

PROJECT DATA SUPPLEMENT

CASE STUDY 2

IMPERMEABLE COVER

(DUNN COUNTY)

FINAL REPORT

ON

WISCONSIN'S DAIRY AND LIVESTOCK

ODOR AND AIR EMISSION PROJECT

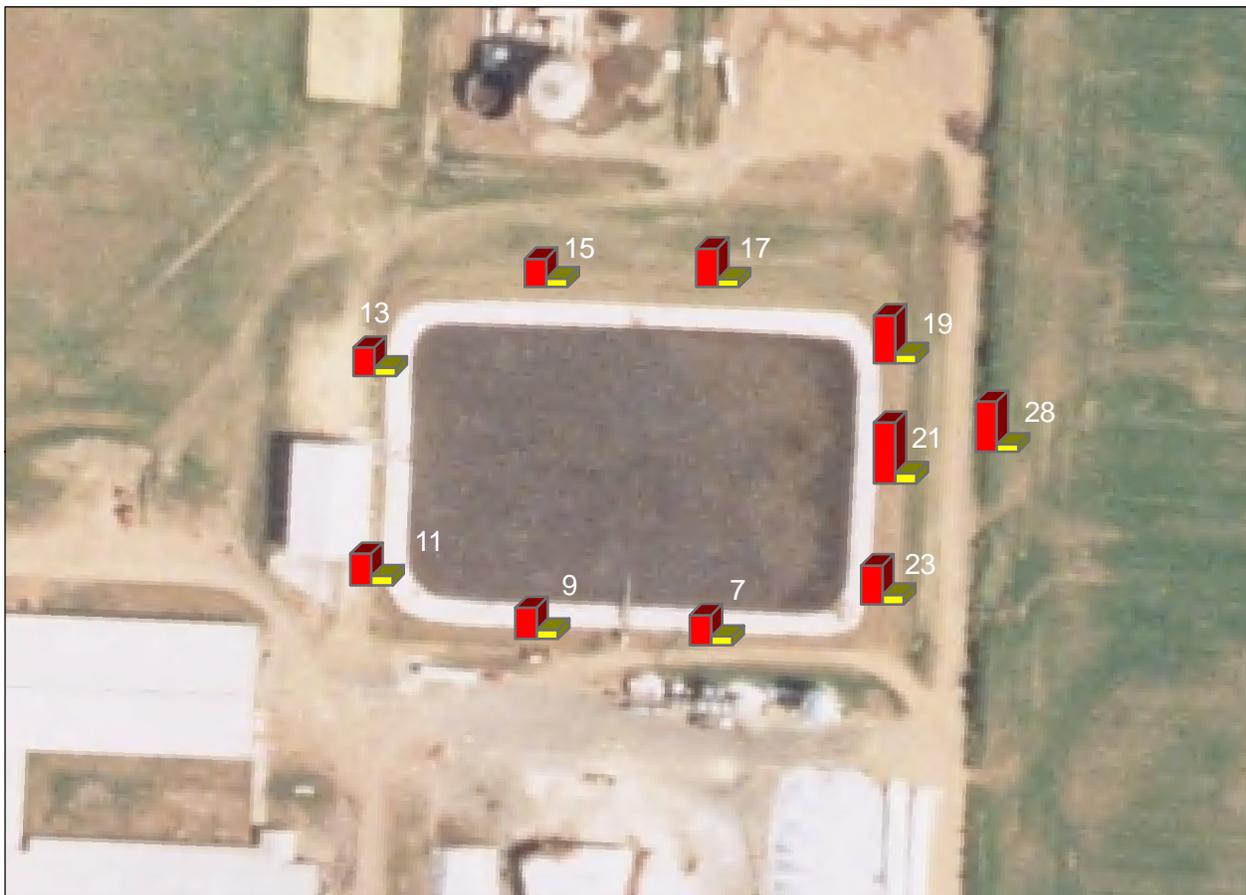
DECEMBER 2008

WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
WISCONSIN AGRICULTURAL STEWARDSHIP INITIATIVE

MADISON, WISCONSIN

Ambient Air Concentrations
Daytime Levels

Dunn County
October 31, 2006

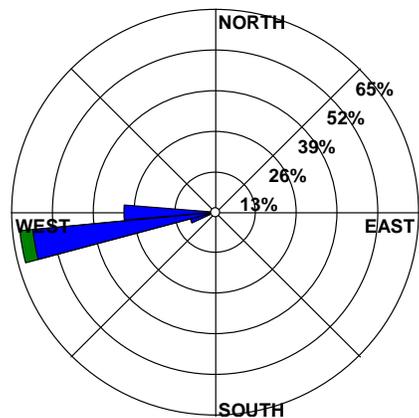
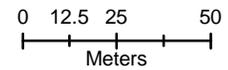


Field Sampling Measurements
(Micrograms per Cubic Meter)

Location	NH3	H2S
7	ND	ND
9	ND	ND
11	ND	ND
13	ND	ND
15	ND	ND
17	355	ND
19	444	ND
21	565	97
23	357	ND
28	465	ND

Notes:
- Non-Detect (ND) - Detection Limits Vary with Conditions

- Ammonia
- Hydrogen Sulfide
- 10 Location Number



- WIND SPEED (m/s)
- >= 11.1
 - 8.8 - 11.1
 - 5.7 - 8.8
 - 3.6 - 5.7
 - 2.1 - 3.6
 - 0.5 - 2.1
 - Calms: 0.00%

Ambient Air Concentrations
Daytime Levels

Dunn County
May 7, 2007

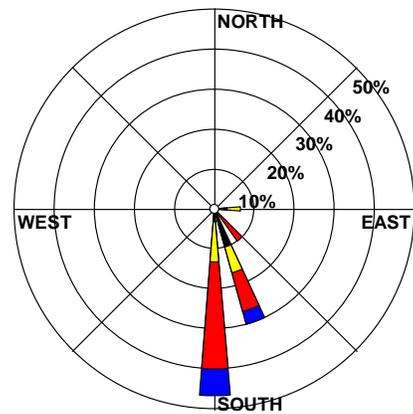
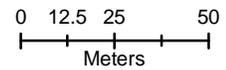


Field Sampling Measurements
(Micrograms per Cubic Meter)

Location	NH3	H2S
7	87	ND
11	217	
13	342	ND
14	426	ND
16	446	ND
18	464	
21	247	ND
24	177	ND

Note: ND = Non-Detect (detection limits vary with conditions)

- Ammonia
- Hydrogen Sulfide
- 10 Location Number



WIND SPEED
(m/s)

- ≥ 11.1
- 8.8 - 11.1
- 5.7 - 8.8
- 3.6 - 5.7
- 2.1 - 3.6
- 0.5 - 2.1

Calms: 6.67%

Ambient Air Concentrations
Nighttime Levels

Dunn County
May 7-8, 2007

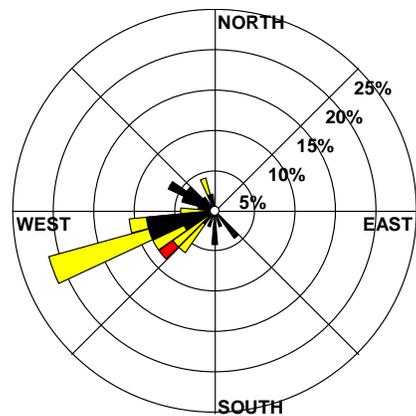
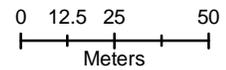


Field Sampling Measurements
(Micrograms per Cubic Meter)

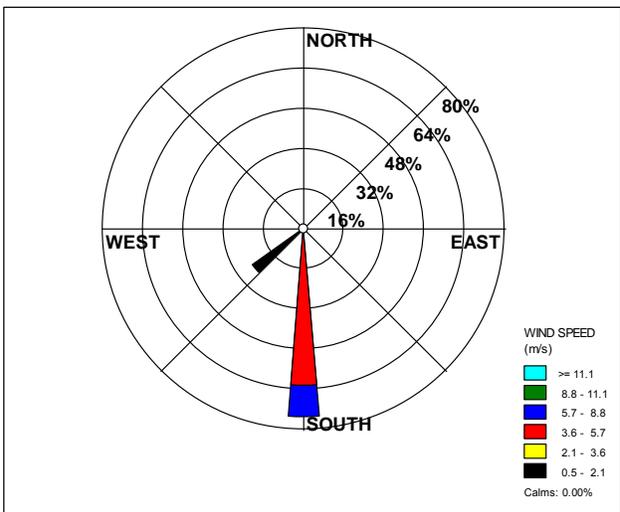
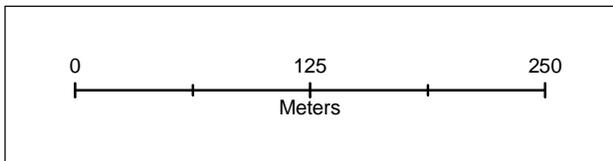
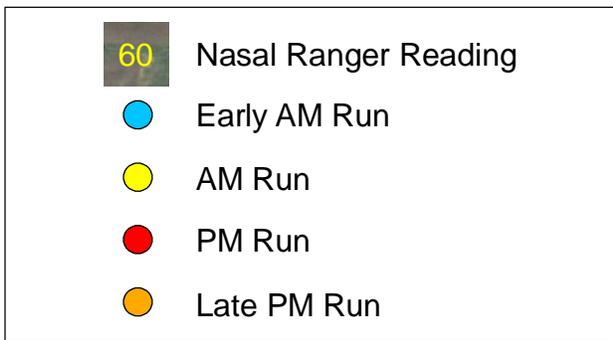
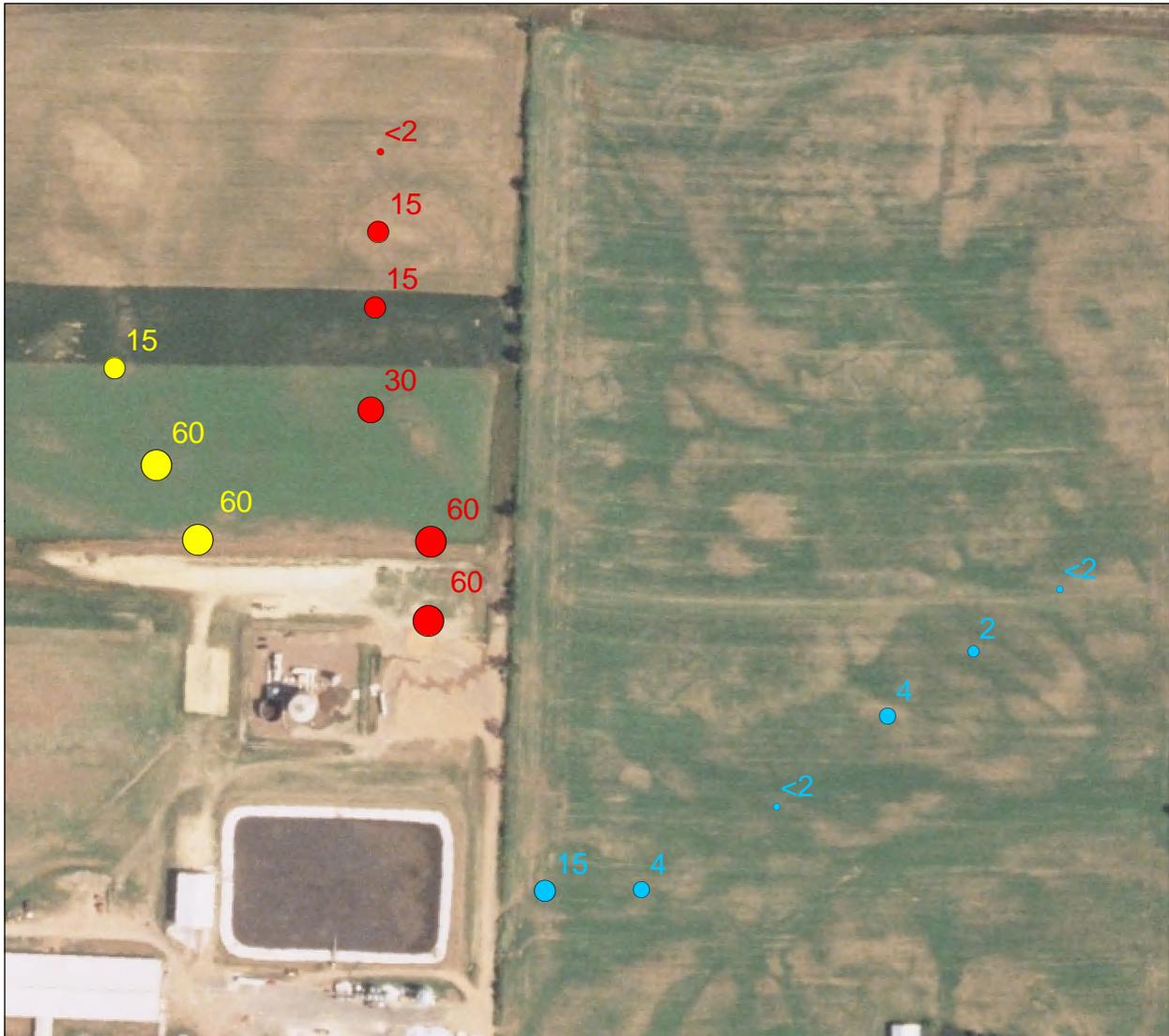
Location	NH3	H2S
11		17
13	154	27
14	246	
16	227	99
18	345	96
21	619	174
24	96	

Note: ND = Non-Detect (detection limits vary with conditions)

- Ammonia
- Hydrogen Sulfide
- 10 Location Number

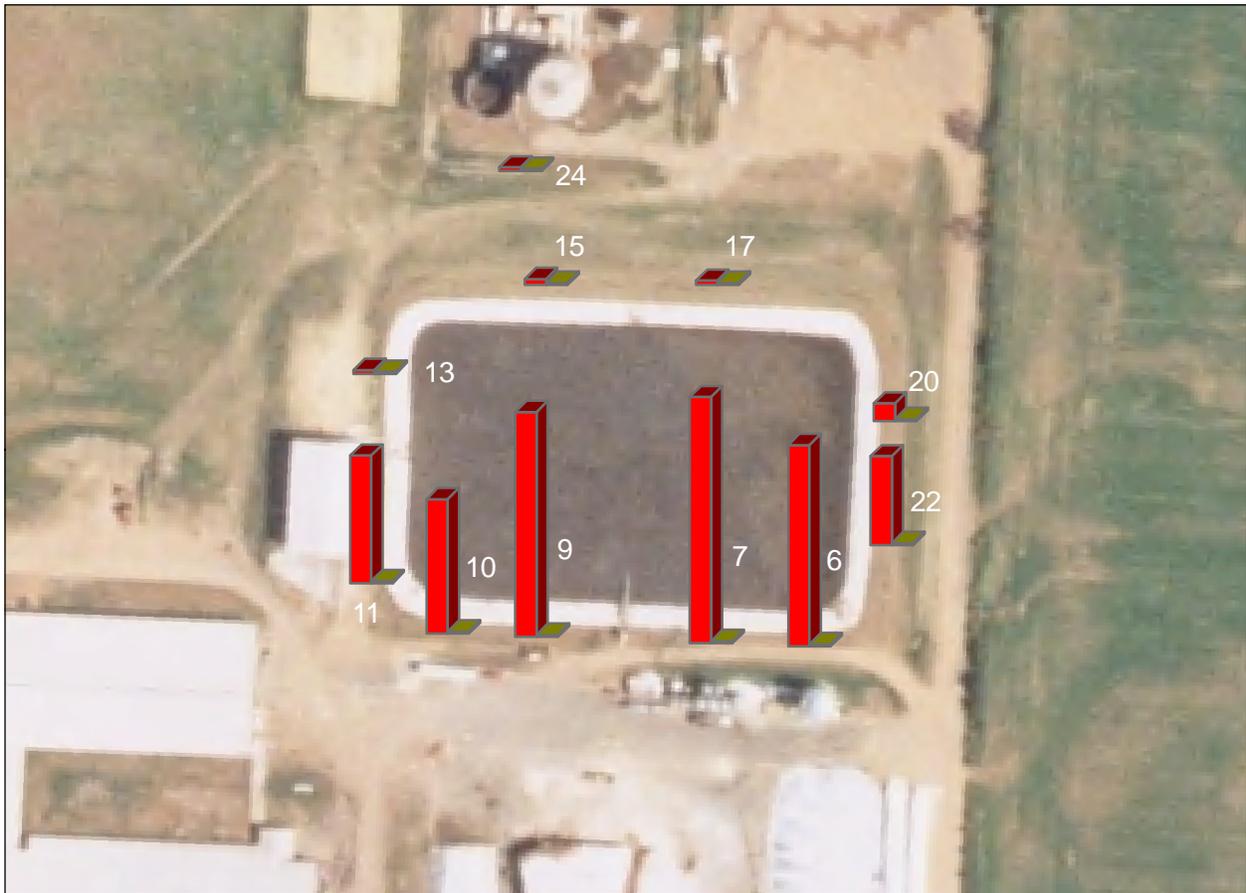


- WIND SPEED (m/s)
- ≥ 11.1
 - 8.8 - 11.1
 - 5.7 - 8.8
 - 3.6 - 5.7
 - 2.1 - 3.6
 - 0.5 - 2.1
- Calms: 2.13%



Ambient Air Concentrations
Daytime Levels

Dunn County
July 9, 2007

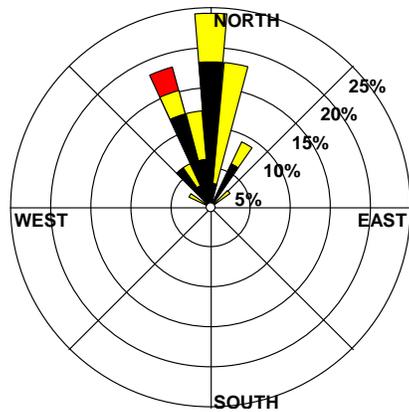
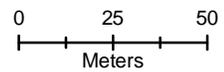


Field Sampling Measurements
(Micrograms per Cubic Meter)

Location	NH3	H2S
6	1864	ND
7	2279	ND
9	2084	ND
10	1246	ND
11	1180	ND
13	ND	ND
15	55	ND
17	ND	ND
20	166	ND
22	822	ND
24	ND	ND

Note: ND = Non-Detect (detection limits vary with conditions)

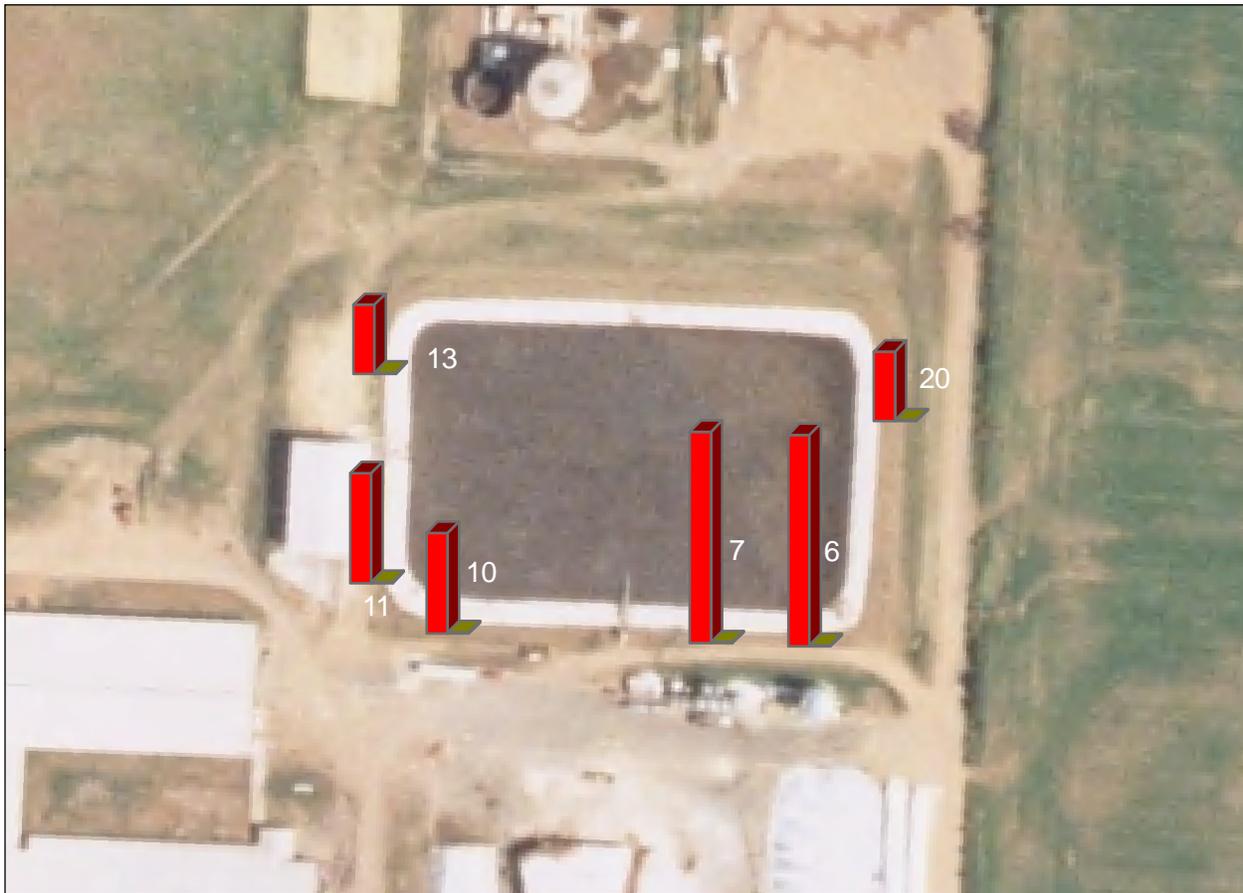
- Ammonia
- Hydrogen Sulfide
- 10 Location Number



- WIND SPEED (m/s)
- ≥ 11.1
 - 8.8 - 11.1
 - 5.7 - 8.8
 - 3.6 - 5.7
 - 2.1 - 3.6
 - 0.5 - 2.1
 - Calms: 0.00%

Ambient Air Concentrations
Nighttime Levels

Dunn County
July 9-10, 2007

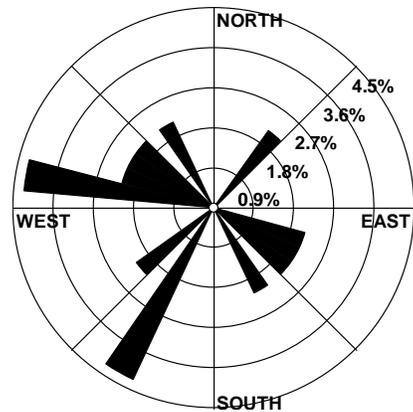
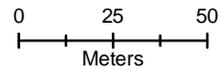


Field Sampling Measurements
(Micrograms per Cubic Meter)

Location	NH3	H2S
6	1958	ND
7	1960	ND
10	934	ND
11	1016	ND
13	639	ND
20	647	ND

Note: ND = Non-Detect (detection limits vary with conditions)

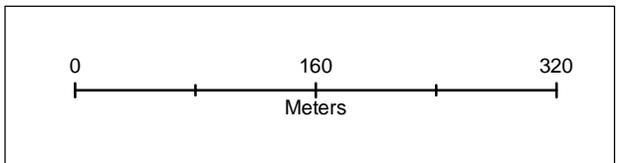
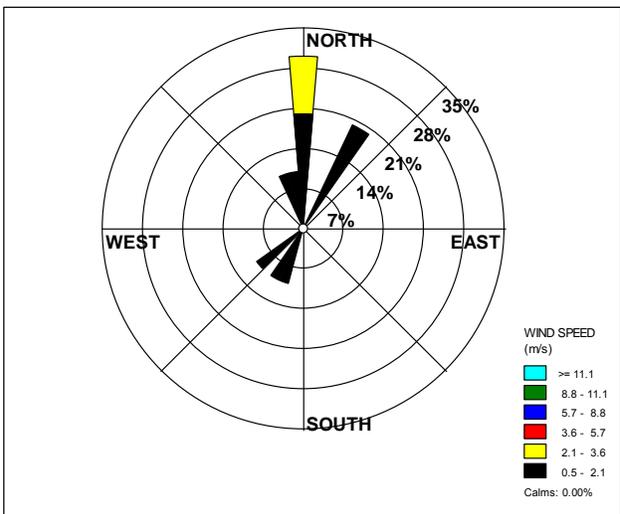
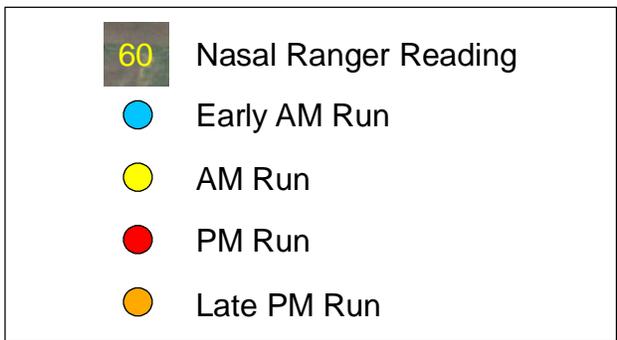
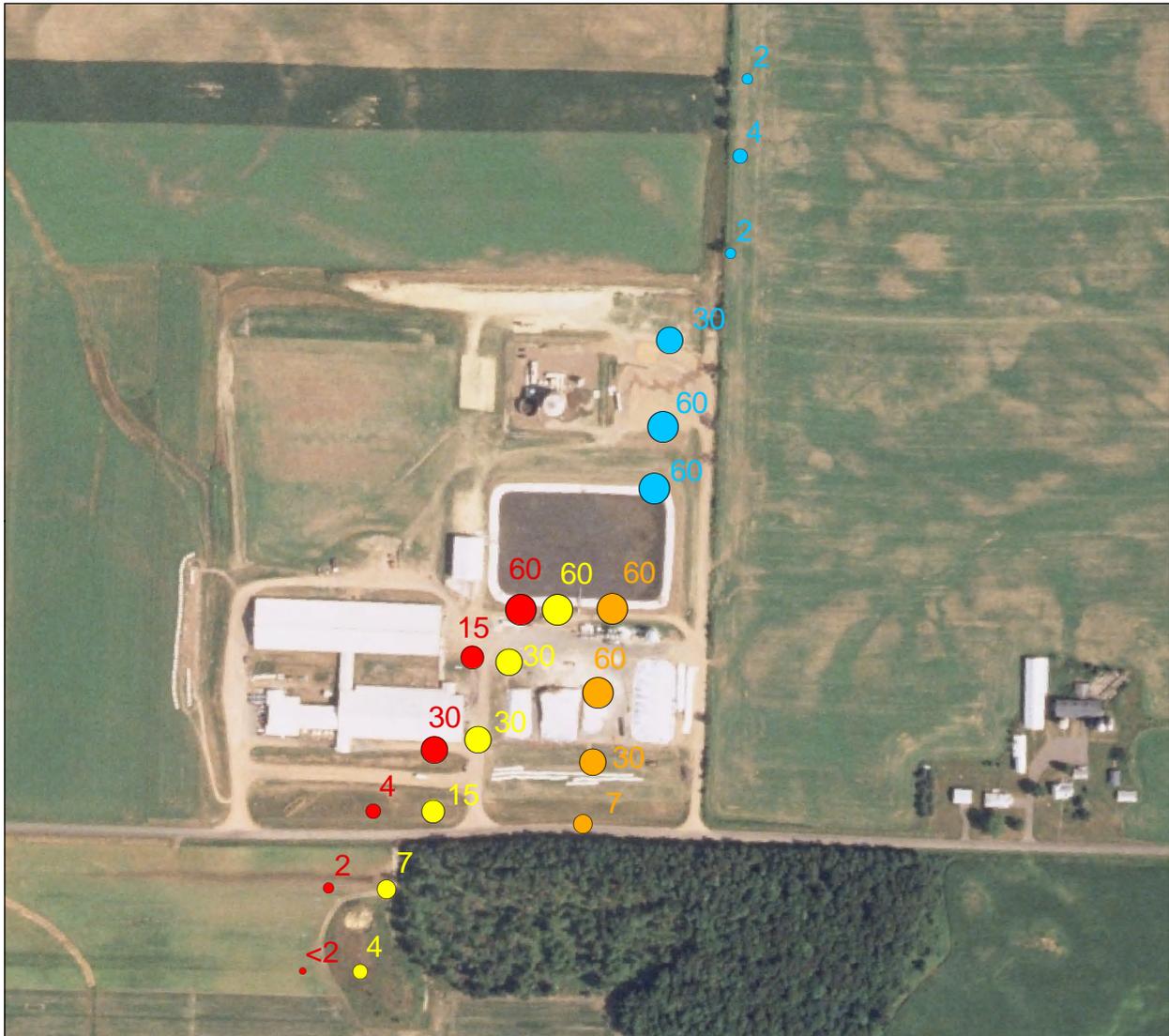
- Ammonia
- Hydrogen Sulfide
- 10 Location Number



WIND SPEED
(m/s)

- ≥ 11.1
- 8.8 - 11.1
- 5.7 - 8.8
- 3.6 - 5.7
- 2.1 - 3.6
- 0.5 - 2.1

Calms: 70.21%



Ambient Air Concentrations
Daytime Levels

Dunn County
September 23, 2008

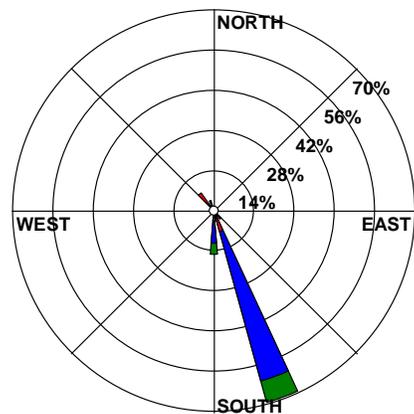
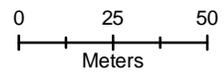


Field Sampling Measurements
(Micrograms per Cubic Meter)

Location	NH3	H2S
6	ND	ND
8	ND	ND
10	ND	ND
11	ND	ND
12	33	
13	ND	ND
16	ND	ND
18	ND	ND
19	ND	ND
21	ND	ND
23	ND	ND

Note: ND = Non-Detect (detection limits vary with conditions)

- Ammonia
- Hydrogen Sulfide
- 10 Location Number



- WIND SPEED (m/s)**
- ≥ 11.1
 - 8.8 - 11.1
 - 5.7 - 8.8
 - 3.6 - 5.7
 - 2.1 - 3.6
 - 0.5 - 2.1
 - Calms: 0.00%

Ambient Air Concentrations
Nighttime Levels

Dunn County
September 23-24, 2008

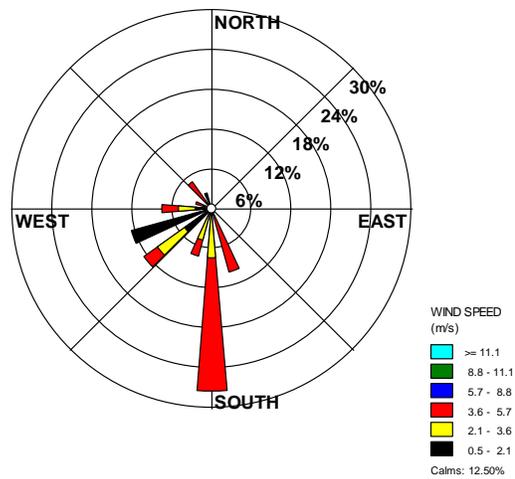
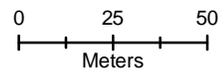


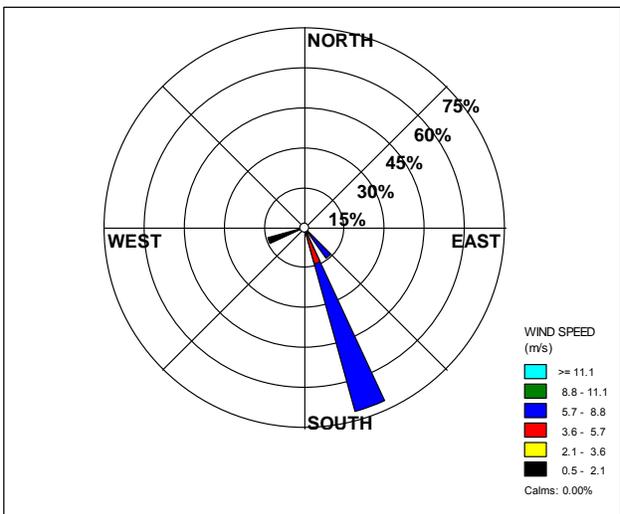
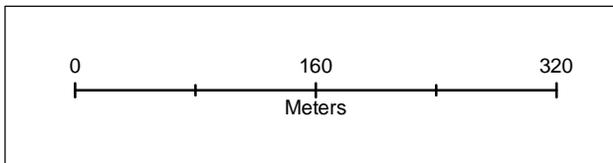
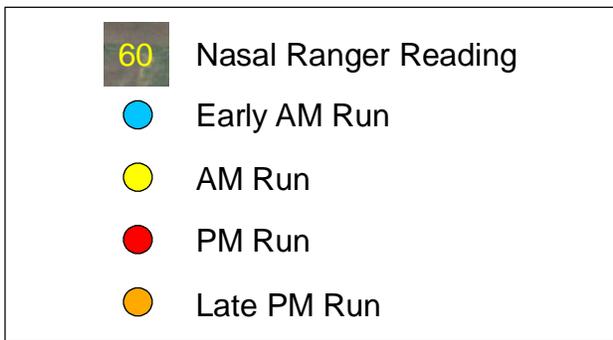
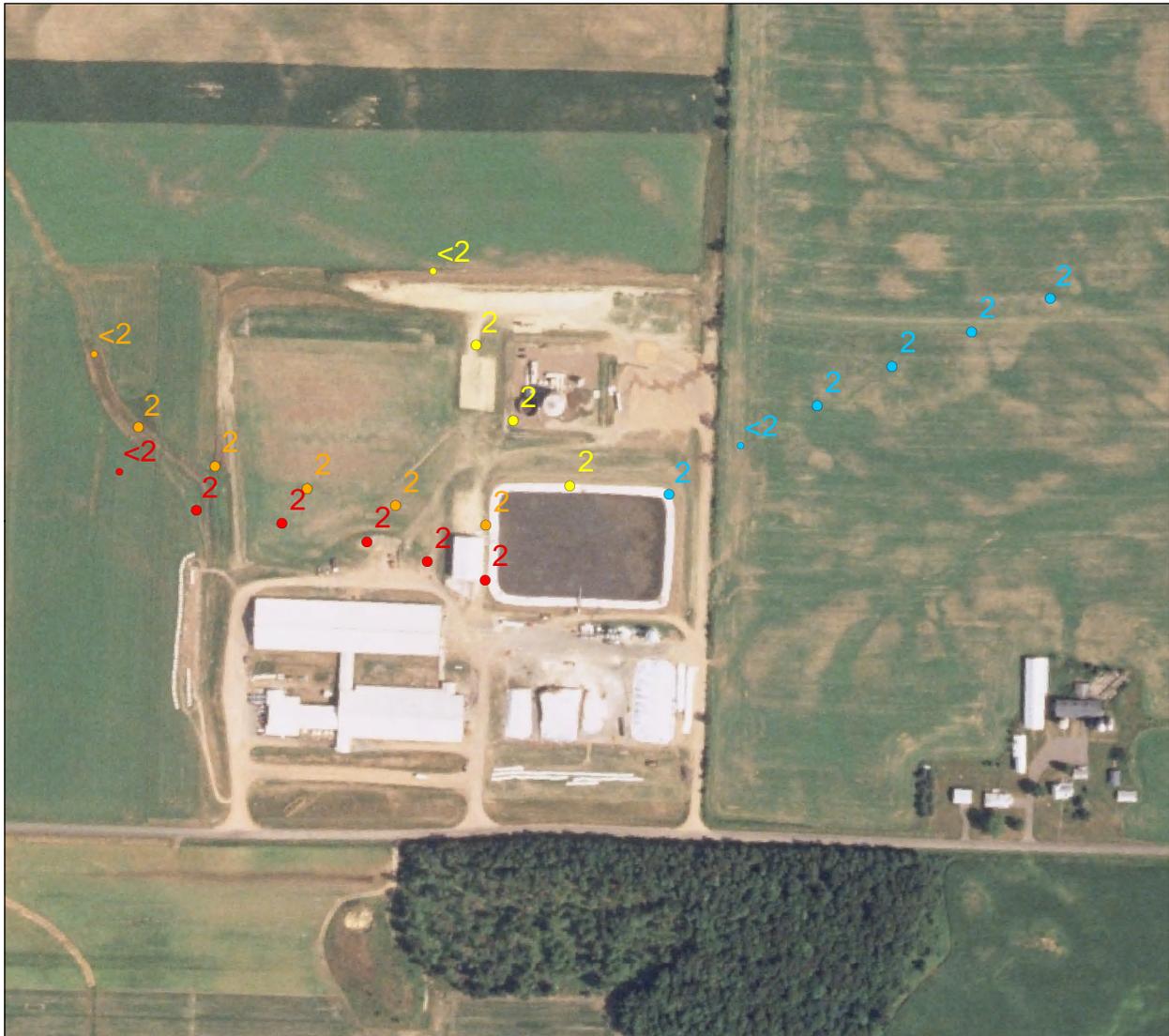
Field Sampling Measurements
(Micrograms per Cubic Meter)

Location	NH3	H2S
6	30	ND
8	38	ND
10	97	ND
11	128	ND
12	157	ND
13	34	ND
16	ND	ND
18	ND	ND
19	ND	ND
21	28	ND
23	ND	ND

Note: ND = Non-Detect (detection limits vary with conditions)

- Ammonia
- Hydrogen Sulfide
- 10 Location Number





Ambient Air Concentrations
Daytime Levels

Dunn County
October 7, 2008

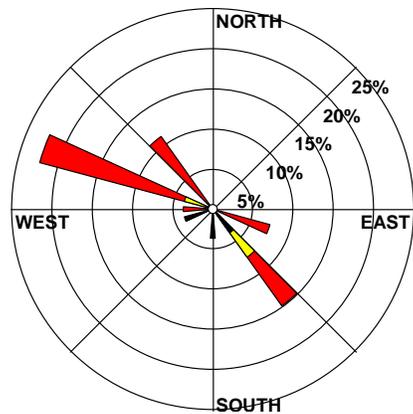
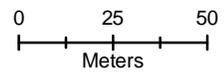


Field Sampling Measurements
(Micrograms per Cubic Meter)

Location	NH3	H2S
6	ND	ND
8	ND	ND
10	ND	ND
11	ND	ND
12	ND	65
13	ND	ND
14	ND	93
16	ND	ND
18	ND	ND
19	ND	21
21	ND	ND
23	ND	ND

Note: ND = Non-Detect (detection limits vary with conditions)

- Ammonia
- Hydrogen Sulfide
- 10 Location Number



- WIND SPEED (m/s)
- ≥ 11.1
 - 8.8 - 11.1
 - 5.7 - 8.8
 - 3.6 - 5.7
 - 2.1 - 3.6
 - 0.5 - 2.1
- Calms: 33.33%

Ambient Air Concentrations
Nighttime Levels

Dunn County
October 7-8, 2008

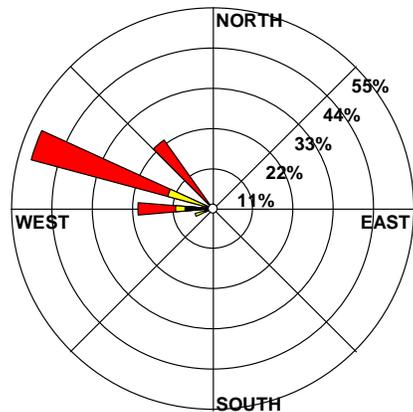
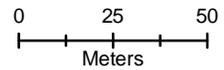


Field Sampling Measurements
(Micrograms per Cubic Meter)

Location	NH3	H2S
6	ND	ND
8	ND	ND
10	ND	ND
11	ND	ND
12	ND	ND
13	ND	ND
14	ND	ND
16	ND	ND
19	ND	ND
21	ND	ND
23	ND	ND

Note: ND = Non-Detect (detection limits vary with conditions)

- Ammonia
- Hydrogen Sulfide
- 10 Location Number



- WIND SPEED (m/s)
- ≥ 11.1
 - 8.8 - 11.1
 - 5.7 - 8.8
 - 3.6 - 5.7
 - 2.1 - 3.6
 - 0.5 - 2.1
 - Calms: 0.00%

