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62-1023
11-5-2010

**Complaint investigation at Wolbach Foods located west of Wolbach, September 21,
2010 by Dave Bubb, Nebraska Department of Environmental Quality**

On September 21, 2010 I assisted Keith Sandall, Agriculture Section, with an investigation at Wolbach Foods which is located west of Wolbach. Wolbach Foods has approximately 60,000 pigs at this facility and this complaint originated when a complainant notified the Agriculture Section that some of the waste had left the property and had gone to a pond adjacent to the facility.

Keith and I met with Phil Stienkamp, who is responsible for the Agronomy Operations at this facility, and he accompanied us while we were on the property. At one time this facility installed a drip system which is designed to dispose of some of the waste. This system was also installed without agency approval. It apparently did not work as it should have and was not in constant operation. It is thought that someone turned this system on without approval and some of the waste left the property and ended-up in a livestock pond south of the facility and across the county road.

The livestock pond appears to be for cattle use and has complete cattle access. The water level looked to be receding as the edges were damp. There had not been rain in the area for some time. The water had a slight red or dark brown appearance and was quite turbid. There was a livestock odor in the Site 1 bottle when opened at the lab. No dead fish were reported to have been seen earlier and none were observed during this investigation. Weather conditions during this investigation included 60% clouds, 62° F and a north wind at 15 to 25 mph.

Field measurements included water temperature at 18.9° C, dissolved oxygen was 0.1 mg/l, pH was 7.8, conductivity was 1,882 umhos and turbidity was 1,947 ntu's. Given the results of field conditions it appears that this pond suggests excessive livestock waste. With cattle access it is likely that some of the water contains cattle and swine waste however because these values are so extreme it would indicate that there was a significant addition of waste from the swine facility. A water sample was collected and designated as Site 1.

After making observations, determining field measurements and collecting water samples we went to the swine facility. We made observations of a pond located below one of the confinements as there was some question as to whether it had received livestock waste also. This pond was quite turbid also but was more of a brown or silt color. Water temperature was 20.5° C, dissolved oxygen was 7.3 mg/l, pH was 7.8, conductivity was 407 umhos and turbidity was 1,676 ntu's. This pond did not have the appearance of having livestock waste in it and results from field parameters do not indicate that there was a significant amount of livestock waste in it. A water sample was also collected from this pond and designated as Site 2. One additional sample was collected at Site 2



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use to compare ammonia results. Returned lab results show close comparison between the two.

Shortly after making observations, taking field measurements and collecting water samples I concluded my portion of investigation and returned samples to the laboratory later that afternoon.

The following are results from samples collected during this investigation.

Results from samples collected during an investigation at Wolbach Foods on September 21, 2010 by Dave Bubb, Nebraska Department of Environmental Quality.


Parameter	Site 1	Site 2, Sample 1	Site 2, Sample 2	RL
Temperature °C	18.9	20.5	20.8	N/A
Dissolved oxygen, mg/l	0.1	7.3	7.0	N/A
pH, st. units	7.8	7.8	7.7	N/A
Conductivity, umhos	1,882	407	409	N/A
Turbidity, ntu's	1,947	1,676	1,680	N/A
Nitrate/Nitrite, mg/l	0.251	4.36	N/A	0.05
Dissolved Sodium, mg/l	69.6	7.79	N/A	0.15
Total Suspended Solids, mg/l	142	2,570	N/A	5
Total Kjeldahl Nitrogen, mg/l	102	11.8	N/A	0.5
Total Phosphorous, mg/l	2.61	4.51	N/A	0.04
Ammonia, mg/l	85.9	0.520	0.355	0.05
Allowable Ammonia, mg/l	14.32	14.32	17.21	N/A
Chloride, mg/l	152	30.1	N/A	1

RL-Reporting Limit

Returned sample results indicate that the amount of ammonia in the pond south of the county road, or Site 1, is greater than maximum allowable concentration in Title 117-Nebraska Surface Water Quality Standards for Class-B Warmwater designation. In addition, the dissolved oxygen value at the time field measurements were determined was below Surface water standards of not less than 5.0 mg/l, Chapter 4, Class B-Warmwater, Section 003.04B1a, dissolved oxygen.

A copy of this report and results will be provided to Keith Sandall, Agriculture Section, for appropriate action.


M. David Bubb


Date

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY-
SURFACE WATER SECTION
FISH KILL/CITIZEN COMPLAINT FIELD DATA SHEET

Revised Jan. 2009

Project Name

Project Number

Resource Tracking No.

Trip Number: DEQ 039092110A
DEQ I.D. & Departure Date (mm/dd/yy) & Trips per Day (A, B, etc.)

Visit Number: _____
1,2,etc.

Station Number: C09309211001
(Type: FK/CC) (County - FIPS Code) (Month) (Day) (Year) (Site #)

Location Description: From road go 1/4 mile south to pond
From 281 and 32 go 1 mile west on gravel facility
on North side of road and pond on South side 1/4 mile
west

Sample Time: 1030

Collector(s) CRB

HUC Code: _____

Value

Phys./Chem. Field Measurements

18.9 Water Temperature, °C; (00010); Meter _____, Type _____; Thermometer _____

0.1 Dissolved Oxygen, mg/l; (00300); Meter _____, Type _____; Other _____

1.5 Percent Saturation, %; (00301)

7.2 pH, St. Units; (00400); Paper _____; Meter _____, Type _____; Other _____

1882 Conductivity, umhos/cm; (00095); Meter Type _____; Adj. to 25 °C Y/N

_____ Gage Height, inches; (00065); Wire Weight _____, Gage House _____, Other _____

_____ Flow, cfs; Real Time _____; Rating Table _____; Measured _____, Meter Type _____

Other: Turbidity NTU - 1947

Note: Lat/Long required for all sample sites.

Latitude: + _____ ° or; _____ °

Longitude: - _____ ° or; _____ °

GPS Unit: _____ Garmin GPSMap60C; _____ Garmin76SMap; Other _____

WAAS Status: _____ Enabled, _____ Disabled; 3D Reading: _____ Yes, _____ No; Accuracy _____ (ft)

Collection Point: _____

Sampling Activities

Water Quality: Method; ☒ Surface Grab; _____ Van Dorn; _____ Equal Width Depth Integrated;
_____ Equal Discharge Integrated; Automatic, _____ Flow Activated; _____ Time Activated

Sediment: _____ Grab/Scoop; _____ Ponar; _____ Eckman; _____ Core Sample; Other _____

Benthic Invertebrate: _____ QUAL; _____ Hesters; Other _____

Fish: _____ Tissue; _____ Community; _____ Electro-Fish; _____ Nets; Other _____

Other: _____

Additional Field Measurement Activities (See Attached)

_____ Phys./Chem. Profiles (e.g., Temp., D.O., etc.)

_____ Habitat (e.g. Riparian, Vegetation, etc.)

_____ Fish Community (Dead Fish, Species, Counts, Weights, Lengths, etc.)

_____ Flow: Marsh McBirney _____; Pygmy _____; Ga. Ht. Read. _____

General Field Observations/Comments: (e.g., Weather, Site Cond., etc.)

60 to 65 mph, 62°, water level 15.25 msl

COMMENTS: Pond has had complete cattail access, plants
mostly level is slowly dropping - No evidence
of impact recently.

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY
SURFACE WATER SECTION
FISH KILL/CITIZEN COMPLAINT FIELD DATA SHEET

Revised Jan. 2009

Project Name

Walbach Foods

Project Number

Resource Tracking No.

Trip Number: D E Q

0390921100
DEQ I.D. & Departure Date (mm/dd/yy) & Trips per Day (A, B, etc.)

Visit Number:

1,2,etc.

Station Number:

C09709211002
(Type: FK/CC) (County - FIPS Code) (Month) (Day) (Year) (Site #)

Location Description:

Site 5 sample 1

Sample Time:

1122

Collector(s)

Bush

HUC Code:

Value

Phys./Chem. Field Measurements

20.5 Water Temperature, °C; (00010); Meter __, Type __; Thermometer __
7.3 Dissolved Oxygen, mg/l; (00300); Meter __, Type __; Other __
84 Percent Saturation, %; (00301)
7.8 pH, St. Units; (00400); Paper __; Meter __, Type __; Other __
407 Conductivity, umhos/cm; (00095); Meter Type __; Adj. to 25 °C Y/N
Gage Height, inches; (00065); Wire Weight __, Gage House __, Other __
Flow, cfs; Real Time __; Rating Table __; Measured __, Meter Type __

Other:

14-14

Note: Lat/Long required for all sample sites.

Latitude: + 41.49629 ° or; __ ° __', __''
Longitude: - 98.47277 ° or; __ ° __', __''
GPS Unit: __ Garmin GPSMap60C; __ Garmin76SMap; Other __
WAAS Status: __ Enabled, __ Disabled; 3D Reading: __ Yes, __ No; Accuracy __ (ft)
Collection Point: __

Sampling Activities

Water Quality: Method; ☒ Surface Grab; __ Van Dorn; __ Equal Width Depth Integrated;
__ Equal Discharge Integrated; Automatic, __ Flow Activated; __ Time Activated
Other: __
Sediment: __ Grab/Scoop; __ Ponar; __ Eckman; __ Core Sample; Other __
Benthic Invertebrate: __ QUAL; __ Hesters; Other __
Fish: __ Tissue; __ Community; __ Electro-Fish; __ Nets; Other __
Other: __

Additional Field Measurement Activities (See Attached)

__ Phys./Chem. Profiles (e.g., Temp., D.O., etc.)
__ Habitat (e.g. Riparian, Vegetation, etc.)
__ Fish Community (Dead Fish, Species, Counts, Weights, Lengths, etc.)
__ Flow: Marsh McBirney __; Pygmy __; Ga. Ht. Read. __;

General Field Observations/Comments: (e.g., Weather, Site Cond., etc.)

COMMENTS:

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY
SURFACE WATER SECTION
FISH KILL/CITIZEN COMPLAINT FIELD DATA SHEET

Revised Jan. 2009

Project Name

Walkeep Creek

Project Number

Resource Tracking No.

Trip Number: DEQ 039092110A
DEQ I.D. & Departure Date (mm/dd/yy) & Trips per Day (A, B, etc.)

Visit Number: _____
1,2,etc.

Station Number: 007709211002
(Type: FK/CC) (County - FIPS Code) (Month) (Day) (Year) (Site #)

Location Description:

Site 2 Sample 2

Sample Time: 1125

Collector(s) Bull

HUC Code:

Value	Phys./Chem. Field Measurements
<u>20.8</u>	Water Temperature, °C; (00010); Meter____, Type____; Thermometer____
<u>7.0</u>	Dissolved Oxygen, mg/l; (00300); Meter____, Type____; Other____
<u>79</u>	Percent Saturation, %; (00301)
<u>7.7</u>	pH, St. Units; (00400); Paper____; Meter____, Type____; Other____
<u>409</u>	Conductivity, umhos/cm; (00095); Meter Type____; Adj. to 25 °C Y/N
	Gage Height, inches; (00065); Wire Weight____, Gage House____, Other____
	Flow, cfs; Real Time____; Rating Table____; Measured____, Meter Type____
Other:	<u>Turbidity NTU 1680</u>

Note: Lat/Long required for all sample sites.

Latitude: + _____ ° or; _____ ° , _____ °
Longitude: - _____ ° or; _____ ° , _____ °
GPS Unit: _____ Garmin GPSMap60C; _____ Garmin76SMap; Other____
WAAS Status: _____ Enabled, _____ Disabled; 3D Reading: _____ Yes, _____ No; Accuracy _____ (ft)
Collection Point: _____

Sampling Activities

Water Quality: Method; ☒ Surface Grab; _____ Van Dorn; _____ Equal Width Depth Integrated;
_____ Equal Discharge Integrated; Automatic, _____ Flow Activated; _____ Time Activated
Other: _____
Sediment: _____ Grab/Scoop; _____ Ponar; _____ Eckman; _____ Core Sample; Other____
Benthic Invertebrate: _____ QUAL; _____ Hesters; Other____
Fish: _____ Tissue; _____ Community; _____ Electro-Fish; _____ Nets; Other____
Other: _____

Additional Field Measurement Activities (See Attached)

_____ Phys./Chem. Profiles (e.g., Temp., D.O., etc.)
_____ Habitat (e.g. Riparian, Vegetation, etc.)
_____ Fish Community (Dead Fish, Species, Counts, Weights, Lengths, etc.)
_____ Flow: Marsh McBirney____; Pygmy____; Ga. Ht. Read.____;

General Field Observations/Comments: (e.g., Weather, Site Cond., etc.)

COMMENTS: _____

4704

9-21-10
1Ch

(Revised March 2007)

(Generic Form for Fish Kills & Citizen Complaints)

Trip Number: DEQ 039 09 21 1 0 A Visit No. 1
 Sampler ID: Depart Date: (MM - DD - YY) Trip per Day (A, B, etc.) (1,2,etc.)

Station Number & QC ID Number	Location Description	Collection Date	Collection Time	Lab Number	Containers per Sample (HHS Lab)
C093092/1001	Pond on So. Side of Rd	9-21-10	1030	54069	
C077092/1002 Sample 1	Pond on Turnpike Prop	9-21-10	1123	54070	
C077092/1002 Sample 2	" "	9-21-10	1125	54071	
QCFLK1	Field Blank				
QCDUP1	Duplicate		NA		

(MM/YY)

PARAMETER REQUEST		(REFER TO BACK <u>✓</u>)

CONTAINER/PRESERVATION			
500 ml Bottle; Un-Preserved	250 ml Bottle; H ₂ SO ₄	250 ml Bottle; HN0 ₃	Sterilized Plastic Un-Preserved
Glass W/ Teflon Lid (Qt.) Un-Preserved	Glass W/ Teflon Lid (Qt.) Preserved; H ₂ SO ₄	Pest. Jar W/ Teflon Lid (120 ml) Un-Preserved	40 ml Glass Vial W/Teflon Lid
Filtered; Un-Preserved	Filtered; Preserved H ₂ SO ₄	Filtered; Preserved HN0 ₃	Un-Preserved; No Air Space

CHAIN OF CUSTODY RECORD				
Delivered By:	Received By:	Date:	Time:	Lab Numbers:
<i>G. B. Smith</i>	<i>J. Foster</i>	<i>9-21-10</i>	<i>11:50</i>	

COMMENTS: Note: C07709211002 Sample 2 needs ammonia
analysis only.

Nebraska Public Health Environmental Laboratory

3701 South 14th Street

Lincoln, NE 68502

(402) 471-2122

(402) 471-2080 (fax)

John Lund

PO Box 98922

Lincoln, NE 68509

ANALYTICAL RESULTS QUALIFIERS

Workorder: 4709 DEQ039092110A

Profile: 03-026-0077, RTN:03-026-0077

Lab ID:	54069	Date Received:	9/21/2010	Matrix:	Water
Sample ID:	POND SOUTH SIDE	Date Collected:	9/21/2010 10:30		
Sampled By:	BUBB, D.	Date Reported:	10/6/2010		
Location:	C09309211001				

Parameters	Results	Units	Qual	Report Limit	MCL	Analyzed	Bv
Analytical Method: EPA 353.2-Nitrate/Nitrite							
Nitrate + Nitrite (As N)	0.251	mg/L		0.05	10	9/21/2010	KLM
Analytical Method: SM 3111B - Minerals by AA							
Sodium, Dissolved	69.6	mg/L		0.15	500	9/24/2010	AMJ
Analytical Method: EPA 160.2 - TSS							
TSS (Non-Filterable Residue)	142	mg/L		5		9/23/2010	SKH
Analytical Method: TKN_TPO4							
Total Kjeldahl Nitrogen	102	mg/L		0.5		9/27/2010	KLM
Total Phosphate as P	2.61	mg/L		0.04		9/27/2010	KLM
Analytical Method: EPA 350.1 - Ammonia							
Ammonia as N, Distilled	85.9	mg/L	1	0.05		9/30/2010	MAP
Analytical Method: EPA 325.2 - Chloride							
Chloride	152	mg/L		1		9/27/2010	MAP

PARAMETER COMMENTS:

[1] Value given is an average value; determined by analyzing aliquots of the same sample two or more times

REMARKS See reverse side of report for description of acronyms and data qualifiers. For inquiries on result interpretation call: (402) 471-6435.

John Lund
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 Lincoln, NE 68509

ANALYTICAL RESULTS QUALIFIERS

Workorder: 4709 DEQ039092110A

Profile: 03-026-0077, RTN:03-026-0077

Lab ID: 54070	Date Received: 9/21/2010	Matrix: Water
Sample ID: POND PROP	Date Collected: 9/21/2010 11:22	
Sampled By: BUBB, D.	Date Reported: 10/6/2010	
Location: C07709211002		

Parameters	Results	Units	Qual	Report Limit	MCL	Analyzed	Bv
Analytical Method: EPA 353.2-Nitrate/Nitrite							
Nitrate + Nitrite (As N)	4.36	mg/L		0.05	10	9/21/2010	KLM
Analytical Method: SM 3111B - Minerals by AA							
Sodium, Dissolved	7.79	mg/L		0.15	500	9/24/2010	AMJ
Analytical Method: EPA 160.2 - TSS							
TSS (Non-Filterable Residue)	2570	mg/L		5		9/23/2010	SKH
Analytical Method: TKN_TPO4							
Total Kjeldahl Nitrogen	11.8	mg/L		0.5		9/27/2010	KLM
Total Phosphate as P	4.51	mg/L		0.04		9/27/2010	KLM
Analytical Method: EPA 350.1 - Ammonia							
Ammonia as N, Distilled	0.520	mg/L		0.05		9/30/2010	MAP
Analytical Method: EPA 325.2 - Chloride							
Chloride	30.1	mg/L		1		9/27/2010	MAP

REMARKS See reverse side of report for description of acronyms and data qualifiers. For inquiries on result interpretation call: (402) 471-6435.

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John Lund**PO Box 98922****Lincoln, NE 68509****ANALYTICAL RESULTS QUALIFIERS**

Workorder: 4709 DEQ039092110A

Profile: 03-026-0077, RTN:03-026-0077

Lab ID: **54071**Date Received: **9/21/2010** Matrix: **Water**Sample ID: **POND ON PROP**Date Collected: **9/21/2010 11:25**Sampled By: **BUBB, D.**Date Reported: **10/6/2010**Location: **C07709211002**

Parameters	Results	Units	Qual	Report Limit	MCL	Analyzed	Bv
Analytical Method: EPA 350.1 - Ammonia							
Ammonia as N, Distilled	0.355	mg/L		0.05		9/30/2010	MAP

REMARKS See reverse side of report for description of acronyms and data qualifiers. For inquiries on result interpretation call: (402) 471-6435.