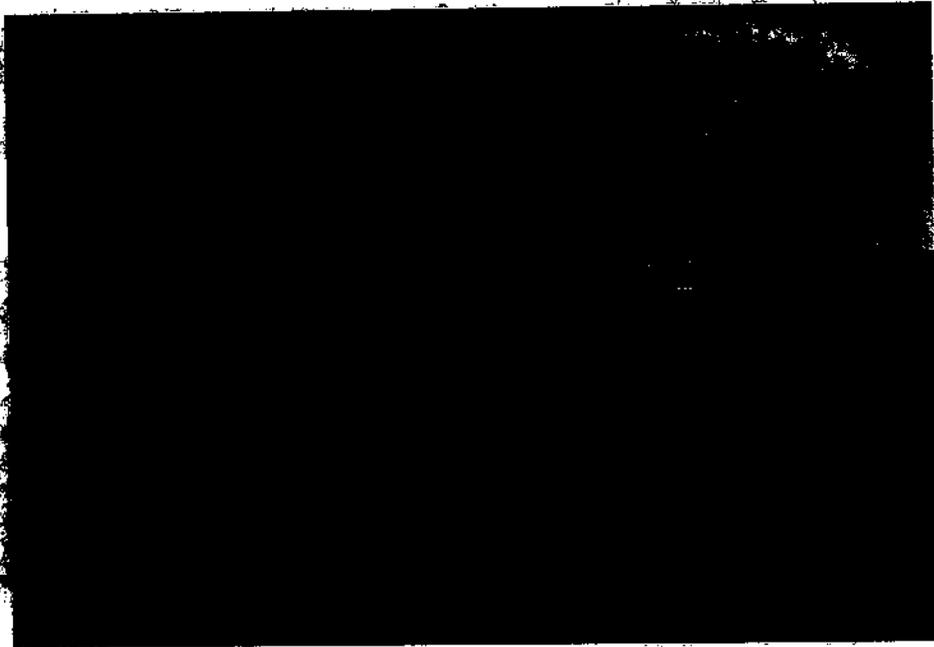


Photo 14: Pond 2 contained a depth marker, view looking southwest.

**Photo Log: Faulkner/Galeton Dairy**



Photo 15: Looking east over Pond 3.



Photo 16: Looking north over Pond 3.

**Photo Log: Faulkner/Galeton Dairy**

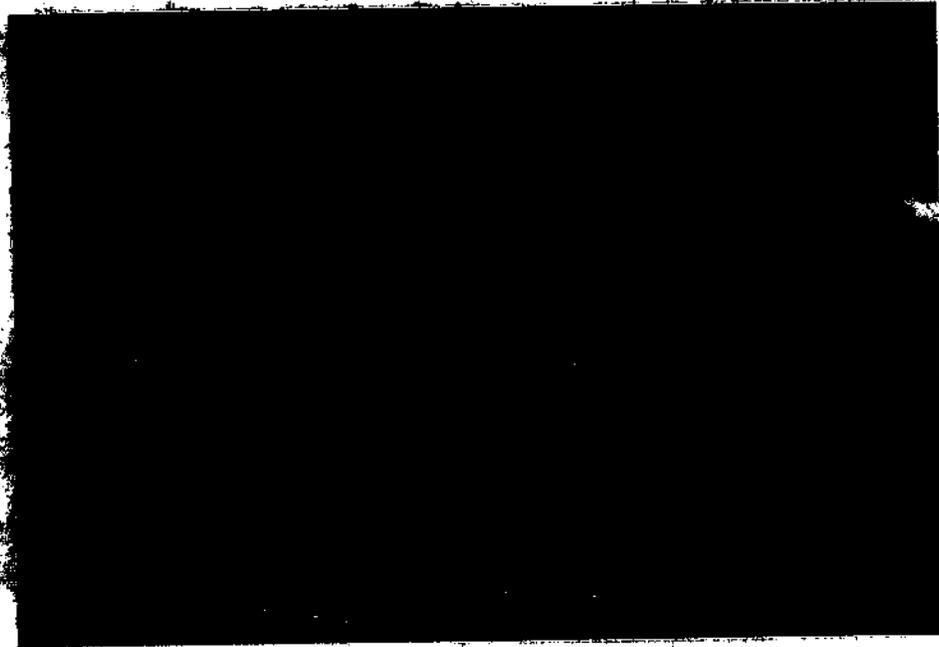


Photo 17: Pond 4, view looking east.

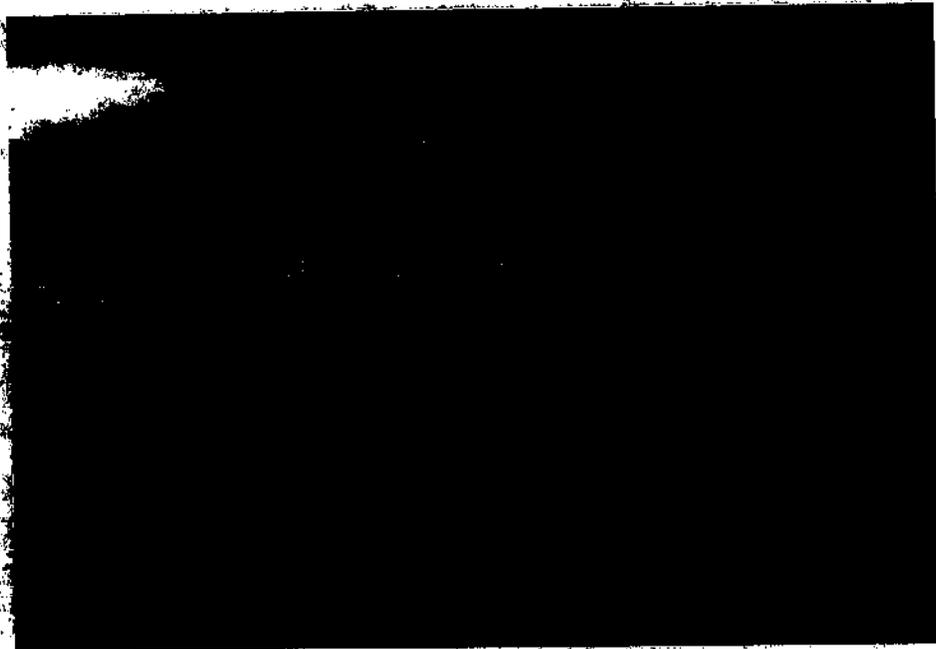


Photo 18: The eastern portion of the facility slopes directly into Ponds 3 and 4, view looking west. County Road 76 borders this area to the south.

**Photo Log: Faulkner/Galeton Dairy**

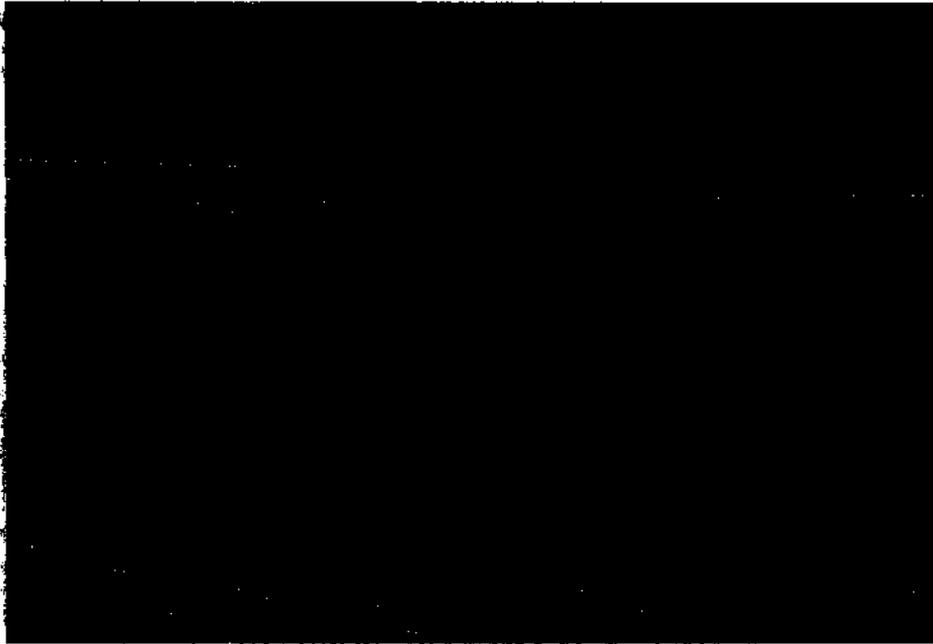


Photo 19: Pond B, view looking northwest. County Road 76 is behind the photographer.



Photo 20: Pond B, view looking north. County Road 76 is behind the photographer and County Road 51 is shown on the left side of the photo.

**Photo Log: Faulkner/Galeton Dairy**

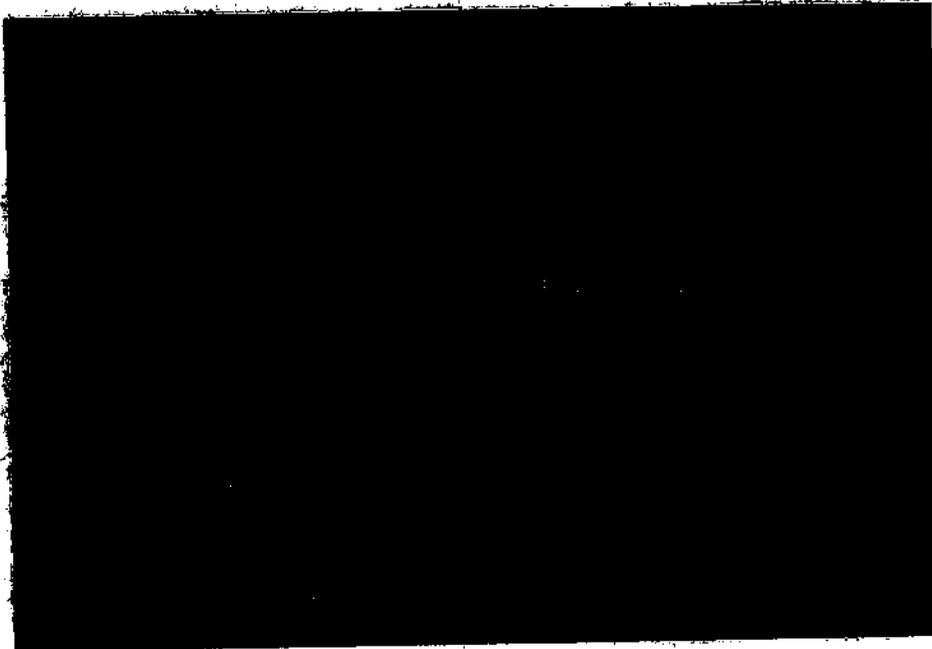


Photo 21: Looking north over the road bordering the east side of Willow Creek. The East Field is to the right (east) of the photo. The main production area is shown on the west side of the creek.

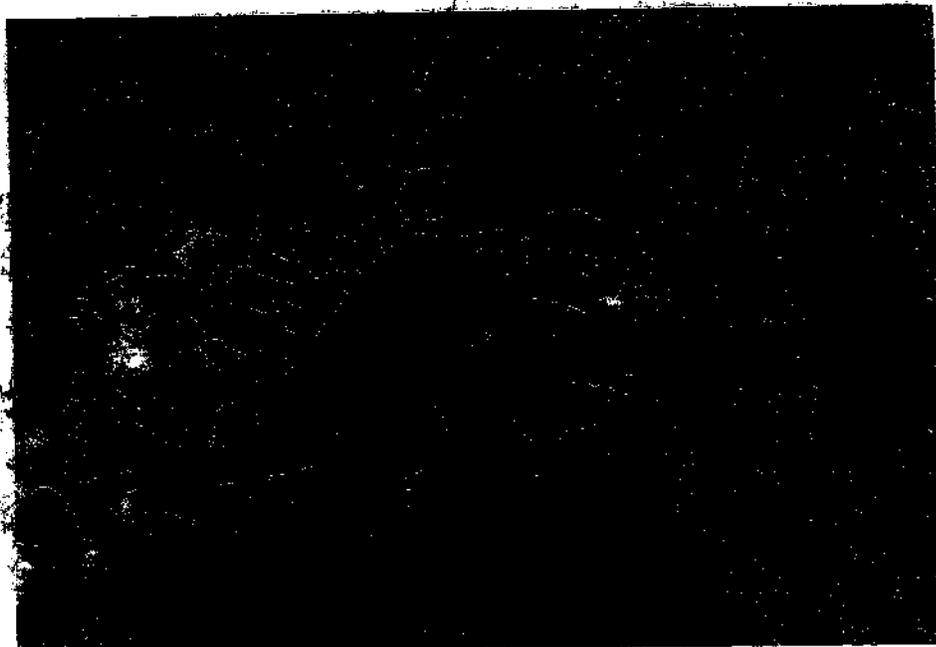


Photo 22: One of several culverts running from the East Field under the road shown in Photo 21, and into Willow Creek.

**Photo Log: Faulkner/Galeten Dairy**



**Photo 23: The culvert shown in Photo 22 did not have any mechanism in place to prevent runoff from reaching Willow Creek.**



**Photo 24: Looking east over the East Field from the road shown in Photo 21.**

**Photo Log: Faulkner/Galeton Dairy**

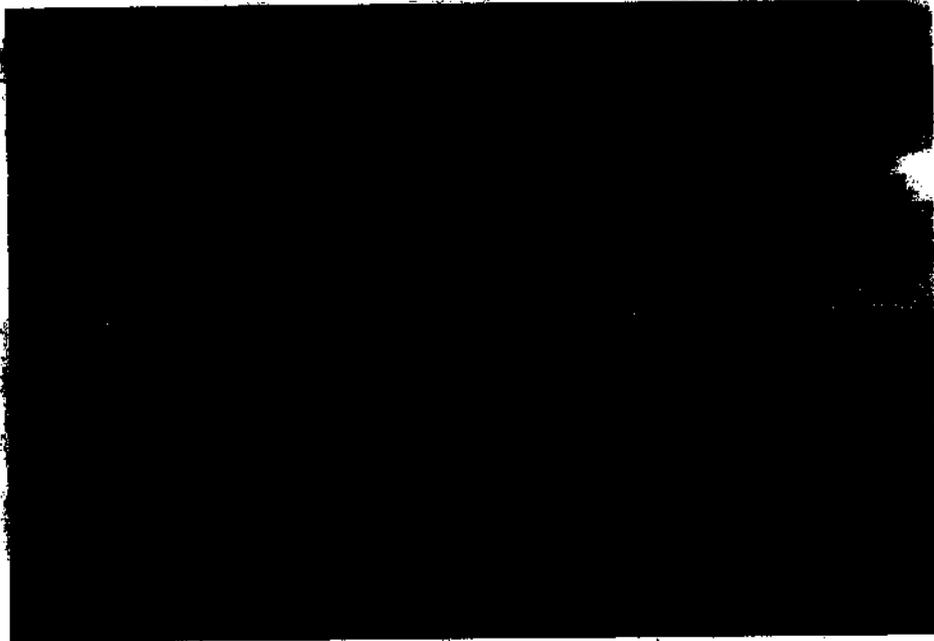


Photo 25: Looking south down the road at the eastern edge of the compost area.



Photo 26: Pond 5, view looking northwest. Ponds 6-8 are in the background.

**Photo Log: Faulkner/Galeton Dairy**

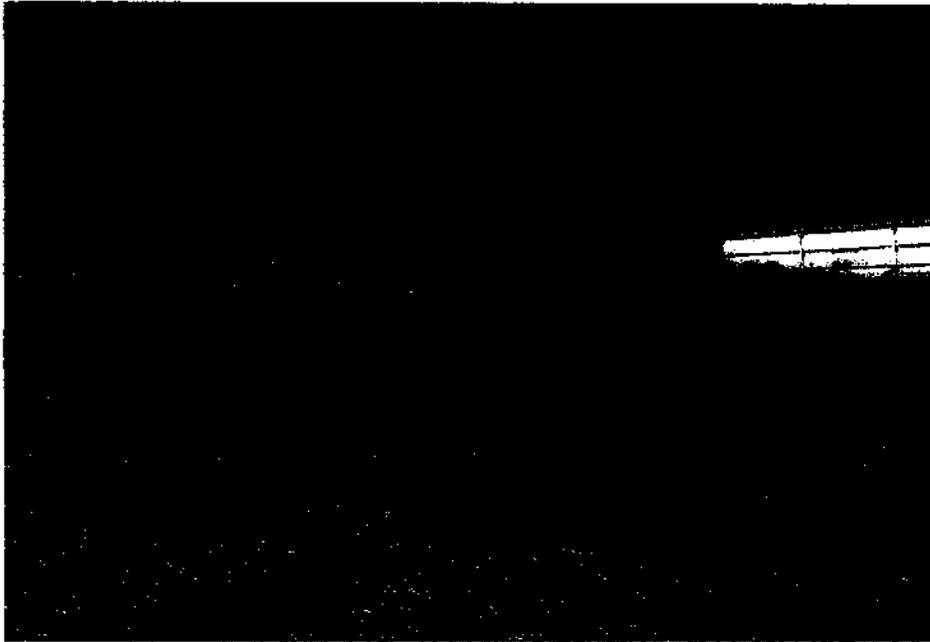


Photo 27: View looking east over the silage storage area east of County Road 51.

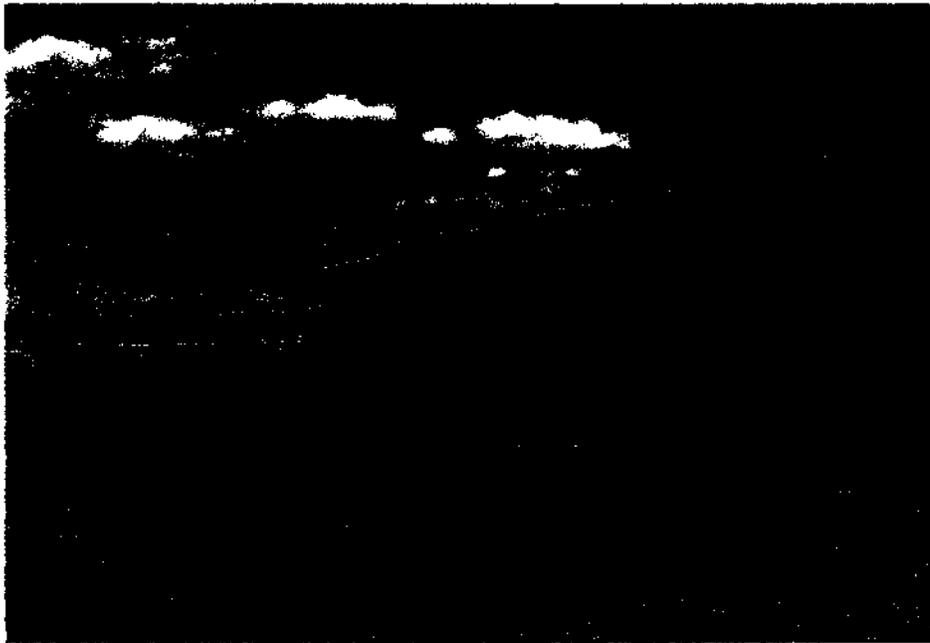


Photo 28: Looking west to the pens where runoff from the area shown in Photo 27 would drain.

