Fields of Opportunities

STATE OF IOWA

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

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

June 4, 2015

Vic Heller
2075 G AVE
Red Oak, IA 51566

Subject: NOTICE OF VIOLATION for Manure Discharge at Hog Haven, Section 30, Red Oak Township (T72N R38W) Montgomery County, ID No: 59895

Dear Ms. Heller,

On April 28, 2015 at 8:50 a.m., you reported a manure release occurring early that morning at the above-referenced property to the Iowa Department of Natural Resources (DNR). The specific time when the release occurred is unknown; however, you reported that the release was the result of a broken water supply pipe in one of the facilities' confinement buildings. A mixture of clean water and manure discharged into a road ditch, leading to an unnamed tributary of the East Nishnabotna River. The amount released is unknown.

I met with you at approximately 9:30 a.m. to document the release, including taking pictures on-site and collecting samples for laboratory analysis. Samples were collected from the point source where water from the road ditch entered into the unnamed tributary, as well as from upstream and downstream locations in the tributary. Sample results are enclosed.

According to 567 Iowa Administrative Code (IAC) chapter 65.2(3)"a", all manure is required to be contained within designed manure containment structures. As such, a broken water line causing water to overflow into manure pits, thus resulting in the manure escaping from the manure containment and reaching a water of the state is a violation of Iowa regulations. Please see enclosed the Report of Investigation for additional information.

If you have any questions, please contact me via e-mail at dan.weber@dnr.iowa.gov or telephone at (712) 243-1934.

Sincerely,

Dan Weber

Dan Weber, Environmental Specialist

File: RedOak042815.cf.hoghavenspill.weber.doc

CC: Gene Tinker (email) and Hog Haven #59895 AFO Facility File, Montgomery County

Enclosure: Report of Investigation, Sample Results, Copy of IAC 567—65.2 (459,459B)

SUSPENSE: August 1, 2015, Written notice to field office 4 plans to permanently remedy the discharge or obtain and comply with an NPDES permit. 567 IAC 65.102

FIELD OFFICE 4, 1401 SUNNYSIDE LANE, ATLANTIC, IOWA 50022
712-243-1934 FAX 712-243-6251 www.iowadnr.gov

IOWA DEPARTMENT OF NATURAL RESOURCES

REPORT OF INVESTIGATION

INVESTIGATION DATE:
Current: 04/28/15
Last: 03/16/13

No: 042815-DJW-0850
Facility ID No: 59895

TO: Vic Heller
2075 G AVE
Red Oak, IA. 51566

RE: Investigation of Manure Discharge
Montgomery County

PERSONS CONTACTED: Vic Heller, Operator

On April 28, 2015, at approximately 8:50 a.m., Vic Heller, Hog Haven confinement, reported a manure release that occurred during the night and was discovered in the morning. She stated that the release was due to a water supply line breaking and filling a confinement buildings shallow pit. An unknown amount of clean water and manure from this pit overflowed onto the ground surrounding the buildings. The leaking water supply had been shut off and the overflowing manure pits were being pumped into the lagoon. Dan Olson, DNR Environmental Specialist Senior, and Josh Chambers, DNR Environmental Specialist, assisted with portions of this investigation.

When I arrived on scene at approximately 9:00 a.m., I observed pooled liquid in front of the facility. It appeared that this liquid drained to the east where it entered a short section of cement culvert. The short section of culvert then day lighted to the east where it drained into another culvert in the road ditch. I observed water in the road ditch and culvert flowing to the south where it drained into an unnamed tributary of the East Nishnabotna River.

Ammonia field tests showed the water north of the culvert had no detectible amounts of ammonia. Further investigation showed the water came from a leaking water main north of the facility at the intersection of G Avenue and 250th street. At the south side of the culvert, ammonia field tests showed ammonia levels between 60 and 90 parts per million (ppm). Samples were collected from the road ditch as well as the upstream and downstream portions of the unnamed tributary. These samples were sent to the State Hygienic Laboratory in Ankeny, IA to be tested for ammonia and E-coli. The results of these samples are shown below in Table 1.

Earthen dams were constructed near the fence line where liquid left the property and where the road ditch entered the unnamed tributary. Liquid was pumped from the road ditch and land applied to crop ground until the field tests showed no traces of ammonia. The earthen dam in the road ditch has since been removed.

A contributing factor to this release is, upon investigation, I discovered a city water line to the east of the facility was also broken and discharging water into the ditch. As such, it seems the additional water from the city's broken water line commingling with the mixture of water and manure from Hog Haven

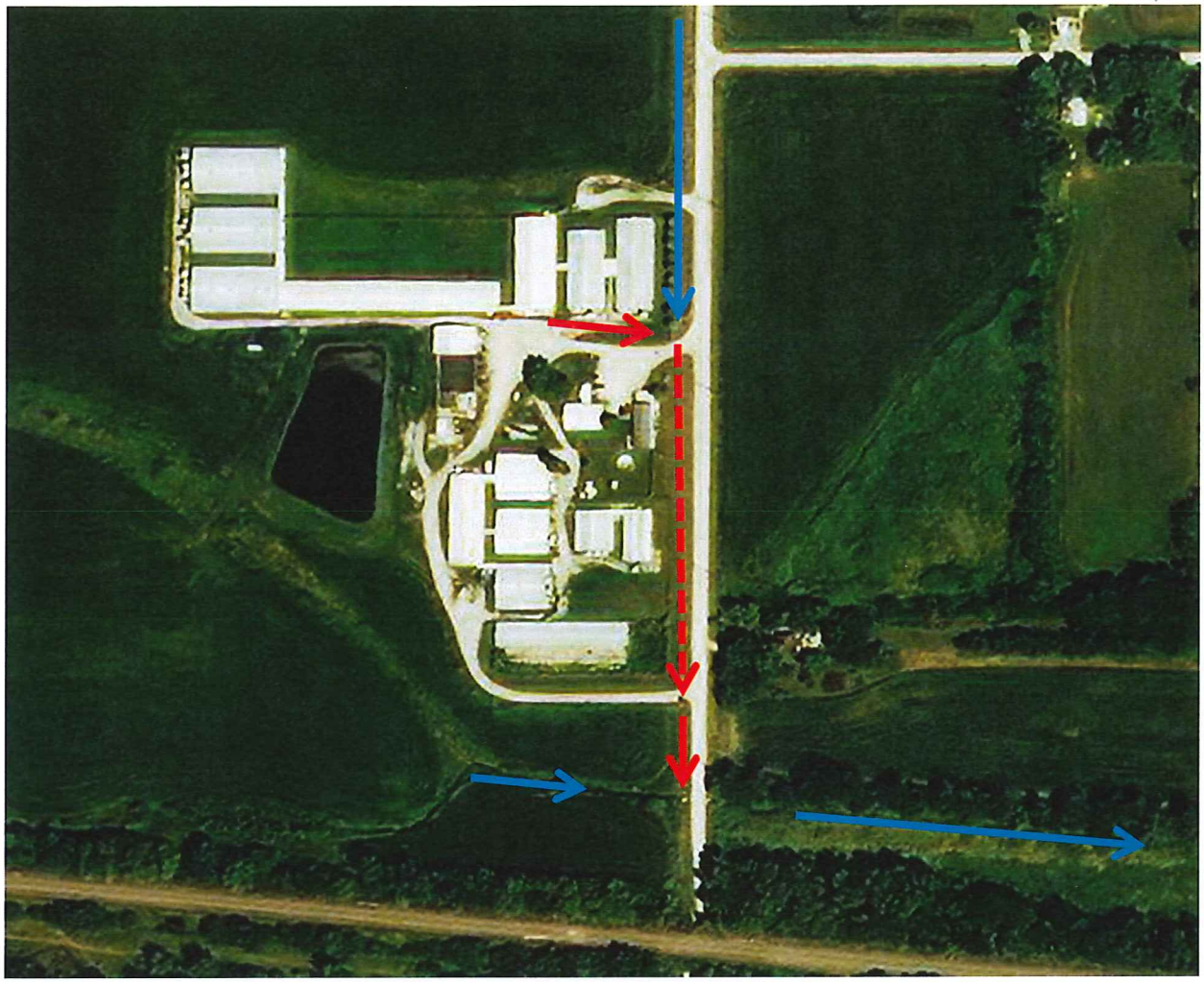


Figure 1: Aerial view of the Hog Haven confinement facility outlining the flow of liquids.

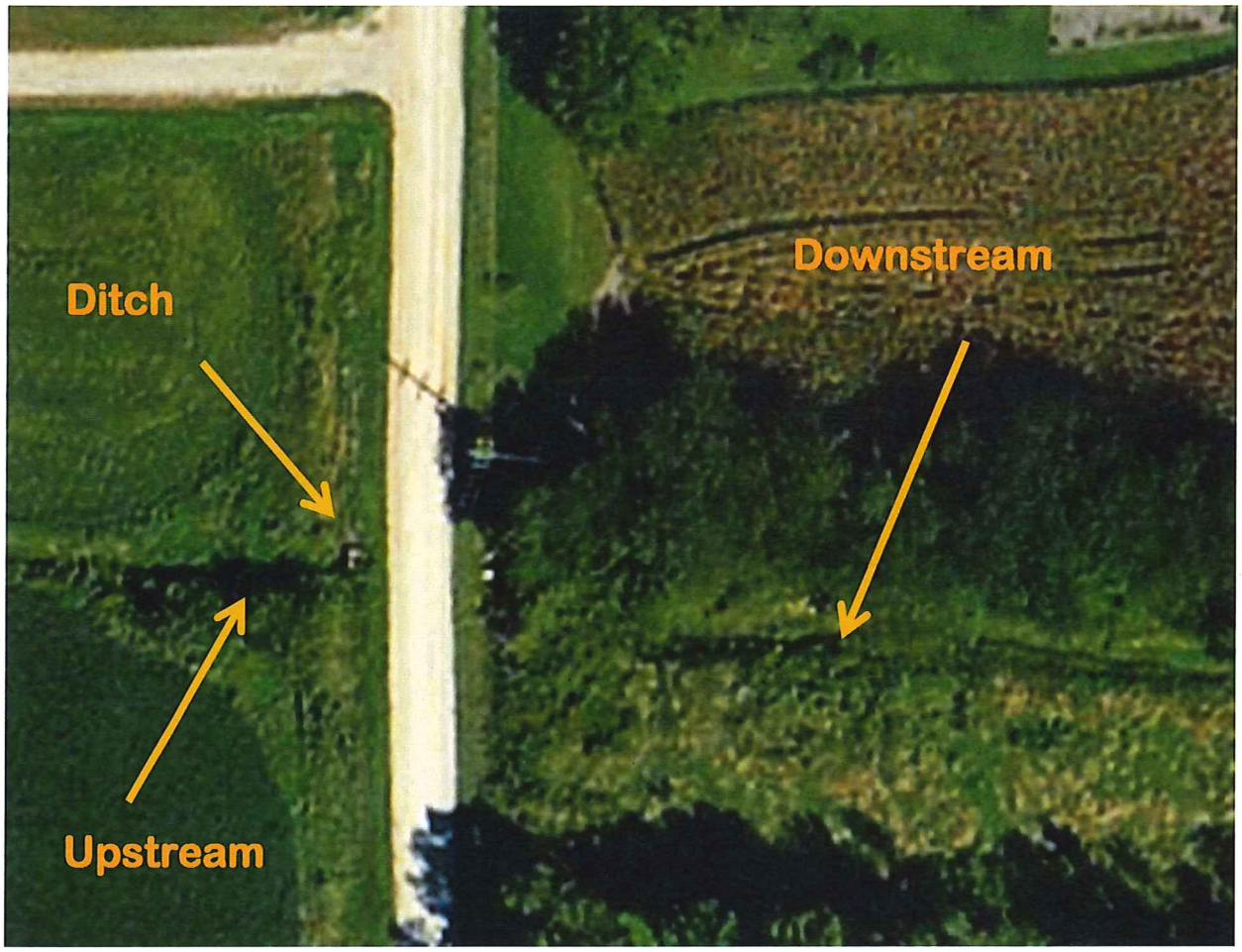


Figure 2: Aerial view of where samples were taken.

Below, Table 1 summarizes the results taken at each sample location, as indicated in Figure 1, above. This table contains the results of the analysis of the samples collected and submitted to the Sate Hygienic Lab (SHL).

Table 1: Sample results collected from the flow of the south open lot

	Upstream	Ditch	Downstream
Bacteria (E. Coli) (MPN/100 ml)	200	>600,000	89,000
Ammonia (mg/L)	0.06	46	0.82

[MPN]/100mL = Most Probable Number per 100 Milliliters. mg/L = Milligrams per Liter

Findings of the investigation conducted on April 28, 2015

Above: Looking at where water left the east side of the facility
Below: Showing where water leaving the facility entered a culvert.

Above: Showing water entering the culvert.
Below: Showing the outlet of the culvert.

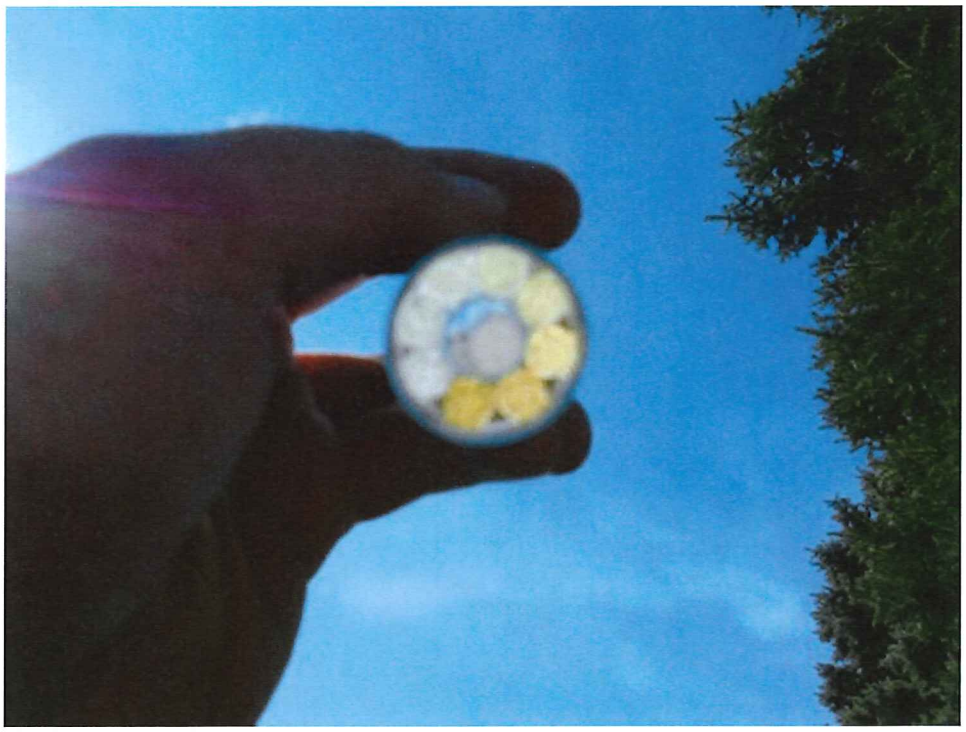
Above: Showing a sample of water taken from the culvert outlet.
Below: Showing the results of an ammonia field test taken at the culvert outlet.

Above: Looking south (downstream) from the culvert outlet.
Below: Looking north at the road ditch from the unnamed tributary.

Above: Looking at the location of the downstream sampling site.
Below: Showing a sample of water taken from the ditch.

Above: The results of the low level ammonia field test kit from the ditch, showing more than 10 ppm
Below: The results of the high level ammonia field test kit from the ditch, showing between 60 and 90 ppm

Above: Looking at a pool of water in the upstream part of the road ditch.
Below: The results of the low level ammonia field test kit from the upstream road ditch, with no visible signs of ammonia.



Above: Looking downstream (east) from the road at the unnamed tributary.
Below: Looking upstream (west) from the downstream sampling site of the unnamed tributary.

Above: Showing a sample of water taken from the downstream sampling site.
Below: The results of the low level ammonia field test kit from the ditch, showing approximately 1 ppm.

Above: The results of the low level ammonia field test kit from the ditch, showing approximately 1 ppm.
Below: Looking upstream (west) from the road at the unnamed tributary.

Above: Showing a sample of water taken from the upstream sampling site.
Below: The results of the low level ammonia field test kit from the upstream sampling site, with no visible signs of ammonia.

Above: Showing liquid pooped outside of one of the confinement buildings.
Below: Showing the level of the facilities lagoon.

Above: Showing the earthen dam placed in the road ditch.
Below: Showing the broken water main north of the facility.

The observations noted above indicate the following violation:

567—65.2(3) (459,459B) Minimum manure control requirements
The minimum level of manure control for a confinement feeding operation shall be the retention of all manure produced in the confinement enclosures between periods of manure application and as specified in this rule. In no case shall manure from a confinement feeding operation be discharged directly into a water of the state or into a tile line that discharges to waters of the state.
a. Control of manure from confinement feeding operations may be accomplished through use of manure storage structures or other manure control methods. Sufficient capacity shall be provided in the manure storage structure to store all manure between periods of manure application. A confinement feeding operation, other than a small animal feeding operation, that is constructed or expanded on or after July 1, 2009, shall not surface-apply liquid manure on frozen or snow-covered ground when there is an emergency, as described in subrule 65.3(4), unless the operation has a minimum of 180 days of manure storage capacity. Additional capacity shall be provided if precipitation, manure or wastes from other sources can enter the manure storage structure.

REQUIREMENTS:

- Report all releases within 6 hours of onset or discovery.
- Obtain and comply with an NPDES permit or provide a permanent remedy that would prevent a future release by **August 1, 2015**

RECOMMENDATIONS:

- Develop a plan to respond to releases that would contain them and prevent them from discharging to a water of the state.
- Develop a plan to regularly inspect and maintain the facility and equipment that could cause a release if it were to fail.

Inspector: Dan Weber **June 4, 2015**

Reviewer: Dan Olson 6/9/15

Distribution: Field Office: Central Office: Inspected Facility

Date Sent: 6/5/15
File: RedOak042815.cf.HogHavendischarge.weber.docx

State Hygienic Laboratory

The University of Iowa

Accession Number	236673
Date Sample Finalized	2015-05-06 16:32
Date Received	2015-04-29 10:57
Sample Source	Non-Drinking Water
Project	07WQER
Date Collected	2015-04-28 10:34
Collection Site	haven ditch
Collection Town	RED OAK
Sample Description	surface water
Client Reference	
Collector	josh for dan weber
Phone	712/243-1934

DAN WEBER
IDNR-FO 4
1401 SUNNYSIDE LANE
ATLANTIC, IA 50022-

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

Fecal Coliform Bacteria, SM 9222D

Units	[CFU]/100mL	Analyzed In	Ankeny
Date Analyzed	2015-04-29 17:45	Date Verified	2015-05-01 11:30
Analyst	PB, DMJ	Verifier	MGB

Analyte	Result	Quant Limit
Fecal Coliform	>600000	10

Note: Colonies were too numerous to count.

Ammonia as N, LAC 10-107-06-1J

Units	mg/L	Analyzed In	Ankeny
Date Analyzed	2015-05-06 13:48	Date Verified	2015-05-06 16:32
Analyst	MGB	Verifier	DLS
Analysis Prep	Ammonia distillation, SM 4500-NH3 B		

Analyte	Result	Quant Limit
Ammonia nitrogen as N	46	0.05

Description of Units used within this report

[CFU]/100mL = Colony Forming Units per 100 Milliliters
mg/L = Milligrams per Liter

The result(s) of this report relate only to the items analyzed. This report shall not be reproduced except in full without the written approval of the laboratory.
Iowa Environmental Laboratory IDs are: Ankeny #397, Iowa City/Coralville #027, Lakeside #393.
If you have any questions, please call Client Services at 800/421-IOWA (4692) or 319/335-4500. Thank you.

Michael D. Wichman, Ph.D.
Wade K. Aldous, Ph.D (D)ABMM
Associate Directors
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2490 Crosspark Road
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712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642

State Hygienic Laboratory

The University of Iowa

Accession Number	236674
Date Sample Finalized	2015-05-06 16:32
Date Received	2015-04-29 10:57
Sample Source	Non-Drinking Water
Project	07WQER
Date Collected	2015-04-28 10:51
Collection Site	haven up
Collection Town	RED OAK
Sample Description	surface water
Client Reference	
Collector	josh for dan weber
Phone	712/243-1934

DAN WEBER
IDNR-FO 4
1401 SUNNYSIDE LANE
ATLANTIC, IA 50022-

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

Fecal Coliform Bacteria, SM 9222D

Units	[CFU]/100mL	Analyzed In	Ankeny
Date Analyzed	2015-04-29 17:45	Date Verified	2015-05-01 11:30
Analyst	PB, DMJ	Verifier	MGB

Analyte	Result	Quant Limit
Fecal Coliform	200	10

Ammonia as N, LAC 10-107-06-1J

Units	mg/L	Analyzed In	Ankeny
Date Analyzed	2015-05-06 13:48	Date Verified	2015-05-06 16:32
Analyst	MGB	Verifier	DLS
Analysis Prep	Ammonia distillation, SM 4500-NH3 B		

Analyte	Result	Quant Limit
Ammonia nitrogen as N	0.060	0.05

Description of Units used within this report

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mg/L = Milligrams per Liter

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Ankeny, IA 50023
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State Hygienic Laboratory

The University of Iowa

Accession Number	236675
Date Sample Finalized	2015-05-06 16:32
Date Received	2015-04-29 10:57
Sample Source	Non-Drinking Water
Project	07WQER
Date Collected	2015-04-28 11:01
Collection Site	haven down
Collection Town	RED OAK
Sample Description	surface water
Client Reference	
Collector	josh for dan weber
Phone	712/243-1934

DAN WEBER
IDNR-FO 4
1401 SUNNYSIDE LANE
ATLANTIC, IA 50022-

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

Fecal Coliform Bacteria, SM 9222D

Units	[CFU]/100mL	Analyzed In	Ankeny
Date Analyzed	2015-04-29 17:45	Date Verified	2015-05-01 11:30
Analyst	PB, DMJ	Verifier	MGB

Analyte	Result	Quant Limit
Fecal Coliform	89000	10

Ammonia as N, LAC 10-107-06-1J

Units	mg/L	Analyzed In	Ankeny
Date Analyzed	2015-05-06 13:48	Date Verified	2015-05-06 16:32
Analyst	MGB	Verifier	DLS
Analysis Prep	Ammonia distillation, SM 4500-NH3 B		

Analyte	Result	Quant Limit
Ammonia nitrogen as N	0.82	0.05

Description of Units used within this report

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mg/L = Milligrams per Liter

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