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EMISSIONS DATA FROM TWO SOW BARNS AND ONE SWINE FARROWING ROOM IN IOWA

Final Report for Site IA4B

of the

National Air Emissions Monitoring Study

Submitted to

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1. INTRODUCTION AND OBJECTIVES

1.1. Overview of NAEMS

The primary goals of the National Air Emissions Monitoring Study (NAEMS) were to: 1) quantify aerial pollutant emissions from dairy, pork, egg, and broiler production facilities, 2) provide reliable data for developing and validating emissions models for livestock and poultry production and for comparison with government regulatory thresholds, and 3) promote a national consensus on methods and procedures for measuring emissions from livestock operations. Emissions measurements were conducted at a total of 15 different barn monitoring sites and ten open source sites in the continental US.

The NAEMS was managed by Purdue University, in its role as Independent Research Contractor (IRC) to the Agricultural Air Research Council (AARC). Purdue selected equipment and methods in consultation with the U.S. EPA, and subcontracted with other universities to operate the monitoring sites. Iowa State University (ISU) installed, maintained, and calibrated equipment, collected samples, and conducted all other on-site activities. Purdue provided rapid feedback (generally within 2-4 business days) to catch aberrations in the data, and later conducted final processing of the data. Both ISU and Purdue participated in reviews of the analyzed data.

The overall objective of this report is to present the quality-assured measurements of ammonia (NH_3), hydrogen sulfide (H_2S), particulate matter (PM) and volatile organic compounds (VOCs) from two sow barns and one farrowing room at the Iowa swine breeding and gestating facility. The specific objectives of the report are to:

1. Describe the farm, and the monitored buildings,
2. Describe the monitoring methods and quality assurance, and
3. Present tabulated daily averages of emissions.

2. CONFINED ANIMAL FEEDING OPERATION

2.1. Farm

This 2,500-hd gestation and farrowing farm (IA4B) was located in Iowa and consisted of three barns built in 1998. The sow farm consisted of two gestation barns, a 16-room farrowing barn, an isolation barn, and an office (Figure 1). There were no obvious livestock operations, other than fields that occasionally receive manure, within 1.6 km of the site. A concrete bunker at the south end of the facility was used for composting mortalities.

The barns were mechanically ventilated and utilized cooling cells in hot weather. The ventilation and pit fans were backed up by a generator when there were power failures.

Emergency curtains ran the entire length of the barn. There were six heaters that provided supplemental heating when needed.

Sows were fed a corn/soy based diet.

The gestation barns had concrete slatted floors with under-building pits for manure storage. The farrowing barn had a combination iron/plastic/concrete floor with a shallow pit for short-term manure storage. Stored manure in the farrowing barn was transferred once every 21-24 days into the nearest gestation barn.

The gestation barns and one room in the farrowing barn were monitored.

Figure 1. Farm layout.

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2.2. Monitored Buildings

The farrowing and both gestation barns had roof slopes of 4:12 and were oriented east-west. Each gestation barn was 86 m long x 25 m wide with a 3.3 m ceiling height; and the farrowing barn was 106 m long x 21 m wide. The farrowing barn contained 16 rooms. The two gestation barns were separated by the long axis of the farrowing barn, and were thus 113 m apart.

Water was metered to the barns and dispensed to the sows by nipples. Power washing was supplied by a central system. All feed brought to the site was weighed on a state-inspected and certified truck scale. The gestation sows were fed twice a day, typically at 6:00 and 18:00. An automated CableVey system and flex augers are used to deliver feed. A microbial probiotic feed additive, Tridilution (AgriKing) was used in the feed to enhance feed digestion.

The farm's electrical supply was backed up by a generator when there is a power failure or emergency.

All of the ventilation fans and controllers were manufactured by Automated Production Systems (Automated Production Systems, Assumption, IL). Each of the two gestation barns had nine pit fans and eleven wall fans. The gestation barns' pit fans had wind diverters (Osborne Industries, Osborne, KS). Ventilation air entered through three rows of ceiling air inlets, each of which had 10 inlets. The ceiling ventilation inlets were manually adjusted October through March, but were closed in warm weather, when tunnel ventilation was used, and fresh air entered through cooling cells located at the west, north, and south walls. In winter, the cool cells were covered with insulation wrap and/or curtain wrap. Emergency curtains were 56 cm wide, and ran the entire length of the barn. There were six 46 cm (Model #GP1833SW, The GSI Group; 230 V; 2.0 A; 1/3 Hp; 1725 rpm) and four 61 cm (Model #GP2433SW, The GSI Group; 230 V; 2.0 A; 1/3 Hp; 1100 rpm) pit fans in each gestation barn. The wall fans (Airstream Model MM4810) were all 122 cm in diameter. These large fans were all shut off from December through February except the primary wall fan and the barn was ventilated by the pit fans and the primary tunnel fan only during winter. Fan stages and cool cells were controlled by an integrated controller (Model TC5-1V10SA, Automated Production System Airstream, IL). The first ventilation stage consisted of all the pit fans, which were operated continuously. The six 46 cm pit fans were started at 85% capacity, while three 61 cm fans were operated at 100%. The second stage of ventilation turned on the wall fan that was closest to the barn door, and the remaining ventilation stages turned on either one or two more fans, on alternating sides of the barn door. The curtain opening on the outside of evaporative cooling cells was controlled by the barn static pressure. There were six gas heaters (Model #C80MLP, S.N. LPB10721, GSI Group Cumberland PuraFire, IL), controlled in two stages, that provided supplemental heating.

The farrowing barn consisted of 16 individual 6.55 m x 19.5 m rooms, each room had three fans: one 25 cm (Model #DF-10, The GSI Group; 230 V; 84 A; 1/6 Hp; 3300 rpm) pit fan, one 61 cm (Model #GP2433SW, The GSI Group; 230 V; 2.0 A; 1/3 Hp; 1100 rpm) wall fan, and another 61 cm (Model #GPMA2433, The GSI Group; 230 V; 6.0 A; 1/2 Hp; 1150 rpm) wall fan. Each room was ventilated in three ventilation stages. The first stage was the 25-cm pit fan, which operated between 85% and 100% voltage. The second and third stages controlled the two 61 cm fans. Although both of these were variable-speed fans, they were set at 100% when on, meaning they were effectively being used as single-speed fans. The farrowing barn had a preheated 149 cm-

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wide hallway located at the east side of the barn. The hallway was heated with five 225.000 Btu/hr gas heaters (Model C225, Automated Production System, Airstream, IL). Ventilation air entered the barn from the attic via six ceiling air inlets of each room and also from the hallway via four wall inlets. There was a gas heater (GSI Group Cumberland PuraFire, Model #C80MLP) in each farrowing room.

The gestation barns had concrete slatted floors with 3.1 m deep pits for manure storage. The gestation barns had two 0.20 m thick pit dividing walls under the floor that essentially separated the entire pit into three pits. Four 0.3 m x 1.22 m equalizing holes at the bottom of the walls allowed manure to flow between them. Manure was stored in the 24.7 m x 3.1 m deep pit for about six months. When hauling manure out of the gestation barns, the producer agitated the pits after opening the 56 cm wide curtains on each sidewall. The farrowing barn had a combination iron/plastic/concrete floor with a 0.6 m shallow pit divided into two cells for short-term manure storage. Stored manure in the farrowing barn was transferred once every 21-24 days into the easternmost deep pit of the nearest gestation barn. Manure on the walkways was scraped or swept into the pit five times per week.

Table 1. Fan numbers and ventilation stages for gestation barns 1 and 2.

Stage	Quantity	ID of fans
1	10	1,3,5,6,8,10 at 85%, and 2,4,9 at 100%
2	10	1,3,5,6,8,10 at 100%, and 2,4,9 at 100%
3	10+1=11	1,3,5,6,8,10,2,4,9,**16**
4	11+1=12	1,3,5,6,8,10,2,4,9,16,**15**
5	12+1=13	1,3,5,6,8,10,2,4,9,16,15,**17**
6	13+1=14	1,3,5,6,8,10,2,4,9,16,15,17,**14**
7	14+1=15	1,3,5,6,8,10,2,4,9,16,15,17,14,**18**
8	15+2=17	1,3,5,6,8,10,2,4,9,16,15,17,14,18,**13,19**
9	17+2=19	1,3,5,6,8,10,2,4,9,16,15,17,14,18,13,19,**12,20**
10	19+2=21	1,3,5,6,8,10,2,4,9,16,15,17,14,18,13,19,12,20,**11,21**

Note – Fan 7 is omitted from this numbering, as it was removed.

Table 2. Fan numbers and ventilation stages for each room of the farrowing barn.

Stage	Quantity	ID of fans
1	1	2 at 85%
1	1	2 at 100%
2	1+1=2	1 and 2
3	2+1=3	1, 2, and 3

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Figure 2. Fan number (outside barn) and fan stage (inside barn) of B1 and Far9.

2.3. Significant Events and Modifications

Lightning damaged several sensors on 9/7/07 and suspected damage on numerous other dates.

Pit liquid level reached capacity and closed off pit ventilation for several days on 10/25/07 and again on 4/10/08.

Ice froze wind speed indicator on 12/12/07.

Snow blocked the static pressure sensor on 2/22/08.

Numerous ventilation fan failures were noted during the monitoring period.

A majority of fan speed sensors were replaced with current switches on 6/30/08 because they failed during a powerful storm. Voltage fluctuations at the farm location (end of power line) was also a continuous challenge to maintain all sensors operational.

The farrowing room was power washed every three weeks, between cycles. The instrumentation in the room, including the particulate matter monitor, were covered during the cleaning activities.

3. MONITORING AND SAMPLING METHODS

3.1. General Approach

Equipment installation and preliminary testing took place between 5/7/07 and 7/18/07. The site setup and equipment installation followed the approved Site Monitoring Plan (SMP) for the IA4B site. The NAEMS Quality Assurance Project Plan (QAPP) and instrument or method-specific Standard Operating Procedures (SOPs) also provided guidance.

The monitoring period began on 7/19/07 and concluded on 9/4/09. Target pollutants for this site were NH_3, H_2S, PM (PM_{10}, TSP, and $PM_{2.5}$), and VOCs. Appendix A lists the target pollutants, and all measured supporting variables and metadata monitored at the site. The monitoring schemes for the two gestation barns (B1 and B2) and farrowing barn are shown in Figure 3.

Farrowing room 9 (Far9) was considered representative of the other rooms in the farrowing barn. Table 5 lists the major equipment.

Table 3. Major instrumentation.

Analyzer/instrument	Serial number
INNOVA 1412 Multi-gas analyzer	710-200
TEI 450i H_2S analyzer	709220674
Environics 4040 dilutor	3911
TEOM 1	261160603
TEOM 2	263520608
TEOM 3	263850609
TEI FH 62C14 (Beta Gauge)	E-1283

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Figure 3. Overhead view of sensor and air sampling locations at site.

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Figure 4. Endwall view of sensor and air sampling locations.

3.2. Instrument Shelter

The on-farm instrument shelter (OFIS) was located just east of the farrowing barn near room 9 (

Figure **4**). Sampling tubes and cables extended from this OFIS to B1, B2 and Far9. A heated raceway was set up from the OFIS to the farrowing hallway. From the entry point, the sampling tubes were run to the two gestation barns and Far9. The outside raceway to the OFIS and the sampling tubing in the hallway and in areas vulnerable to cold temperatures were heated to avoid condensation inside the tubing.

The OFIS was supplied with 120/240 VAC (50 A) electric power by the farm. A copper ground rod was installed at the location of the OFIS, and connected to the OFIS ground. The HVAC system of the OFIS maintained inside temperatures within the operating range for the analyzers, and created a positive pressure with a filtered outside air intake to minimize entry of unfiltered outside air. The temperature and differential static pressure in the OFIS were monitored with a thermocouple near the HVAC system and a pressure sensor.

One set of gas analyzers (Table 5) in the OFIS measured gas concentrations as the gas sampling system (GSS) sequenced through all the gas sampling locations (GSLs). Vacuum pumps and controllers for the PM monitors were located in the OFIS. A personal computer collected all site monitoring data using a data acquisition and control program AirDAC.

3.3. Data Acquisition and Control System

The data acquisition and control system consisted of a personal computer, custom software (AirDAC) written in a commercial programming language (LabVIEW, National Instruments, Austin, TX), distributed I/O hardware (National Instruments FieldPoint modules), and Universal Serial Bus (USB) devices by National Instrument (NI) and Measurement Computing (MC, Norton, MA). The NI FieldPoint (FP) modules and MC USB devices (Table 1) were selected and configured to acquire data for all the on-line measurement variables (Appendix A).

The 16-channel NI FP-DO-401 digital output module was used to control: 1) sequential switching of multiple gas sampling lines, 2) the raceway heating system, and 3) gas sampling system cooling fan. Serial communication (RS232) was used to acquire data from the multi-gas monitor and calibration variables (calibration time, gas concentration, etc.) from the gas dilutor. Voltage or current analog signals from various analyzers and sensors were connected to FP-AI-112 modules. Type T thermocouples were connected to FP-TC-120 modules. Digital signals from current switches were connected to the MC USB DIO96H device. Voltage pulses from proximity sensors used to measure fan speed were detected by the MC USB 4303 Counter.

Table 4. Data acquisition hardware configuration.

Manufacturer and model	I/O type	# units	# channels/unit	Notes
NI FP-AI-112	Analog input	3	16	Single-ended, 16-bit
NI FP-TC-120	Thermocouple	4	8	
NI FP-DO-401	Digital output	1	16	2 A at 10-30 VDC
MC USB 4303 counter	Count input	5	10	

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MC USB DIO 96H	Digital input	1	96	

AirDAC averaged the signals (after conversion to engineering units) over 15-s and 60-s intervals and recorded the means into two separate computer files. All real-time data were displayed in tabular and graphic forms for on-site or remote (pcAnywhere, Symantec, Mountain View, CA) viewing (Ni et al., 2009; Ni and Heber, 2010). Measurement alarms, data collection notifications, data files, graphs and statistics of the daily data sets, and modified configuration and field note files were automatically emailed to several recipients after midnight.

3.4. Monitoring and Recording Farm and Building Operations

3.4.1. Animal Husbandry and Building Systems

Infrared motion sensors (activity sensors) were situated to monitor movement of animals and workers in the barns, and researcher presence in the OFIS.

The producer provided monthly farm records of the inventory in each gestation barn and farrowing room 9, average animal mass, mortalities and special events like generator tests. Inventory counts by the site personnel were also after November 2008.

3.4.2. Environmental

Weather data was collected using a solar radiation shielded capacitance-type relative humidity and temperature probe (RH/T) (Model RHT-WM, Novus Automation, Porto Alegre, Brazil), a pyranometer (Model LI-200SL, LI-COR, Lincoln, NE) and a cup anemometer (Wind Sentry, RM Young, Traverse City, MI), which were mounted on the ridge of the farrowing barn roof.

For the building environment conditions, RH/T probes were located at the inlet to Fan 16 in B1, Fan 15 in Barn 2, and Fan 1 in FAR9, which were considered the primary representative exhaust fans (PREFs) for the respective barns. Type T thermocouples (TCs) measured temperatures at four positions along the length of each gestation barn, at the center of the farrowing room, at each gas sampling point that did not have an RH/T probe, and in the OFIS itself. . Thermocouples were also placed inside each heated raceway, at the center and return registers of the AC system, and in the PM pump enclosure.

3.4.3. Building Airflow

Fan rotational speed was monitored using a magnetic Hall-effect sensors (speed sensor) installed on each fan. The speed sensors were mounted to detect the rotational speed in revolutions per minute (rpm) of either the fan shaft or the fan pulley. The digital signal from the speed sensor was converted into a frequency measurement with a counter module in the data acquisition system.

Over 35 fan speed sensors were damaged in a thunderstorm on 6/8/08. Because of their sensitivity to voltage fluctuations at the site and this recent electrical storms at this site, the fan speed sensors on the wall fans in the gestation barns were replaced with current switches on (CR9380-NPN, CR Magnetics, St. Louis, MO) 7/1/08. The current switches provided

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measurements of fan operation, in conjunction with digital inputs to the data acquisition system, for stages 2 through 6 (Table 3). Over the second year of monitoring, fan speed sensors were replaced on the gestation barn pit fans and farrowing room fans in the event of fan speed sensor failure. All fans in the gestation barns operated at 100% speed.

Static pressure was measured across the north, east and south walls of each gestation barn, and the west wall of the farrowing room with differential static pressure sensors (Model 260, Setra Systems, Boxborough, MA). Static pressure in the OFIS was measured with the same type of sensor, to ensure that positive pressure was maintained.

Impeller anemometers were placed downstream of Fan 16 in B1 and Fan 15 in B2, and Fan 1 in Far9. Fan 6 and Fan 9 in B2were also equipped with an impeller anemometer downstream. The impeller anemometers provided a back-up indication of fan operation, and at least one of each fan model-type was monitored and considered representative for other operating fans of the same type.

In-situ airflow measurements were conducted with a 123-cm field-porTable Ean tester (Fan Assessment Numeration System or FANS, University of Kentucky, Lexington, KY), which was described by Gates et al. (2004), for the wall fans in B1; however, the measurement unit did not fit inside B2 to access upstream measurements for the B2 wall fans, and the unit did not seal properly downstream of the remaining fans because of the fan shrouds. The traverse method was adopted for all *in-situ* airflow measurements in B2, in Far9, and for the pit fans in B1.

The wall fans in the gestation and farrowing barns were divided into 16 equal cross-sectional squares, and the pit fans were divided into three concentric circles (10 measurements per fan). Air velocity was measured at the center of each section. The B1 and B2 pit fan measurements were collected inside the shrouds, upstream of the fan. The wall fan measurements were collected 2.5 cm upstream of the fans. The fan airflow capacity was determined by multiplying the mean traverse velocity by the cross-sectional area of the measured airflow. For all wall fans, the FANs-unit and traverse method measurements were compared, and the FANs-unit measurements used in the development of the airflow model.

In-field airflow measurements were collected during three periods at one or more differential pressures. The field data was used to develop equations that would calculate airflow as a function of differential pressure and fan rotational speed, and to assess uncertainty in airflow predictions.

The airflow curves of the 122-cm gestation wall fans (Airstream Model MM4810), 61-cm gestation pit fans (GSI Model GP2433SW), 61-cm farrowing wall fans (Model GPMA2433), 46-cm gestation pit fans (GSI Model GP1833SW), and 25-cm farrowing pit fans (GSI Model DF-10) were obtained from the Bioenvironmental and Structural Systems (BESS) Lab at the University of Illinois at Urbana-Champaign (BESS, 1994a-d). Each performance record consisted of airflow (Q1) measured at several static pressures (P1), and at a relatively constant speed (N1 = 565 and 1128 rpm for the 122 and 61 cm wall fans, and 1059, 1733, and 3293 rpm for the 61-, 46-, and 25-cm pit fans, respectively.

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For each fan type, the BESS fan curve was adjusted to the mean speed (N2) of the fan tests (Table 5). Most of the 61-cm and 46-cm pit fans had mean speeds of 1059 rpm and 1733 rpm, respectively. There was one 61-cm and one 46-cm pit fan that operated at 1725 and 1188 rpm, respectively.

The new, speed-indexed baseline curves were derived using the first ($Q_2 = Q_1(N_2/N_1)$) and second ($\Delta P_2 = \Delta P_1(N_2/N_1)^{0.5}$) fan laws, where Q_2 is the speed-adjusted BESS fan curve at speed N_2. The speed-corrected airflow prediction model is $Q_4 = (a\Delta P_4 + b)\cdot(N_4/N_2)\cdot Q_2$, where ΔP_4 and N_4 are measured fan static pressure and speed. For a given test using the portable tester, the model is $Q_4 = (a\cdot\Delta P_3 + b)\cdot(N_3/N_2)\cdot Q_2$, where ΔP_3 and N_3 are the measured fan static pressure and speed during the fan test, and the fan degradation factor $k = a\cdot\Delta P_3 + b$. The values for the coefficients a and b were those which minimized the sum of square differences between Q_4 and Q_3 for all the valid fan tests within a speed regime. Resulting fan models are shown in Table 5.

Table 5. Fan airflow models.

Fan type	Reference speed (N_2)	Polynomial coef. of $Q_2=f(\Delta P_2)$ at speed N_2				Coefficients of k	
		a3	a2	a1	a0	b1	b0
122W	555	6.41E-05	3.50E-03	1.11E-01	1.06E+01	4.44E-03	7.66E-01
61P	1074	1.63E-05	5.53E-04	6.11E-02	1.12E+01		0.427
61P	1725	3.46E-06	1.06E-04	1.23E-02	2.59	-0.003	0.662
61W	1106	3.22E-06	1.66E-04	1.77E-02	3.49	2.40E-03	6.59E-01
46P	1697	4.01E-08	-4.46E-05	4.18E-03	1.57	0.006	0.760
46P	1188	2.39E-07	-1.30E-04	5.97E-03	1.10		0.722
25P	3354	3.93E-07	6.93E-06	6.05E-03	1.99	0.392	-0.002

Gestation barn fans were assigned to a sampling stream based on their proximity to the four sampling locations in each barn. The airflow for each stream was calculated by summing the individual airflows for all fans in the stream. In Far9, the individual airflows through the two wall fans constituted one stream, and were summed together with the pit fan for the total airflow through Far9.

3.4.4. Biomaterials Sampling Methods and Schedule

All analyses of biomaterials were performed by an independent laboratory (Midwest Laboratories, Omaha, NE).

Water characteristics were evaluated based on analyses of two water samples taken on 12/18/08 and 1/2/09 Table E4.

Feed samples were collected on 12/14/07 and 12/18/08. The feed samples were analyzed for total nitrogen, dry matter, and the 12/18/08 for sulfur Table E1.

Manure samples from the liquid surface were taken six times in 2008 and once four times in 2009 on 3/12/09, 4/11/09, 7/02/09 and 9/04/09 Table E2. Table E2.

Manure loadout samples were taken on 12/10/07, 4/8/08, 10/5/08, 4/16/09 and 4/22/09 Table E3.

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3.5. Particulate Matter Monitoring

Real-time PM monitors (TEOM Model 1400a, Thermo Fisher Scientific, Waltham, MA) continuously sampled exhaust PM. A TEOM was placed upstream of Fan 16 in B1, Fan 15 in B2, and Fan 1 in Far9. These fans were considered the primary representative exhaust fan (PREF) for the respective barns.

A beta attenuation PM monitor (Beta Gauge Model FH62C-14, Thermo Fisher Scientific, Franklin, MA) continuously measured inlet PM concentration. The Beta Gauge was located in the OFIS, with the inlet extending 1.8-m through and above the roof of the OFIS. The sampling location of this inlet PM monitor was very close to the ventilation inlet air that flowed into the farrowing barn.

Table 6. Sampling schedule for PM_{10}, TSP and $PM_{2.5}$.

Date, m/d/y		Test duration, d		
Start	**End**	**PM10**	**TSP**	**PM2.5**
9/28/07	1/17/08	111.6		
1/17/08	2/7/08			21.1
2/7/08	4/10/08	62.9		
4/10/08	4/24/08		13.9	
4/24/08	6/12/08	49.1		
6/12/08	6/18/08		6.0	
6/18/08	7/10/08	22.0		
7/10/08	7/23/08			12.9
7/23/08	9/12/08	50.9		
9/12/08	9/18/08		6.0	
9/18/08	11/13/08	56.0		
11/13/08	11/21/08		8.0	
11/21/08	1/29/09	68.0		
1/29/09	2/12/09			13.0
2/12/09	2/19/09		7.4	
2/19/09	4/16/09	57.0		
4/16/09	4/23/09		6.9	
4/23/09	6/18/09	56.1		
6/18/09	6/25/09		7.1	
6/25/09	7/16/09	20.8		
7/16/09	7/30/09			14.2
7/30/09	9/30/09	62.3		
Totals		617	55	61

At any one time, the sampled PM size class was either PM_{10}, $PM_{2.5}$ or TSP at all three TEOMs and the Beta Gauge. The $PM_{2.5}$ size class was measured in December, 2007 for 21 d, and August, for 14 d (Table 6). The TSP inlet heads were placed on the TEOMs for six, 7-11 d periods. The PM_{10} concentration was measured at all other times.

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3.6. Continuous Gas Sampling and Monitoring

Air samples for continuous gas measurements were collected from multiple gas sampling probes with a custom-designed GSS. Each probe was connected to the GSS with Teflon tubing. Tubular raceways between the OFIS and the farrowing barn, and through the farrowing barn hallway to the gestation barn, protected the sampling lines and data signal cables. The sampling lines were wrapped with insulation and heated inside the raceway and at other locations vulnerable to cold air to prevent condensation inside the tubes.

Exhaust gas concentrations were sampled at the inlet of the stage-two-controlled wall fan, and from three sets of composited pit fan gas sampling location groups (GSLGs), each of which consisted of two stage-one fans. The stage-one pit fan and stage-two wall fan were each sampled in the farrowing room. Sampling probes were located about 0.5 m directly in front of the fan at the same height as the fan hub. One inlet gas concentration was sampled at the inlet on the east side of the farrowing barn, about midpoint along the length of the barn.

One set of gas analyzers in the OFIS was used to sequence through all the GSLs. Hydrogen sulfide was measured with a fluorescence H_2S analyzer (Model 450i, Thermo Fisher Scientific, Waltham, MA). Concentrations of NH_3 and CO_2 were measured with a photoacoustic infrared multi-gas monitor (INNOVA Model 1412, LumaSense Technologies, Ballerup, Denmark).

Each exhaust location was sampled individually for 10 min. The inlet location was monitored at least twice daily, originally with a 10-min sampling period. In January 2008, the inlet sampling period was increased to 30 min.

Table 7. Analyte sampling locations.

Analyte	Barn/Room	Sampling Location*	Qty
NH_3 H_2S	B1, B2	GSL-A: W pit fans on N and S walls	2
	B1, B2	GSL-B: Central pit fans on N & S walls	2
	B1, B2	GSL-C: E pit fan on S wall, and pit fan on NE corner (B2)/E pit fan on N wall, and pit fan on SE corner (B2)	2
	B1, B2	GSL-D: Center exhaust wall fan	2
	Far9	GSL-E: E wall fan	1
	Far9	GSL-F: Pit fan	1
	B1,B2,Far9	Inlet: 3 m outside air inlet on E wall of the farrowing barn, at center height of inlet, adjacent to the OFIS.	1
$PM_{2.5}$ PM_{10} TSP)	B1	PREF: exhaust fan #5 from the N	1
	B2	PREF: exhaust fan #6 from the N	1
	Far9	PREF: wall fan (stage 2) on W wall of room 9	1
	B1,B2,Far9	Inlet: 1.8 m above the roof of the OFIS	1
VOC	B1	PREF: exhaust fan #5 from the N	1
	B2	PREF: exhaust fan #6 from the N	1
	Far9	PREF: wall fan (stage 2) on W wall of room 9	1

*Gas sampling probes were located at fan hub height, suspended from the ceiling.

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3.7. VOC Sampling and Analysis

Grab samples of VOC were collected at the PREFs (Table 7), using methodology based on methods TO-15 and TO-16. Sampling was conducted with 6-L stainless-steel canisters (TO-Can, Restek Corp, Bellefonte, PA), equipped with ¼″ bellows valves (Swagelok SS4H) and 207-kPa vacuum gauges. Sampling trains contained flow controllers (Veriflo Model 423XL, Parker-Hannifin Corp., Richmond, CA) with 2- to 4-sccm critical orifices and 7-µm in-line stainless steel filters. Flow controllers were pre-set to a constant flow rate of 3.4 mL/min. Canister sampling was conducted for 24 h, and canister pressures were recorded at the beginning and end of the sampling periods for the calculation of total sample volumes. Sampling was conducted five times between 2/19/09 and 8/12/09, with duplicate samples collected at each location. All canisters were cleaned and passed QC before sample collection.

Canister samples were analyzed at Purdue University's Trace Contaminant Laboratory. The canisters were pressurized to +207 kPa with ultrapure N2, and transferred to TDS tubes (Carbotrap 300, Supelco, Bellefonte, PA). The pressurized canisters initially yielded sample flows of 50 mL min^{-1} during sample transfer to tubes. Canister heating was introduced when a canister pressure decreased to 13.8 kPa to ensure maximal transfer of nonvolatile components.

Samples were analyzed on a thermodesorption-gas chromatograph-mass spectrometer (TDS-GC-MS), consisting of a gas chromatograph (Model 6890, Agilent Technologies, Palo Alto, CA) coupled with a Model 5795 mass spectrometer detector (Agilent Model 5795) and equipped with a thermal desorption system (Model TDS-G, Gerstel, Baltimore, MD) and a cooled injection system (Gerstel CIS). The GC-MS passed a leak check prior to analyzing each set of samples. Compounds were separated on a 60 m x 0.25 mm x 1µm column. The detector utilized the full scan mode covering masses from 27-270 Daltons in 8 scans/s. The MS quad hold temperature was 150ºC, and the MS source hold temperature was 230ºC. The analytical results were analyzed by ChemStation, and all integrations were manually checked. This method used an external standard compound for instrument monitoring and QA to avoid losses of low-molecular-weight analytes that would occur when purging solvent used with internal standard(s). All TDS tubes were cleaned with a tube conditioning system (Gerstel TC-2 TDS) for 3.5 h at 350ºC prior to each use.

Response curves were generated at both the beginning and the end of the VOC analysis period. The response curves of all chemical standards reach good linearity as 55% of the response curves had $R^2 > 99\%$ and over 98% had $R^2 > 95\%$. Toluene was used as an external standard that was analyzed during each batch of samples to assure quality. The relative bias and standard deviation of 97 toluene checks were -4.3% and 18.8%, respectively. The uncertainty of the mean of duplicate field samples was calculated as 27%, based on the toluene checks.

3.8. Documentation of Quality Assurance

3.8.1. Oversight, Maintenance, and Calibration

Iowa State University personnel visited the site at least weekly. A total of 128 and 130 visits were made to the site during years 1 and 2 of the monitoring period. The average number of

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persons visiting was 2.6 during year 1 and 2.0 during year 2. Remote checks of the system were conducted each work day by the site personnel.

The Science Advisor audited the site on 8/30/07. The Environmental Protection Agency (EPA) conducted site audits on 8/7/08 and 7/14/09.

Various site maintenance and calibration activities were conducted by site personnel (Appendix A). Specific quality assurance tests of the GSS, gas analyzers and other sensors are discussed below.

3.8.2. Gas Sampling System

Two types of GSS leak tests were conducted. The first test examined GSS integrity, by briefly creating a "dead head" against the pump by closing all solenoid valves, while measuring exhaust airflow with a portable rotameter, and recording the leakage flow with the GSS mass flow meter. The second test consisted of monitoring GSS flow and pressure after manually setting AirDAC to sample from a particular GSL and plugging the GSL's gas sampling probe. Preliminary tests indicated that GSS flow under dead-head conditions that were 10% or less (<0.4 L/min) of the normal GSS flow rate of 4.0 L/min was indicative of leak-free operation under normal GSS manifold vacuums of -3,000 to -10,000 Pa. Leak tests of the GSS were conducted at least quarterly. Systematic checking of individual sampling lines was conducted on 8/25/07 12/27/07, 11/26/08 and 5/19/09. Data was only invalidated when leaks occurred away from the sampling location. If gas sampling probe filter maintenance eliminated a leak, no data was invalidated since leakage air would be the same as sampled air.

3.8.3. Gas Analyzers

Gas measurements were evaluated using multipoint calibrations and zero and span checks (Appendix B). The gas concentration data output by the analyzers was adjusted to correct for bias introduced by the gas sampling and measurement system.

3.8.3.1. Correction of Ammonia Concentrations

A multipoint calibration (MPC) was conducted through the challenge line 10 times using purified air (Cat. # AIO.OCE-T, CEM zero-grade, Praxair, Indianapolis, IN) and three span concentrations ranging from 9 to 50 ppm NH_3. Each MPC was conducted with replication (Table 5). The NH_3 was delivered using a 6-port gas dilutor (Model 4040, Environics, Tolland, CT). The R^2 values of each MPC exceeded 0.99, indicating linearity of instrument response to standard gas between 0 and 50 ppm.

The average response of the analyzer to the zero and span gas applications was assessed, and the results were combined based on changes to the instrument or GSS to create linear correction model (Table 9). The model was used to correct instrument readout data. The measurement accuracy was assessed based on model-corrected zero and span checks (Table 9).

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Table 8. Multipoint calibration record and results for the NH_3 measurements.

Date	# points	Span concentration, ppm		R^2
		Minimum	Maximum	
08/23/07	4	9	27	0.997
10/18/09	4	17	50	0.998
10/25/07	4	17	50	0.999
05/03/08	4	17	40	0.999
06/05/08	4	17	40	0.999
11/16/08	4	17	40	0.999
01/19/09	4	17	40	0.998
02/26/09	4	17	40	0.996
04/30/09	4	10	30	0.997
06/25/09	4	10	30	0.988
08/06/09	4	10	30	0.996
09/01/09	4	10	30	0.997

Table 9. Concentration correction and measurement accuracy for ammonia.

Start/end dates	# of checks		Linear model	Accuracy, % of span			
				Bias		Precision	
	Zero	Span		z	s	z	s
7/15/07-8/6/09	72	77	y = 1.061(x - 0.28)	0.0	-0.1	0.6	3.7
8/6/09-9/6/09	5	5	y = 1.193(x – 0.83)	-0.4	-2.3	2.2	4,7

3.8.3.2. Correction of Hydrogen Sulfide Concentrations

A MPC was conducted through the challenge line nine times using purified air (Cat. # AIO.OCE-T, Praxair CEM zero air) and three span concentrations (Cat. # NI-HSR1E-AS, Praxair EPA Protocol Standard). Each MPC was conducted with replication (Table 7). The H_2S was delivered using a 6-port dilutor (Model 040, Environics, Tolland, CT). The R^2 values of each MPC exceeded 0.998, indicating excellent linearity of instrument response to standard gas between 0 and 9,946 ppb.

Table 10. Multipoint calibration record and results for the H_2S measurements.

Date	# points	Span concentration, ppb		R^2
		Minimum	Maximum	
08/24/07	4	740	2,229	0.998
10/18/07	4	1,200	4,604	0.999
12/12/07	4	996	9,946	0.999
02/07/08	4	2,985	8,951	0.999
05/03/08	4	2,981	8,945	1.00
10/31/08	4	2,980	8,944	0.999
01/19/09	4	3,000	9,000	0.999
03/05/09	4	3,000	9,000	0.999
06/05/09	4	3,000	9,000	1.00
08/30/09	4	3,000	9,000	0.998

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The average response of the analyzer to the zero and span gas applications was assessed, and the results were combined based on changes to the instrument or GSS to create linear correction models (Table 11). The models were used to correct instrument readout data. The measurement accuracy was assessed based on model-corrected zero and span checks (Table 11).

Table 11. Concentration correction and measurement accuracy for H_2S.

Start/end dates	# of checks		Linear model	Measurement accuracy relative to span, %			
				Bias		Precision	
	Zero	Span		z	s	z	s
7/16/07-12/16/07	8	8	y = 0.961 (x – 9.248)	-0.1	-0.1	0.2	5.2
12/16/07-2/2/08	7	7	y = 0.798(x - 35.335)	0.0	0.0	0.1	0.4
2/2/08-10/31/08	35	35	y = 0.912(x – 37.682)	0.0	0.0	0.2	1.5
10/31/08-3/5/09	12	12	y = 828(x – 23.417)	0.0	0.0	0.0	1.3
3/5/09-9/6/09	24	24	y = 0.968(x – 36.34)	0.0	0.0	0.2	5.8

3.8.3.3. Noise Tests

Analyzer noise tests were conducted to assess the minimum detection limit (MDL) of the gas measurements on 6/11/09. The analyzers measured CEM zero air (Praxair Cat. # AIO.OCE-T CEM) continuously for 60 min. The MDL was calculated as the t-statistic times the standard deviation of the data collected during the equilibrated period (Table 9).

Table 12. Noise test of gas analyzers with humidified air on 6/11/09.

Gas	Statistical variable				Duration, min	T_{dew}, °C
	Min	Max	SD	MDL		
NH_3, ppm	0.16	0.62	0.11	0.3	20	23.2
H_2S, ppb	37.0	38.7	0.5	1.2	20	22.1

3.8.4. Particulate Matter Monitors

The quality of the exhaust PM data was assessed through periodic mass verifications and flow and leak checks of the TEOMs (Tables 13, 14 and 15). The B1, B2, and Far9 TEOMs met or exceeded the mass verification criteria (Ko actual within ±2.5% of Ko audit).

The criteria for total and main flows were 16.67±1.0 and 3.0±0.2 L/min, respectively, and were met on all dates except 5/9/08 in B1.

Leakage criteria were total flow ≤ 0.62 L/min and main flow ≤ 0.15 L/min, respectively. All leak and flow tests of all TEOMs were acceptable on all dates, except for main flow leakage rates on 1/2/09 and 5/25/09 for one or more of the TEOMs.

Mass verifications and flow calibrations of the ambient PM monitor were conducted periodically (Table 13). The mass verification criteria of <5% and total flow check criteria of <4% were met on all dates.

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The TEOM measurements were also evaluated based on collocated measurements of the B1 and B2 TEOMs in March 2008 and the B1 and a spare TEOM in September 2009, under barn conditions with concentrations between 100 and 600 μg m^{-3}. The differences in average PM_{10} concentrations over the collocation periods were -7 to 4%.

Table 13. Quality assurance tests of Barn 1 TEOM.

Date	Time since last test, d	Mass error, %	Audit flows, $L \cdot min^{-1}$		Leak test flows, $L \cdot min^{-1}$	
			Main	Total	Main	Aux.
7/18/07	0		3.1	17.47	0.07	0.21
8/17/08	30	1.73				
10/5/07	49	1.18	3.19	16.3	0.06	0.2
1/4/08	91	0.85	3.09	17.33	0.07	0.21
3/18/08	74	1.53	3.11	17.04	0.13	0.19
4/19/08	32	0.85	3.09	17.33	0.07	0.21
5/9/08	20		3.09	17.8	0.01	0.16
6/13/08	35		3.04	16.54	0.14	0.05
8/29/08	77	1.53				
9/26/08	28		3.005	16.91	0.11	0.14
10/3/08	7		3.005	16.8	0.15	0.16
11/21/08	49	1.03				
1/2/09	42		2.98	16.9	0.21	0.29
2/12/09	41	1.4				
2/26/09	14		2.97	16.55	0.14	0.29
4/9/09	42		2.98	16.62	0.15	0.29
4/16/09	7	2.19				
5/25/09	39		2.89	16.79	0.18	0.25

3.9. Data Analysis

3.9.1. Software

All emission data processing was conducted using custom software (CAPECAB, Fibre Recovery Systems, Inc., Calgary, AB). Data was carefully inspected and validated. If a datum was invalid for a known reason, the datum was marked (flagged) invalid and all calculations dependent on that datum were also invalid unless a substitution datum was identified. All periods of invalid data that were longer than one day are listed in Appendix C.

If the QA/QC checks described above indicated a measurement bias, the data was corrected prior to calculating emissions. The CAPECAB program provided a robust method to inspect data, invalidate if necessary, and implement various corrections over specified time periods.

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Table 14. Quality assurance tests of Barn 2 TEOM.

Date	Time since last test, d	Mass error, %	Audit flow, L/min		Leak test flow, L/min	
			Main	Total	Main	Aux.
7/18/2007	0		3.1	17.2	0.12	0.17
8/22/2007	35	1.64				
10/5/2007	44	0.02	3.21	17	0.04	0.08
1/4/2008	91	0.85	3.12	16.66	0.06	0.02
2/28/2008	55	1.98	2.95	17.02	0.09	0.21
4/19/2008	51	0.85	3.12	16.66	0.06	0.04
6/13/2008	55		3.05	16.7	0.12	0.31
8/29/2008	77	1.74				
10/3/2008	35		3.1	16.78	0.12	0.42
11/21/2008	49	2.31				
1/2/2009	42		3.09	16.85	0.29	0.3
2/12/2009	41	1.93				
2/26/2009	14		3.04	16.74	0.11	0.29
4/9/2009	42		2.97	16.48	0.14	0.24
4/16/2009	7	1.08				
5/25/2009	8		2.97	16.56	0.16	0.23

3.9.2. Data Substitution, Validation, Correction and Uncertainty

3.9.2.1. Pressure

The static pressure sensor measurements were adjusted based on both multipoint calibrations performed on 8/30/07 (except for the Far9 sensor) and 1/22/09, and time-weighted average zero offsets during the interim periods.

The average static pressures for each building were determined using data from all properly-operating sensors among the north, east, and south ΔP sensors.

3.9.2.2. Environmental Sensors

The average exhaust temperature for each gestation barn was the mean of the RH/T probe temperature measurement and the thermocouple measurements at the GSLG pit fans. In Far9, the RH/T probe temperature measurement is reported.

The solar sensor was one of the instruments damaged during the thunderstorm on 6/8/08. The sensor was offline for repairs between 6/8/08 and 9/19/08. The solar sensor signal was collocated with a reference solar sensor 7/28/09. The collocated reference sensor confirmed the linear output by the solar sensor. Ground noise influenced the offset of the sensor, thus the solar sensor signal was corrected using variable offsets required to correct for non-zero readings during nighttime hours.

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3.9.2.3. Fan Operation

Low-level noise was filtered out by setting operational status to "off" (0%) if the average speed was less than 55 rpm for gestation barn fans, and less than 25% of full speed for farrowing room fans. High-level noise was also filtered out by setting the operational status to 100% if the fan speed exceeded the maximum operating speed (as determined by a fan speed frequency analysis).

Between 10/18/07 and 12/1/07 in B1, and3/21/08 and 4/2/08 in B2 the manure level in the respective gestation barns cut off the air supply from the barn. As these pit fans were no longer acting as true exhaust points, zero airflow values were assigned to these fans during these periods.

3.9.2.4. Gas Concentrations

Table 17 describes the time specified in the data processing software for gas concentration measurements to stabilize based on gas and sampling location, and the maximum interval for interpolating between two valid concentration measurements for a sampling location.

Table 15. Quality assurance tests of Far9 TEOM.

Date	Time since last test, d	Mass error, %	Audit flow, L·min^{-1}		Leak test flow, L·min^{-1}	
			Main	Total	Main	Aux.
7/18/2007	0		3.1	17.5		
8/7/2007	20	2.47				
10/4/2007	58	2.3	3.16	16.91	0.07	0.3
1/4/2008	92	2.1	3.06	16.43	0.1	0.07
2/21/2008	48	0.23	3.03	16.42	0.1	0.22
4/19/2008	58	2.10	3.06	16.43	0.1	0.07
6/6/2008	48	1.6	3.09	17.8	0.2	0.57
6/13/2008	7		3.02	16.922	0.14	0.16
8/29/2008	77	0.17				
10/3/2008	35		2.95	16.95	0.13	0.46
11/21/2008	49	0.1				
1/2/2009	42		3.08	16.75	0.26	0.49
2/12/2009	41	0.94				
2/26/2009	14		3.065	16.7	0.14	0.06
4/9/2009	42		2.92	16.41	0.18	0.32
4/16/2009	8	0.91				
5/25/2009	39		3	17	0.42	0.42

Gas and water vapor concentrations, and sample relative humidity, temperature, pressure, flow rate, and flow direction were invalidated during all gas analyzer MPCs and Z/S checks.
Gas concentration data at pit fan sampling locations were invalidated between 10/18/07 and 12/1/07 in B1, and3/21/08 and 4/2/08 in B2 because the manure level cut off the air supply from the barn; thus, these GSLGs were no longer representative exhaust measurements. Gas concentration data was also invalidated between 4/26/08 and 5/14/08 because of a low sampling

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flowrate and high analyte concentrations detected during Z/S checks, and subsequent repair of the gas sampling system pump. The INNOVA was offline between 6/30/09 and 8/6/09 for recalibration by the manufacturer.

Table 16. Ambient PM monitoring quality assurance parameters.

Date	Time since last test, d	Mass verification, %	Total flow check, %
7/26/07	0	0.73	
9/27/07	63		0.9
12/18/07	82	0.93	
5/3/08	137		0.3
8/12/08	101	-1	0.2
5/18/09	279	0.13	1.70

Table 17. Gas concentration data validation and interpolation requirements.

Gas	Equilibration period, min		Maximum interpolation interval, min	
	Inlet	Exhaust	Inlet	Exhaust
NH_3	10	7	3000	300
H_2S	10	5	3000	300

Standard gas concentrations were calculated on dry and moist bases with Eqns. 3-1 and 3-2, respectively.

$$C'' = \frac{C'}{(1-W)} \tag{3-1}$$

and

$$C' = \frac{P' \cdot c \cdot M}{R \cdot (273 + T')} \tag{3-2}$$

where:

- C'' Dry standard mass concentration, dry basis (mg $d^{-1}sm^3$ or µg $d^{-1}sm^3$)
- C' Standard mass concentration, moist-air basis (mg sm^{-3} or µg sm^{-3})
- P' Standard pressure (1 atm)
- T' Standard temperature (20°C)
- c Volumetric concentration of gas (ppm or ppb)
- M Molecular weight of gas (g mol^{-1})
- R Universal Gas Constant (0.08206 L atm mol^{-1} $°K^{-1}$)
- W Humidity ratio

3.9.2.5. PM Concentrations

Prior to 2/21/08, the TEOM flow rates were erroneously internally adjusted to 16.7 L min^{-1} based on conditions of 25ºC and 1 atm). The actual flow under measured temperature and pressure conditions was calculated, and the PM data invalidated if the flow fell outside the required 15.7

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to 17.7 L min^{-1} range. The TEOM settings were changed on 2/21/08 to adjust the flow to 16.7 L min^{-1} based on actual rather than standard air density.

The TEOMs were configured to output the PM concentration data at 25ºC and atmospheric pressure until 2/21/08, at which time they were reconfigured to output the PM data at standard conditions (20ºC, 1 atm). All PM concentration data prior to 2/21/08 was corrected to standard conditions.

Dry standard PM concentrations were obtained by dividing standard concentrations by one minus the air humidity ratio.

Flow errors, faulty temperature sensors, and battery problems resulted in periods of invalid TEOM data. Invalid periods longer than one day are included in Appendix D.

3.9.3. Emission Calculations

3.9.3.1. Particulate Matter

PM emissions were calculated with Eqn. 3-3.

$$E = \left(Q_O \cdot P_O \cdot \left(\frac{273+20}{273+T_O} \right) \right) \cdot \left(c'_O - c'_i \right) \tag{3-3}$$

Where:

E	Net PM emission rate (µg s^{-1})
Q_0	Exhaust airflow rate at To (m^3 s^{-1})
P_0	Pressure of exhaust air (atm)
C_0'	PM concentration of exhaust air (µg m^{-3})
C_i'	Ambient PM concentration (µg m^{-3})
T_0	Temperature of exhaust air (°C)

3.9.3.2. Gases

Stream-specific gas emissions were determined as follows:

$$E = Q_O \cdot \frac{P_O \cdot M}{R \cdot (273+T_O)} \cdot (c_O - c_i) \tag{3-4}$$

Where:

E	Stream or house emission rate (mg s^{-1} or µg s^{-1})
Q_O	Stream or house outlet moist airflow rate at To (m^3 s^{-1})
P_O	Exhaust air pressure (atm)
M	Gas molecular weight (g mol^{-1})
R	Universal Gas Constant (0.08206 L atm/mol^{-1} °K^{-1})
T_O	Exhaust air temperature (°C)

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c_o Exhaust air concentration (ppm or ppb)
c_i Ambient or ventilation air inlet concentration (ppm or ppb)

Building emissions were the summation of the stream emissions. If the interpolated stream concentration was invalid for one stream in a house, the average of the other two stream concentrations was substituted in the emission calculation. Building emission was divided by variables (house inventory, feed consumption) or constants (floor area) to normalize emissions to site-specific characteristics.

3.9.3.3. Volatile Organic Compounds

The total VOC concentration was multiplied by building airflow for the 24-h canister sampling period to yield an average emission rate. If two samples were successfully collected for a building at one sampling event, the average concentration was used in the calculation.

4. RESULTS

4.1. Farm Production Information

The farm production information, including inventory, animal mass and density are presented in (Table E2). The average sow mass in the gestation barns was estimated at 249 kg.

The monitoring period extended across 31 farrowing room batches.

4.2. Characteristics of Biomaterials

The summarized results of lab analyses of the various biomaterials are available in Appendix . The solids content was higher in the loadout samples compared to the surface samples for the gestation barns.

The measured nitrate/nitrite nitrogen content of the two water samples ranged from 1.8 to 5.0 mg/L. The total sulfur content ranged from 21 $mg \cdot L^{-1}$ in the farrowing water to 343 $mg \cdot L^{-1}$ in the gestation water .

The total nitrogen content of the gestation diet was between 1.87 and 2.51% wet basis. The nitrogen content of the sow diet in the farrowing rooms was a percentage point higher, between 2.65 and 2.89% wet basis.

4.3. Environmental Conditions

4.3.1. Ambient Conditions

According to historical climatic information daytime average high temperatures ranges from -3°C in the winter to 29°C in the summer. Average overnight lows range from -14°C in winter to 17°C in summer. Typical prevailing winds for the region are from the south in the summer and NW in the winter.

Table E1 (Appendix E) shows the daily average outdoor temperature, relative humidity, wind speed, wind direction, solar radiation and barometric pressure. The ADM temperature was 9.4ºC,

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comparable to the annual average of 8.6ºC for the area. The DM wind speed ranged from 1.2 to 12.5 m s^{-1}, and the ADM wind speed was 4.5 m/s.

Table 18. Monthly averages for weather in the area*.

Month	Temperature*,°C			Wind speed** km•h^{-1}	Wind direction**
	High	Low	Mean		
January	-3	-14	-8	19	NW
February	1	-11	-5	18	NW
March	7	-4	2	21	NW
April	15	3	9	21	NW
May	22	9	16	18	S
June	27	15	21	16	S
July	29	17	23	14	S
August	28	16	22	14	S
September	24	10	17	16	S
October	17	3	10	16	S
November	7	-3	2	19	NW
December	-1	-10	-6	18	NW
Annual Average	14	3	9		

* http://www.weather.com/weather/wxclimatology/monthly/USIA0466
** Data collected at Des Moines, IA, taken NOAA National Climate Data Center.

4.3.2. Barn Conditions

The environmental conditions in B1, B2 and Far9 are shown in Table E3. The ADM exhaust temperatures in B1, B2 and Far9 were 17.4±4.7°C, 17.3±5.1°C, and 25.2±2.2°C, respectively (Figure 5).

Figure 5. Inlet and exhaust temperatures and airflow rates at B1 and B2.

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4.3.3. Ventilation Rate

The ADM static pressure differential was -25.3±13.4, -18.3±8.2 and -15.4±7.6 Pa in Far9, B1 and B2, respectively. For Far9, B1 and B2, static pressure was greater than -55, -45 and -45 Pa respectively, over 90% of the time. The fraction of time that the pressure was positive between all cases ranged from 1.3 to 7.4%. Most of the positive pressures were likely wind-induced.

Figure 6 demonstrates an increasing airflow rate with temperature. The dry standard ventilation rates of B1 and B2 ranged from approximately 7 $m^3 s^{-1}$ in winter to 35 $m^3 s^{-1}$ during the summer. The dry standard ventilation rate of Far9 ranged from approximately 0.2 $m^3 s^{-1}$ in winter to 3.4 $m^3 s^{-1}$ during the summer.

Figure 6. Inlet and exhaust temperatures and airflow rates for Far9.

4.4. Particulate Matter Concentration and Emission

4.4.1. PM_{10}

The DM inlet PM_{10} concentration ranged from -0.5 to 84.2 µg dsm^{-3} (n=548 d) whereas the DM B1, B2 and Far9 PM_{10} exhaust concentrations ranged from 29 to 995 µg dsm^{-3} (n=525 d), 21 to 721 µg dsm^{-3} (n = 443 d) and from 0.7 to 1080 µg dsm^{-3} (n=454 d), respectively (Table E4).

The ADM (±SD) inlet, B1, B2 and Far9 PM_{10} concentrations were 20±12, 312±212, 282±166 and 379±207 µg dsm^{-3}, respectively (Table E4).

The overall mean (±SD) PM_{10} emission rates were 466±225 g d^{-1} (464±230 mg $d^{-1}hd^{-1}$) for B1, 526±224 g d^{-1} (485±210 mg $d^{-1}hd^{-1}$) for B2 and 28±17 g d^{-1} (1171±704 mg $d^{-1}hd^{-1}$) for Far9 (Figure 7). The ADM PM_{10} emissions increased with piglet age with each batch in the farrowing room.

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Figure 7. Daily mean PM_{10} emission rates.

4.4.2. $PM_{2.5}$

Daily mean concentrations of $PM_{2.5}$ ranged from -0.7 to 26 µg dsm^{-3} in the inlet air (n=57 d), 7 to 79 µg dsm^{-3} in B1 exhaust air (n= 56 d), 9 to 101 µg dsm^{-3} in B2 exhaust air (n= 79 d),and from 5 to 110 µg dsm^{-3} in Far9 exhaust air (n= 54 d) (Table E4).

The ADM (±SD) inlet, B1, B2 and Far9 exhaust concentrations were 9±7, 39±23, 42±28 and 50±26 µg dsm^{-3}, respectively (Table E4).

The overall mean (±SD) $PM_{2.5}$ emission rates were 48±17 g d^{-1} (47±17 mg $d^{-1}hd^{-1}$) from B1 (n= 36 d), 52±29 g d^{-1} (50±29 mg $d^{-1}hd^{-1}$) from B2 (n = 30 d), and 3.1±2.7 g d^{-1} (131±112 mg $d^{-1}hd^{-1}$) from Far9 (Figure 8).

4.4.3. TSP

Data from the ten TSP measurement periods are shown in Table E4. Daily mean TSP concentrations ranged from 6 to 64 µg dsm^{-3} in the inlet air, 59 to 1840 µg dsm^{-3} in B1 exhaust air (n=47 d), 108 to 1240 µg dsm^{-3} in B2 exhaust air (n=53 d) and from 94 to 1850 µg dsm^{-3} in Far9 exhaust air (n=53 d).

The ADM (±SD) inlet, and B1, B2 and Far9 exhaust concentrations were 20±11, 560±441 654±337 and 1044±516 µg dsm^{-3}, respectively (Table E4).

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Figure 8. Daily mean $PM_{2.5}$ emission rates.

The ADM TSP emissions ranged from 109 to 1600 g d^{-1} (n = 39 d) in B1, 318 to 2110 g d^{-1} (n = 45 d) in B2, and 15 to 149 g d^{-1} (n = 48 d) in Far9 (Figure 9). Emission rates are shown in Figure 9. The overall mean TSP emission rates were 728±445 g d^{-1} (716±439 mg $d^{-1}hd^{-1}$) for B1, 1069±462 g d^{-1} (975±441 mg $d^{-1}hd^{-1}$) for B2 and 64.7±36.8 g d^{-1} (2.7±1.5 g $d^{-1}hd^{-1}$) for Far9.

Figure 9. Daily mean TSP emission rates.

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4.5. VOC Concentrations and Emissions

The 20 most prevalent VOCs detected in the canister samples accounted for 94.3% of the total quantified mass (Table 19). The most prevalent compound was iso-Propanol, which accounted for 45.9% of the total mass.

Table 19. Average concentration of 20 most prevalent VOCs.

Compound	Concentration., ng·m^{-3}	% of total	Cumulative %
iso-Propanol	1.66E+06	45.91	45.9
2-Butanone	5.53E+05	15.27	61.2
n-Propanol	3.02E+05	8.33	69.5
Ethyl acetate	2.19E+05	6.04	75.6
Hexane	1.18E+05	3.25	78.8
2-Butanol	7.68E+04	2.12	80.9
2,3-Butanedione	5.68E+04	1.57	82.5
Dimethyl sulfide	5.13E+04	1.42	83.9
1-Butanol	5.09E+04	1.40	85.3
Methyl cyclopentane	4.93E+04	1.36	86.7
4-Methyl-phenol	4.83E+04	1.33	88.0
Acetaldehyde	3.48E+04	0.96	89.0
Pentane	3.20E+04	0.88	89.9
Benzene	2.87E+04	0.79	90.6
Phenol	2.87E+04	0.79	91.4
Acetic acid	2.74E+04	0.76	92.2
Hexanal	2.17E+04	0.60	92.8
2-Pentanone	2.06E+04	0.57	93.4
Propanoic acid	1.91E+04	0.53	93.9
Pentanal	1.51E+04	0.42	94.3

Concentrations of total VOC in exhaust air ranged from 0.29 to 15.0 mg m^{-3} in B1, 1.31 to 1.46 mg m^{-3} in B2 and 0.43 to 23.6 mg m^{-3} in Far9 (Table 20). The mean (±SD) total VOC concentrations were 3.04±5.43, 1.39±0.11 and 4.85±8.48 mg m^{-3} in B1, B2 and Far9, respectively.

Total VOC emissions (ng s^{-1}) during each sampling period were determined by multiplying the mean building airflow rate (m^3 s^{-1}) by the total mass (ng m^{-3}) and converting to kg d^{-1}. The VOC emission rates from B1 and B2 ranged from 1.29 to 27.6 kg d^{-1}, and from 1.29 to 4.56 kg d^{-1}, respectively. The VOC emission rates from Far9 ranged from 0.07 to 0.96 kg d^{-1}. The mean VOC emission rates from B1, B2 and Far9 were 7.22±11.4 kg d^{-1}, 2.82±2.46 kg d^{-1}, and 0.25±0.32 kg d^{-1}, respectively (Table 20).

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Table 20. Emission of total VOC for each sampling day.

Day	# canisters			Concentration, mg•m⁻³			Airflow, m³ s⁻¹			Emission, kg•d⁻¹		
	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2
2/19/09	1	1	1	5.67	3.72	1.31	0.36	10.0	9.53	0.18	3.22	1.08
3/05/09	1	1	0	23.6	15.0	N/A	0.47	21.3	N/A	0.96	27.6	N/A
5/27/10	2	2	2	1.89	0.69	1.46	0.59	27.4	36.0	0.10	1.64	4.56
7/01/10	2	2	0	1.16	0.29	N/A	1.80	51.9	N/A	0.18	1.29	N/A
7/29/10	2	2	0	0.52	0.50	N/A	1.47	N/A	N/A	0.07	N/A	N/A
8/06/10	2	2	0	0.67	0.45	N/A	2.45	60.1	N/A	0.14	2.31	N/A
8/12/09	2	2	0	0.43	0.57	N/A	3.41	N/A	N/A	0.13	N/A	N/A
Mean	1.71	1.71	0.43	4.85	3.04	1.39	1.51	34.1	22.8	0.25	7.22	2.82

4.6. Hydrogen Sulfide Concentration and Emissions

Daily mean inlet and exhaust H_2S concentrations for the entire test are provided in Table E6. The average daily mean (±SD) H_2S concentrations were approximately 15±22 (n=722 d) ppb in the inlet air, 2346±1787 (n=685 d), 1710±1395 (n=684) and 414±545 (n=656) ppb in the exhausts of B1, B2 and Far9, respectively.

Daily mean H_2S emissions from B1, B2 and Far9 are tabulated in Table E7 and plotted in Figure 9 for the entire test period.

The ADM (±SD) H_2S emission rates from B1, B2 and Far9 were 8585±5655 (n=391), 5722±3570 (n=464 d) and 89.7±169 (n=566) kg d^{-1}, respectively.

The ADM (±SD) sow-specific H_2S emission rates from B1, B2 and Far9 were 8551±5634 (n=377), 5160±3236 (n=436) and 3.74±7.03 (n=498) mg $d^{-1}hd^{-1}$, respectively.

4.7. Ammonia Concentration and Emissions

Daily mean inlet and exhaust NH_3 concentrations for the entire test are provided in Table E8. The ADM (±SD) NH_3 concentrations were approximately 0.42±0.26 (n=683) ppm in the inlet air, and 17.8±9.5 (n=648), 12.8±7.3 (n=597) and 4.4±2.3 (n=620) ppm in the exhausts of B1, B2 and Far9, respectively.

Daily mean NH_3 emissions from B1, B2 and Far9 are tabulated in Table E9 and plotted in Figure 11 for the entire test period. The NH_3 emission rates exhibited an increasing trend corresponding to piglet age in the farrowing room, and higher emission rates occurred during the summer months.

The ADM (±SD) NH_3 emission rates from B1, B2 and Far9 were 31.3±25.1 (n=379 d), and 20.1±10.1 (n=433 d) kg d^{-1} and 241±200 (n=528 d) g d^{-1}, respectively.

The ADM (±SD) sow-specific NH_3 emission rates from B1, B2 and Far9 were 29.4±23.1 (n=368), 17.3±7.8 (n=419) and 10.0±8.3 (n=476) g d^{-1} hd^{-1}, respectively.

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Figure 10. Daily mean H2S emission rates.

Figure 11. Daily mean NH_3 emission rates.

4.8. Emission Data Completeness

Daily completeness data is given in **Error! Reference source not found.**, and summarized in Table 21. The number of complete data days (>75% valid required for reporting a daily mean) were calculated for emission measurements conducted from 7/19/07 to 9/4/09. The NH_3 and H_2S

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emission rate completeness values represent more than 75% of the monitoring period. The quantity of $PM_{2.5}$ and TSP emissions data for Far9 was reduced by TEOM failures.

Table 21. Emissions data completeness.

Location	Days with >75% valid emission data				
	NH_3	H_2S	PM_{10}	$PM_{2.5}$	TSP
B1	379	391	359	36	39
B2	433	464	342	39	45
Far9	528	566	399	51	48

4.9. Reconciliation with Data Quality Objectives

The data quality objectives prior to the study were to measure gas and PM emissions from mechanically-ventilated buildings with total relative uncertainties of 27% and 32%, respectively.

4.9.1. Airflow

The overall average airflows for B1, B2 and Far9 were 28.8 ± 18.3 $dsm^3 s^{-1}$ (n=492), 35.3 ± 21.0 $dsm^3 s^{-1}$ (n=539), and 1.16 ± 0.88 $dsm^3 s^{-1}$ (n=633), respectively. An average of 13.6 fans operated in B1 and B2 at which condition the airflow measurement uncertainty was 35.3%, based on the fan models. An average of 1.16 fans operated in Far9 at which condition the airflow measurement uncertainty was 76.8%, based on the fan models.

4.9.2. Gas Emissions

The bias and precision of NH_3 concentration measurements were derived from the NH_3 zero/span checks as compared with the NH_3 correction models (Table 9). The bias and precision of NH_3 measurements were -0.08% and 1.65%, respectively.

The bias and precision of H_2S concentration measurements were derived from the H_2S zero and span checks as compared with the H_2S correction models (Table 11). The bias and precision of H_2S measurements were -0.02% and 3.78%, respectively.

Based on these measurement errors calculated for concentrations and airflows, the uncertainties of NH_3 and H_2S emissions from all gestation barns (B1and B2) were 35.1 and 35.7%, respectively. The uncertainties of NH_3 and H_2S emissions from the farrowing barn were 77%.

4.9.3. PM Emissions

The precision of PM_{10}, TSP and $PM_{2.5}$ concentration measurements were 0.35, 1.54, and 8.84% based on collocation tests of the B1 TEOM in exhaust air. The precision of PM_{10}, TSP and $PM_{2.5}$ concentration measurements were 2.07, 1.66, and 5.39% based on collocation tests of the B2 TEOM in exhaust air. The precision of PM_{10}, TSP and $PM_{2.5}$ concentration measurements were 3.78, 1.78, and 1.94% based on collocation tests of the Far9 TEOM in exhaust air. The relative biases of the TEOMs were 1.47, 1.95 and 1.28% for B1, B2 and Far9 (Tables 13-15).

The uncertainties of PM_{10}, TSP and $PM_{2.5}$ emissions from B1 were 35.0, 35.1, and 39.2%, respectively. The uncertainties of PM_{10}, TSP and $PM_{2.5}$ emissions from B2 were 35.2, 35.1, and 36.6%, respectively. The uncertainties of PM_{10}, TSP and $PM_{2.5}$ emissions from Far9 were 77%.

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5. SUMMARY

The emissions of NH_3, H_2S, PM_{10}, TSP, $PM_{2.5}$ and VOCs from two 1200-sow gestation barns (B1 and B2) and a room (Far9) in a 16-room farrowing barn at a breeding and gestation facility in Iowa were measured during a two-year monitoring study. Manure was stored deep pits under the gestation barn floors for up to six months and in shallow pits in the farrowing barn for up to 24 d. The gestation barns were tunnel ventilated. The gestation and farrowing barns has both single-speed wall fans and variable-speed pit fans.

The overall average emission rates from B1 were 31.3 kg d^{-1} of NH_3, 8.59 kg d^{-1} of H_2S, 466 g d^{-1} of PM_{10}, 48.3 g d^{-1} of $PM_{2.5}$, 728 g d^{-1} of TSP, and 7.22 kg d^{-1} of total VOC. The overall average emission rates from B2 were 20.1 kg d^{-1} of NH_3, 5.72 kg d^{-1} of H_2S, 526 g d^{-1} of PM_{10}, 52.4 g d^{-1} of $PM_{2.5}$, 1069 g d^{-1} of TSP, and 2.82 kg d^{-1} of total VOC. The overall average emission rates from Far9 were 241 g d^{-1} of NH_3, 89.7 g d^{-1} of H_2S, 28.1 g d^{-1} of PM_{10}, 3.1 g d^{-1} of $PM_{2.5}$, 64.7 g d^{-1} of TSP, and 0.25 kg d^{-1} of total VOC.

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7. DEFINITIONS AND ACRONYMS

AirDAC	Air Data Acquisition and Control – computer program
ADM	Average daily mean
B1	Gestation barn 1
B2	Gestation barn 2
BESS	Bioenvironmental and Structural Systems lab at University of Illinois
CAPECAB	Calculations of Air Pollutant Emissions from Confined Animal Buildings
CO_2	Carbon dioxide
CH_4	Methane
DAC	Data acquisition and control
DM	Daily mean
ΔP	Differential pressure
Far9	Farrowing room 9
FANS	Fan Airflow Numeration System
GC-MS	Gas chromatograph mass spectrometer
GSL	Gas sampling location(s)
GSS	Gas sampling system
H_2S	Hydrogen sulfide
MDL	Minimum detection limit
MPC	Multipoint calibration
MS	Mass spectrometer
n	Number or count
NAEMS	National Air Emissions Monitoring Study
NH_3	Ammonia
QA	Quality assurance
QAPP	Quality Assurance Project Plan
QC	Quality control
OFIS	On farm instrument shelter
PM	Particulate matter
PREF	Primary representative exhaust fan
RH/T	Relative humidity/temperature
RH	Relative humidity
SD	Standard deviation
T_{dew}	Dew point temperature
ISU	Iowa State University
TDS	Thermal desorption system
TEOM	Tapered element oscillating microbalance
TSP	Total suspended particulate
VOC	Volatile organic compounds
Z/S	Zero/span

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APPENDIX A. MEASUREMENT VARIABLE LIST

Table A1. Site measurement variables, instruments and digital controls.

Col#	Data heading	Instrument/sensor	Location	Monitoring/control location	Range/target	DAC item
1	Date & time	---				---
2	Smpl loc#	---				---
3	Cal gas #	Environics	Rack			---
4	Cal gas, ppm(b)	Environics	Rack			---
5	NH3, ppm	Innova 1412	Rack	12 GSLs	Span 25	---
6	N2O, ppm	Innova 1412	Rack	12 GSLs	Span 4.5	---
7	THCg, ppm	Innova 1412	Rack	12 GSLs	Span 9.92	---
8	CH4g, ppm	Innova 1412	Rack	12 GSLs	Span 25	---
9	CO2, ppm	Innova 1412	Rack	12 GSLs	Span 1255	---
10	WV, Tdew	Innova 1412	Rack	12 GSLs		---
11	H2S, ppb	H2S analyzer	Rack	12 GSLs	0 - 2000	FP-AI-112-1
12	SO2, ppb	H2S analyzer	Rack	12 GSLs	0 - 2000	FP-AI-112-1
13	Smpl P, Pa	Setra 209 ΔP sensor	GSS	12 GSLs	0 - 14.7 psiv	FP-AI-112-1
14	Smpl Q, L/m	Mass flow	GSS	12 GSLs	0 - 10	FP-AI-112-1
15	Smpl RH, %	Humitter 50Y	GSS	12 GSLs	0 - 100	FP-AI-112-1
16	Smpl T, ºC	Humitter 50Y	GSS	12 GSLs	-40 - 60	FP-AI-112-1
17	Smpl dir, uV	Flow direction	GSS	12 GSLs		FP-AI-112-1
18	GSS T, ºC	AD 592D	GSS	GSS	0 - 70	FP-AI-112-1
19	B1 PM, µg/m3	TEOM #1	B1	B1 Fan 15	-1000 - 9000	FP-AI-112-1
20	B1 Filter, %	TEOM #1	B1	B1 Fan 15	0 - 140	FP-AI-112-1
21	B1 Atm P, atm	TEOM #1	B1	B1 Fan 15	0.8 - 1.3	FP-AI-112-1
22	B2 PM, µg/m3	TEOM #2	Far9	Far9 stage 2 fan W wall	-1000 - 9000	FP-AI-112-1
23	B2 Filter, %	TEOM #2	Far9	Far9 stage 2 fan W wall	0 - 140	FP-AI-112-1
24	Far9 PM, µg/m3	TEOM #3	B2	B2 Fan 15	-1000 - 9000	FP-AI-112-1
25	Far9 Filter, %	TEOM #3	B2	B2 Fan 15	0 - 140	FP-AI-112-1
27	Amb PM, µg/m3	Beta gauge	Amb	1.8 m above OFIS roof	0 - 5000	FP-AI-112-2
28	Far9W ΔP, Pa	Setra 260 ΔP #1	Far9W	Far9 W wall	-100 - 100	FP-AI-112-2
29	B1N ΔP, Pa	Setra 260 ΔP #2	B1N	B1 N wall	-100 - 100	FP-AI-112-2
30	B1E ΔP, Pa	Setra 260 ΔP #3	B1E	B1 E wall	-100 - 100	FP-AI-112-2
31	B1S ΔP, Pa	Setra 260 ΔP #4	B1S	B1 S wall	-100 - 100	FP-AI-112-2
32	B2N ΔP, Pa	Setra 260 ΔP #5	B2N	B2 N wall	-100 - 100	FP-AI-112-2
33	B2E ΔP, Pa	Setra 260 ΔP #6	B2E	B2 E wall	-100 - 100	FP-AI-112-2
34	B2S ΔP, Pa	Setra 260 ΔP #7	B2S	B2 S wall	-100 - 100	FP-AI-112-2
35	OFIS ΔP, Pa	Setra 260 ΔP #8	OFIS	Inside & outside of OFIS	-100 - 100	FP-AI-112-2

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Col#	Data heading	Instrument/sensor	Location	Monitoring/control location	Range/target	DAC item
36	Wind D, deg	Wind monitor 05103-5	Roof	Roof tower	0 - 360	FP-AI-112-2
37	Wind V, m/s	Wind monitor 05103-5	Roof	Roof tower	0 - 50	FP-AI-112-2
38	Solar, W/m2	Solar sensor	Roof	Roof tower	0 - 1000	FP-AI-112-2
39	Amb RH, %	NOVUS RHT-WM #1	Roof	Roof tower	0 - 100	FP-AI-112-2
40	Amb T, ºC	NOVUS RHT-WM #1	Roof	Roof tower	-40 - 120	FP-AI-112-2
41	Far9 RH, %	NOVUS RHT-WM #2	Far9	Far9 stage 2 fan, W wall	0 - 100	FP-AI-112-2
42	Far9 T, ºC	NOVUS RHT-WM #2	Far9	Far9 stage 2 fan, W wall	-40 - 120	FP-AI-112-2
43	B1E RH, %	NOVUS RHT-WM #3	B1E	B1 Fan 15	0 - 100	FP-AI-112-3
44	B1E T, ºC	NOVUS RHT-WM #3	B1E	B1 Fan 15	-40 - 120	FP-AI-112-3
45	B2E RH, %	NOVUS RHT-WM #4	B2E	B2 Fan 15	0 - 100	FP-AI-112-3
46	B2E T, ºC	NOVUS RHT-WM #4	B2E	B2 Fan 15	-40 - 120	FP-AI-112-3
47	Far9 act , V	Activity sensor #1	Far9	Far9 center of room		FP-AI-112-3
48	B1N act , V	Activity sensor #2	B1N	N side of B1 even with fan 5		FP-AI-112-3
49	B1S act , V	Activity sensor #3	B1S	S side of B1 even with fan 5		FP-AI-112-3
50	B2N act , V	Activity sensor #4	B2N	N side of B2 even with fan 5		FP-AI-112-3
51	B2S act , V	Activity sensor #5	B2S	S side of B2 even with fan 5		FP-AI-112-3
52	OFIS act , V	Activity sensor #6	OFIS	OFIS		FP-AI-112-3
53	Ele V, VAC	Adapter	OFIS	Power adapter voltage (opt.)		FP-AI-112-3
59	Far9 inlet T, ºC	TC T type	Far9 inlet	Far9 inlet		FP-TC-120-1
60	Far9 room T, ºC	TC T type	Far9 room	Far9 Middle of room		FP-TC-120-1
61	B1F1 T, ºC	TC T type	B1F1	B1 Pit fan 1		FP-TC-120-1
62	B1F3 T, C	TC T type	B1F3	B1 Pit fan 3		FP-TC-120-1
63	B1F5 T, ºC	TC T type	B1F5	B1 Pit fan 5		FP-TC-120-1
64	B1F6 T, C	TC T type	B1F6	B1 Pit fan 6		FP-TC-120-1
65	B1F8 T, ºC	TC T type	B1F8	B1 Pit fan 8		FP-TC-120-1
66	B1W T, ºC	TC T type	B1W	B1 W end		FP-TC-120-1
67	B1MidW T, ºC	TC T type	B1MidW	B1 W of center		FP-TC-120-2
68	B1MidE T, ºC	TC T type	B1MidE	B1 E of center		FP-TC-120-2
69	B1E T, ºC	TC T type	B1E	B1 E end		FP-TC-120-2
70	B1F10 T, ºC	TC T type	B1F10	B1 Pit fan 10		FP-TC-120-2
71	B2F1 T, ºC	TC T type	B2F1	B2 Pit fan 1		FP-TC-120-2
72	B2F3 T, ºC	TC T type	B2F3	B2 Pit fan 3		FP-TC-120-2
73	B2F5 T, ºC	TC T type	B2F5	B2 Pit fan 5		FP-TC-120-2
74	B2F6 T, ºC	TC T type	B2F6	B2 Pit fan 6		FP-TC-120-2
75	B2F8 T, ºC	TC T type	B2F8	B2 Pit fan 8		FP-TC-120-3
76	B2W T, ºC	TC T type	B2W	B2 W end		FP-TC-120-3

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Col#	Data heading	Instrument/sensor	Location	Monitoring/control location	Range/target	DAC item
77	B2MidW T, ºC	TC T type	B2MidW	B2 W of center		FP-TC-120-3
78	B2MidE T, ºC	TC T type	B2MidE	B2 E of center		FP-TC-120-3
79	B2E T, ºC	TC T type	B2E	B2 E end		FP-TC-120-3
80	B2F10 T, ºC	TC T type	B2F10	B2 Pit fan 10		FP-TC-120-3
81	Rwy T, ºC	TC T type	Rwy	Barn/OFIS rwy		FP-TC-120-3
82	Rwy HT, ºC	TC T type	Rwy HT	Barn/OFIS rwy, center		FP-TC-120-3
83	RwyB1 T, ºC	TC T type	RwyB1	B1/OFIS rwy, center		FP-TC-120-4
84	RwyB1 HT, ºC	TC T type	RwyB1 HT	B1/OFIS rwy, center		FP-TC-120-4
85	RwyB2 T, ºC	TC T type	RwyB2	B2/OFIS rwy, center		FP-TC-120-4
86	RwyB2 HT, ºC	TC T type	RwyB2 HT	B2/OFIS rwy, center		FP-TC-120-4
87	OFIS T, ºC	TC T type	OFIS	DAC panel		FP-TC-120-4
88	OFIS AC T, ºC	TC T type	OFIS AC	Wall A/C exhaust		FP-TC-120-4
89	Pump box T, ºC	TC T type	Pump box	Pump box		FP-TC-120-4
90	Sample line ins. T, ºC	TC T type	OFIS tubing	Sample tubes in OFIS		FP-TC-120-4
91	B1F1, rpm	Fan speed sensor #1	B1F1	Fan shaft or support	0 - 10	USB-4303-1
92	B1F2, rpm	Fan speed sensor #2	B1F2	Fan shaft or support	0 - 10	USB-4303-1
93	B1F3, rpm	Fan speed sensor #3	B1F3	Fan shaft or support	0 - 10	USB-4303-1
94	B1F4, rpm	Fan speed sensor #4	B1F4	Fan shaft or support	0 - 10	USB-4303-1
95	B1F5, rpm	Fan speed sensor #5	B1F5	Fan shaft or support	0 - 10	USB-4303-1
96	B1F6, rpm	Fan speed sensor #6	B1F6	Fan shaft or support	0 - 10	USB-4303-1
97	B1F7, rpm	Fan speed sensor #7	B1F7	Fan shaft or support	0 - 10	USB-4303-1
98	B1F8, rpm	Fan speed sensor #8	B1F8	Fan shaft or support	0 - 10	USB-4303-1
100	B1F10, rpm	Fan speed sensor #10	B1F10	Fan shaft or support	0 - 10	USB-4303-1
101	B1F11, rpm	Fan speed sensor #11	B1F11	Fan shaft or support	0 - 10	USB-4303-2
102	B1F12, rpm	Fan speed sensor #12	B1F12	Fan shaft or support	0 - 10	USB-4303-2
103	B1F13, rpm	Fan speed sensor #13	B1F13	Fan shaft or support	0 - 10	USB-4303-2
104	B1F14, rpm	Fan speed sensor #14	B1F14	Fan shaft or support	0 - 10	USB-4303-2
105	B1F15, rpm	Fan speed sensor #15	B1F15	Fan shaft or support	0 - 10	USB-4303-2
106	B1F16, rpm	Fan speed sensor #16	B1F16	Fan shaft or support	0 - 10	USB-4303-2
107	B1F17, rpm	Fan speed sensor #17	B1F17	Fan shaft or support	0 - 10	USB-4303-2
108	B1F18, rpm	Fan speed sensor #18	B1F18	Fan shaft or support	0 - 10	USB-4303-2
109	B1F19, rpm	Fan speed sensor #19	B1F19	Fan shaft or support	0 - 10	USB-4303-2
112	B2F1, rpm	Fan speed sensor #22	B2F1	Fan shaft or support	0 - 10	USB-4303-3
113	B2F2, rpm	Fan speed sensor #23	B2F2	Fan shaft or support	0 - 10	USB-4303-3
114	B2F3, rpm	Fan speed sensor #24	B2F3	Fan shaft or support	0 - 10	USB-4303-3
115	B2F4, rpm	Fan speed sensor #25	B2F4	Fan shaft or support	0 - 10	USB-4303-3
116	B2F5, rpm	Fan speed sensor #26	B2F5	Fan shaft or support	0 - 10	USB-4303-3

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Col#	Data heading	Instrument/sensor	Location	Monitoring/control location	Range/target	DAC item
117	B2F6, rpm	Fan speed sensor #27	B2F6	Fan shaft or support	0 - 10	USB-4303-3
118	B2F7, rpm	Fan speed sensor #28	B2F7	Fan shaft or support	0 - 10	USB-4303-3
119	B2F8, rpm	Fan speed sensor #29	B2F8	Fan shaft or support	0 - 10	USB-4303-3
120	B2F9, rpm	Fan speed sensor #30	B2Far9	Fan shaft or support	0 - 10	USB-4303-3
121	B2F10, rpm	Fan speed sensor #31	B2F10	Fan shaft or support	0 - 10	USB-4303-4
122	B2F11, rpm	Fan speed sensor #32	B2F11	Fan shaft or support	0 - 10	USB-4303-4
123	B2F12, rpm	Fan speed sensor #33	B2F12	Fan shaft or support	0 - 10	USB-4303-4
124	B2F13, rpm	Fan speed sensor #34	B2F13	Fan shaft or support	0 - 10	USB-4303-4
125	B2F14, rpm	Fan speed sensor #35	B2F14	Fan shaft or support	0 - 10	USB-4303-4
126	B2F15, rpm	Fan speed sensor #36	B2F15	Fan shaft or support	0 - 10	USB-4303-4
127	B2F16, rpm	Fan speed sensor #37	B2F16	Fan shaft or support	0 - 10	USB-4303-4
128	B2F17, rpm	Fan speed sensor #38	B2F17	Fan shaft or support	0 - 10	USB-4303-4
129	B2F18, rpm	Fan speed sensor #39	B2F18	Fan shaft or support	0 - 10	USB-4303-4
130	B2F19, rpm	Fan speed sensor #40	B2F19	Fan shaft or support	0 - 10	USB-4303-4
131	B2F20, rpm	Fan speed sensor #41	B2F20	Fan shaft or support	0 - 10	USB-4303-5
132	B2F21, rpm	Fan speed sensor #42	B2F21	Fan shaft or support	0 - 10	USB-4303-5
134	Far9F2, rpm	Fan speed sensor #44	Far9F2	Fan shaft or support	0 - 10	USB-4303-5
136	B1F20, rpm	Fan speed sensor #20	B1F20	Fan shaft or support	0 - 10	USB-4303-5
137	B1F21, rpm	Fan speed sensor #21	B1F21	Fan shaft or support	0 - 10	USB-4303-5
138	Far9F3, rpm	Fan speed sensor #45	Far9F3	Fan shaft or support	0 - 10	USB-4303-5
139	B1F9, rpm	Fan speed sensor #9	B1Far9	Fan shaft or support	0 - 10	USB-4303-5
140	Far9F1, rpm	Fan speed sensor #43	Far9F1	Fan shaft or support	0 - 10	USB-4303-5
141	B2 F11	Current switch	B2 F11	Fan power supply	on/off	DIO 96H/50
142	B2 F12	Current switch	B2 F12	Fan power supply	on/off	DIO 96H/50
143	B2 F13	Current switch	B2 F13	Fan power supply	on/off	DIO 96H/50
144	B2 F14	Current switch	B2 F14	Fan power supply	on/off	DIO 96H/50
145	B2 F15	Current switch	B2 F15	Fan power supply	on/off	DIO 96H/50
146	B2 F16	Current switch	B2 F16	Fan power supply	on/off	DIO 96H/50
147	B2 F17	Current switch	B2 F17	Fan power supply	on/off	DIO 96H/50
148	B2 F18	Current switch	B2 F18	Fan power supply	on/off	DIO 96H/50
149	B2 F19	Current switch	B2 F19	Fan power supply	on/off	DIO 96H/50
150	B2 F20	Current switch	B2 F20	Fan power supply	on/off	DIO 96H/50
151	B2 F21	Current switch	B2 F21	Fan power supply	on/off	DIO 96H/50
152	B1 F11	Current switch	B1 F11	Fan power supply	on/off	DIO 96H/50
153	B1 F12	Current switch	B1 F12	Fan power supply	on/off	DIO 96H/50
154	B1 F13	Current switch	B1 F13	Fan power supply	on/off	DIO 96H/50
155	B1 F14	Current switch	B1 F14	Fan power supply	on/off	DIO 96H/50

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Col#	Data heading	Instrument/sensor	Location	Monitoring/control location	Range/target	DAC item
156	B1 F15	Current switch	B1 F15	Fan power supply	on/off	DIO 96H/50
157	B1 F16	Current switch	B1 F16	Fan power supply	on/off	DIO 96H/50
158	B1 F17	Current switch	B1 F17	Fan power supply	on/off	DIO 96H/50
159	B1 F18	Current switch	B1 F18	Fan power supply	on/off	DIO 96H/50
160	B1 F19	Current switch	B1 F19	Fan power supply	on/off	DIO 96H/50
161	B1 F20	Current switch	B1 F20	Fan power supply	on/off	DIO 96H/50
162	B1 F21	Current switch	B1 F21	Fan power supply	on/off	DIO 96H/50
163	B2F1	Current switch	B2F1	Fan power supply	on/off	DIO 96H/50
164	B2F2	Current switch	B2F2	Fan power supply	on/off	DIO 96H/50
165	B2F3	Current switch	B2F3	Fan power supply	on/off	DIO 96H/50
166	B2F4	Current switch	B2F4	Fan power supply	on/off	DIO 96H/50
167	B2F5	Current switch	B2F5	Fan power supply	on/off	DIO 96H/50
168	B2F6	Current switch	B2F6	Fan power supply	on/off	DIO 96H/50
169	B2F7	Current switch	B2F7	Fan power supply	on/off	DIO 96H/50
170	B2F8	Current switch	B2F8	Fan power supply	on/off	DIO 96H/50
171	B2F9	Current switch	B2F9	Fan power supply	on/off	DIO 96H/50
172	B2F10	Current switch	B2F10	Fan power supply	on/off	DIO 96H/50
173	B1F1	Current switch	B1F1	Fan power supply	on/off	DIO 96H/50
174	B1F2	Current switch	B1F2	Fan power supply	on/off	DIO 96H/50
175	B1F3	Current switch	B1F3	Fan power supply	on/off	DIO 96H/50
176	B1F4	Current switch	B1F4	Fan power supply	on/off	DIO 96H/50
177	B1F5	Current switch	B1F5	Fan power supply	on/off	DIO 96H/50
178	B1F6	Current switch	B1F6	Fan power supply	on/off	DIO 96H/50
179	B1F7	Current switch	B1F7	Fan power supply	on/off	DIO 96H/50
180	B1F8	Current switch	B1F8	Fan power supply	on/off	DIO 96H/50
181	B1F9	Current switch	B1F9	Fan power supply	on/off	DIO 96H/50
182	B1F10	Current switch	B1F10	Fan power supply	on/off	DIO 96H/50
183	Far9F1	Current switch	Far9F1	Fan power supply	on/off	DIO 96H/50
184	Far9F2	Current switch	Far9F2	Fan power supply	on/off	DIO 96H/50
185	Far9F3	Current switch	Far9F3	Fan power supply	on/off	DIO 96H/50
186	Raw NH3, ppm	Innova 1412	Rack	12 GSLs	Span 25	---
187	Raw CH4, ppm	Innova 1412	Rack	12 GSLs	Span 25	---
188	Raw CO2, ppm	Innova 1412	Rack	12 GSLs	Span 1255	---
189	Raw H2S, ppb	H2S analyzer	Rack	12 GSLs	0 - 2000	FP-AI-112-1
190	H2S, VDC	H2S analyzer	Rack	12 GSLs	0 - 2000	FP-AI-112-1
191	SO2, VDC	H2S analyzer	Rack	12 GSLs	0 - 2000	FP-AI-112-1

APPENDIX A. RECORD OF MAINTENANCE AND CALIBRATION.

Maintenance and Calibration Tasks	
Category	**Times completed**
Environment Sensing and Other	
Clean RH/T probe	106
Calibration check of RH/T probe	18
Calibration check of thermocouples	3
Performance check of weather station	13
Direction verification of wind indicator	2
Clean solar sensor	29
Check solar sensor with collocated sensor	2
Clean motion sensors	39
Air Flow Measurement System	
Fan test events	4
Zero check of pressure sensors (dP)	20
Multipoint calibration of pressures sensors (dP)	3
Drift & accuracy check of anemometer(s)	6
Particulate Matter Measurement System	
Clean TOEM screens	0
Check/clean TEOM inlet head(s)	106
Replace TEOM filters	82
Verify TEOM mass transducer calibration	18
Leak test of TEOM	15
Verify TEOM flow rate & MFC accuracy	12
Change TEOM in-line filters	6
Check/clean Beta Gauge inlet head	33
Check Beta Gauge airflow	6
Validate Beta Gauge mass w/foil set	4
Calibrate Beta Gauge mass & airflow	3
Gas Measurement System	
Clean/replace GSS membrane filters	38
Leak check of GSS	18
Calibration check of all lines	5
Replace GSS filters	5
Calibrate GSS pressure and flow sensors	3
Flow calibration/check MFC flow of Environics dilutor	3
Precision check of multigas analyzer	109
Multipoint calibration of multigas analyzer	12
Precision check of TEC 450I	107
Multipoint calibration of TEC 450I	12

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APPENDIX B. GAS ANALYZER CALIBRATIONS.

AMMONIA

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HYDROGEN SULFIDE

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APPENDIX C. MAJOR DATA INVALIDATIONS.

Variable	Start Date/Time	End Date/Time	Minutes	Comment
GSS T	7/1/07 0:01	7/31/07 12:28	43947	Systematic error-FN: sensor and connections problems
Beta Amb PM	7/1/07 0:01	7/30/07 10:16	42375	DAC-FN: FP channel problem
F9 RH/T	7/1/07 0:01	7/19/07 12:53	26692	FN: sensor offline
INNOVA	7/1/07 0:01	7/19/07 9:52	26511	INNOVA offline
G2 pit fan Anes	7/1/07 0:01	7/18/07 12:06	25205	FN: pit fan anemometers offline
GSS	7/1/07 0:01	7/12/07 14:29	16708	GSS offline
F9F1 Ane	7/1/07 0:01	7/12/07 10:02	16441	FN: sensor was offline
G1F16 Ane	7/1/07 0:01	7/12/07 10:02	16441	FN: sensor was offline
G2F15Ane	7/1/07 0:01	7/12/07 10:02	16441	FN: sensor was offline
GSS	7/12/07 13:26	7/18/07 11:39	8533	Sampling Elsewhere-FN: OFIS air being sampled
G2F9 Ane	7/18/07 9:18	9/12/07 12:15	80817	Systematic error-FN: shaky signals - bad connection?
F9 RH/T	7/18/07 12:22	7/20/07 12:46	2904	Systematic error-FN: sensor on wrong power supply
INNOVA	7/19/07 9:49	7/20/07 10:31	1482	INNOVA offline
G2F3	7/20/07 9:19	9/1/07 11:36	62057	Systematic error: Erratic signal - poor sensor position
G1F2	7/20/07 11:16	8/10/07 10:34	30198	Systematic error-FN: sensor needed adjustment
G1F17	7/22/07 23:53	8/10/07 13:20	26727	FN: sensor failure
G1F11	7/22/07 23:53	8/10/07 13:11	26718	FN: sensor failure
G2F20	7/22/07 23:53	8/10/07 11:43	26630	FN: sensor failure
G2F21	7/22/07 23:53	8/10/07 11:43	26630	FN: sensor failure
G1F10	7/22/07 23:53	8/10/07 9:23	26490	FN: sensor failure
G1F9	7/22/07 23:53	8/10/07 9:03	26470	FN: sensor failure
G1F6	7/22/07 23:57	7/31/07 11:44	12227	FN: sensor failure
G1F1	7/22/07 23:57	7/30/07 14:44	10967	FN: sensor failure
G1F20	7/23/07 0:22	8/16/07 13:38	35356	FN: sensor failure
G1F21	7/23/07 0:22	8/16/07 13:38	35356	FN: sensor failure and DAQ problem
G2 PM	7/23/07 0:31	8/17/07 11:01	36630	Systematic error
F9 PM	7/23/07 0:31	8/17/07 11:01	36630	Systematic error-FN: sensor units on wrong controller
Inlet RH/T	7/23/07 7:56	8/9/07 10:19	24623	FN: sensor failure
G1E T	7/23/07 8:16	8/9/07 12:22	24726	FN: sensor failure

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Variable	Start Date/Time	End Date/Time	Minutes	Comment
F9F3	7/30/07 12:24	8/16/07 15:07	24643	FN: sensor failure and DAQ problem
F9F1	7/30/07 13:25	8/15/07 15:07	23142	FN: sensor failure
Far9	8/14/07 11:29	8/15/07 13:11	1542	Sensors offline or covered during room cleaning
F9F2	8/30/07 17:57	9/1/07 11:41	2504	FN: sensor failure
G2F21	9/7/07 0:17	9/26/07 15:51	28294	FN: sensor failure
G1F21	9/7/07 0:17	9/26/07 15:51	28294	FN: sensor failure
F9F1	9/7/07 0:42	9/26/07 17:53	28391	FN: sensor failure and DAQ problem
G1F20	9/7/07 0:42	9/26/07 15:51	28269	FN: sensor failure
G1F14	9/7/07 1:20	9/26/07 15:52	28232	FN: sensor failure
G1F9	9/7/07 1:20	9/26/07 12:17	28017	FN: sensor failure
Solar	9/7/07 10:23	9/20/07 12:00	18817	Out of Range: Signal higher than normal
G1F8	9/9/07 22:19	11/2/07 16:06	77387	Systematic error-FN: sensor needed adjustment
G2F9 Ane	9/12/07 12:16	9/20/07 12:23	11527	Systematic error-FN: bad connection in sensor
G2F11	9/18/07 9:30	9/27/07 13:24	13194	Noise-FN: fan missing motor
G2F9 Ane	9/20/07 10:28	9/26/07 13:57	8849	FN: sensor offline while being sent in for repair
G2F11	10/4/07 6:46	10/9/07 21:45	8099	Noise-FN: fan not running so these signals are noise
F9F2	10/8/07 5:16	10/12/07 16:11	6415	FN: sensor failure
G2F11	10/19/07 4:59	11/3/07 17:52	22373	Noise-FN: fan not running so these signals are noise
G2F18	10/19/07 5:47	11/2/07 12:49	20582	Noise-FN: fan is off so this is noise
G1F3 T	11/20/07 8:21	11/29/07 15:14	13373	Systematic error-FN: sensor required resoldering
G2F15Ane	11/26/07 1:31	12/12/07 11:35	23644	FN: sensor failure
G1MidE T	11/30/07 13:57	12/2/07 8:07	2530	Sampling Elsewhere-FN: sensor is situated near heater
F9F2	12/1/07 19:45	12/3/07 13:46	2521	Based on typical data, appears to be a sensor failure
Far9	12/4/07 8:46	12/5/07 12:01	1635	FN: sensors offline during room cleaning
F9F2	12/7/07 9:35	12/19/07 14:44	17589	FN: sensor failure
G1F10	12/8/07 1:56	12/24/07 13:26	23730	Systematic error: Sensor likely required some adjustment
G2F4	12/8/07 23:53	12/27/07 13:06	26713	FN: sensor failure
G2F5	12/8/07 23:56	12/19/07 13:11	15195	FN: sensor failure
G2 PM	12/10/07 18:17	12/12/07 11:47	2490	FN: TEOM cable failure
G2 Filter	12/10/07 18:17	12/12/07 11:47	2490	Failure
Wind V	12/11/07 1:28	12/15/07 17:56	6748	Systematic error-FN: ice buildup on sensor

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Variable	Start Date/Time	End Date/Time	Minutes	Comment
G2 PM	12/12/07 15:10	12/17/07 14:03	7133	FN: sensor unit failure
INNOVA	12/14/07 16:54	12/17/07 10:49	3955	Systematic error-FN: Nafion tube in front of INNOVA
G2F5	12/14/07 20:14	12/19/07 13:09	6775	FN: sensor failure
G2F8	12/19/07 3:53	12/21/07 12:08	3375	FN: sensor failure
OFIS dP	12/21/07 21:33	12/25/07 14:54	5361	Systematic error: Signal error from water in sample line?
F9F2	12/22/07 2:13	12/27/07 13:18	7865	FN: sensor failure
G2F9 Ane	12/22/07 6:09	1/4/08 17:33	19404	FN: sensor is not turning properly
G2F15Ane	12/22/07 19:10	12/27/07 13:06	6836	FN: sensor failure
G1F2	12/22/07 20:34	12/23/07 23:48	1634	FN: sensor failing periodically
G2F8 T	12/23/07 14:08	12/25/07 18:59	3171	Systematic error-FN: sensor tip needed resoldering
G2F15Ane	12/27/07 10:34	2/5/08 16:19	57945	FN: sensor offline while sent for repairs
G1F2	1/1/08 11:59	1/10/08 13:43	13064	FN: sensor failing periodically
G2F8 T	1/2/08 8:35	1/4/08 17:00	3385	Systematic error-FN: sensor tip needed resoldering
G2F9 Ane	1/4/08 16:44	1/10/08 12:30	8386	FN: sensor uninstalled for testing
F9 PM	1/4/08 17:02	1/7/08 17:04	4322	Low Flow-FN: low flow error
G1F3	1/15/08 3:56	1/17/08 6:00	3005	Systematic error: Lower fan speed due to eventual failure
G1F10	1/17/08 12:52	1/24/08 11:58	10027	FN: sensor failure
G1F10	1/17/08 12:56	1/24/08 11:50	10015	Systematic error-FN: a problem with the sensor
G2F21	1/18/08 10:39	1/19/08 12:25	1547	Noise: Noise common problem with this signal
G1F5	1/18/08 18:05	1/28/08 17:09	14345	Systematic error: Lower speed from change in max speed
G2E RH/T	1/21/08 7:31	1/31/08 11:10	14620	FN: sensor failure
F9F1	1/21/08 7:48	1/26/08 23:34	8147	Systematic error
G2F21	1/29/08 3:30	1/30/08 8:56	1767	Noise: Noise common problem with this signal
F9F1	1/29/08 4:16	2/7/08 12:53	13478	Failure
G2F9 Ane	1/29/08 9:55	1/31/08 12:31	3037	Systematic error
G1F6 T	1/29/08 10:40	1/31/08 11:41	2942	Systematic error-FN: sensor tip needed to be resoldered
G2F13	1/30/08 21:15	2/4/08 1:48	6034	Noise-FN: bearing failure in fan causing damage sensor
G2F13	1/30/08 21:24	2/4/08 1:15	5992	Noise: unsure of cause of noise in this signal
G2E RH/T	1/31/08 10:54	2/5/08 16:29	7536	DAC
F9 PM	1/31/08 12:02	2/5/08 15:14	7393	Low Flow
G2E RH/T	2/5/08 15:39	2/23/08 20:26	26208	Off

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Variable	Start Date/Time	End Date/Time	Minutes	Comment
F9 PM	2/5/08 18:59	2/21/08 13:13	22695	Low Flow-FN: low flow problem with this sensor
G1F4	2/6/08 23:44	3/6/08 12:30	41087	DAC-FN: signal cable failed
Far9	2/7/08 8:22	2/8/08 9:44	1523	Data sensors offline after room cleaning
F9 PM	2/7/08 12:57	2/10/08 4:38	3822	Low Flow-FN: low flow problem with this sensor
F9 PM	2/7/08 12:59	2/10/08 4:42	3824	Maintenance
G1F3	2/10/08 14:26	4/5/08 12:15	79070	FN: sensor failure
G2F21	2/11/08 12:47	2/13/08 11:28	2802	Noise: Noise common problem with this signal
G2F11	2/11/08 13:07	2/13/08 14:56	2990	Noise: site personnel confirmed signals are noise
G2F3	2/17/08 10:11	3/13/08 13:53	36223	FN: sensor failure
G2F9 Ane	2/17/08 22:25	2/23/08 21:25	8581	Systematic error
G2F5	2/20/08 0:41	2/28/08 9:20	12040	DAC-FN: a poor connection resulted in no signal
FP	2/23/08 19:46	2/28/08 8:13	6508	DAC: Flagged FLR in error-FN: FP2000 module failed
G1N dP	2/28/08 6:45	3/29/08 10:29	43425	FN: a sensor failure
G2F15Ane	2/28/08 10:11	3/3/08 18:11	6241	DAC-FN: a severed signal wire
G2F5	2/28/08 12:22	3/6/08 11:58	10057	DAC-FN: a poor connection resulted in no signal
F9 PM	2/29/08 10:23	3/4/08 10:56	5794	FN: TEOM offline while room was cleaned
Far9	2/29/08 10:28	3/4/08 9:15	5688	FN: sensors covered during room cleaning
G2F21	2/29/08 17:26	3/4/08 4:24	4979	Noise: Noise common problem with this signal
G2F9 Ane	3/3/08 2:09	3/4/08 14:14	2166	Systematic error: Sensor subject to snow and ice buildup
G2F15Ane	3/3/08 17:48	3/6/08 12:51	4024	DAC-FN: a severed signal wire
Beta Inlet PM	3/5/08 1:31	3/6/08 10:11	1961	Systematic error-FN: error code 8 shown on Beta Gauge
F9 PM	3/6/08 13:28	3/13/08 10:32	9905	Low Flow
G2F6 T	3/14/08 8:31	3/17/08 12:13	4543	Systematic error-FN: TC needed a new tip
G1 PM	3/16/08 2:58	3/17/08 9:00	1803	Low Flow-FN: bypass tube blocked by dust
G2F13	3/19/08 7:54	4/5/08 15:21	24928	Noise-FN: fan is not running and wind turning blades
G2F3 T	3/19/08 16:59	3/21/08 9:19	2421	Systematic error: Unstable due to high manure in pit
F9F2	3/21/08 13:45	4/5/08 11:04	21440	Systematic error-FN: sensor needed adjustment
G1 PM	3/24/08 0:47	3/29/08 9:10	7704	Low Flow: bypass flow was blocked by dust
Inlet RH/T	3/27/08 10:25	3/29/08 11:28	2944	Sensor tip failed
OFIS dP	3/29/08 9:16	4/26/08 9:49	40354	FN: sensor replaced an barn sensor under repair
G2F3 T	3/29/08 10:21	4/5/08 12:29	10209	Systematic error

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Variable	Start Date/Time	End Date/Time	Minutes	Comment
F9 Atm P	3/29/08 14:01	4/8/08 19:42	14742	DAC: Download data not available
G2F8 T	3/29/08 15:16	4/5/08 13:52	9997	Systematic error
G2F11	3/31/08 6:30	4/4/08 13:06	6157	Noise: This fan is missing motor so signal is noise
G2F21	3/31/08 6:31	4/4/08 13:12	6162	Noise-FN: fan not working on 3/29 so this signal is noise
G1 PM	4/1/08 14:10	4/5/08 16:26	5897	Low Flow
G2F6 T	4/3/08 11:28	4/4/08 11:55	1468	Systematic error-FN: high pit level caused variable signal
G2F4	4/4/08 3:23	4/5/08 16:17	2215	FN: problem with sensor
G1 PM	4/6/08 3:27	4/8/08 16:59	3693	FN: TEOM lost software
TC	4/6/08 3:31	4/8/08 15:55	3625	DAC-FN: problem with TC module
G1 Atm P	4/6/08 3:42	4/8/08 18:44	3783	FN: TEOM lost software
G2F1 T	4/6/08 5:43	4/11/08 5:04	7162	Systematic error-FN: sensor tip eventually remade
G2F6 T	4/10/08 9:47	4/12/08 11:28	2982	Systematic error
G2F6 T	4/10/08 9:58	4/12/08 11:17	2960	Systematic error-FN: sensor tip eventually remade
Fan speed	4/13/08 5:20	4/15/08 6:24	2945	DAC: Problem with sensors, fans operating normally
G1 Atm P	4/19/08 19:25	4/26/08 9:29	9485	TEOM offline while troubleshooting
G1 PM	4/19/08 20:11	5/3/08 9:21	19511	FN: MFC failure
G1 Atm P	4/26/08 9:30	5/3/08 10:13	10124	DAC-FNG2 Pressure signal connected but no output
G2F6	4/29/08 10:35	5/1/08 11:21	2927	Systematic error: unstable signal - fan not turned off
G1 Atm P	5/3/08 10:31	5/28/08 8:47	35897	DAC
G2 PM	5/3/08 16:43	6/8/08 12:12	51570	FN: MFC failure
Environics	5/9/08 16:14	5/29/08 8:01	28308	FN: Environics offline
Fan speed	5/29/08 14:32	6/5/08 7:58	9687	DAC-FN: problem with counter module
Far9	6/2/08 7:24	6/3/08 10:33	1630	FN: sensors covered during room cleaning
G2F9	6/2/08 9:47	6/5/08 8:58	4272	FN: sensor failure
G2F9 Ane	6/4/08 19:18	7/17/08 2:52	60935	FN: bearing broke
G1 Atm P	6/5/08 11:42	6/8/08 9:08	4167	FN: sensor failure
G1 PM	6/5/08 11:52	6/8/08 8:58	4147	FN: sensor failure
Solar	6/13/08 3:48	8/12/08 14:46	87059	FN: sensor damaged during lightning storm
G2F2	6/13/08 5:46	7/3/08 10:04	29059	Related to thunderstorm
G2F3	6/13/08 5:46	7/3/08 10:04	29059	Related to thunderstorm
G2F5	6/13/08 5:46	7/3/08 10:04	29059	Related to thunderstorm

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Variable	Start Date/Time	End Date/Time	Minutes	Comment
G2F9	6/13/08 5:46	7/3/08 10:04	29059	Related to thunderstorm
G2F10	6/13/08 5:46	7/3/08 10:04	29059	Related to thunderstorm
G1F10	6/13/08 6:35	7/3/08 9:58	29004	Related to thunderstorm
G1 w speed sensor	6/13/08 6:44	7/5/08 5:16	31593	Related to thunderstorm
Fan speed	6/13/08 7:01	6/17/08 8:45	5865	DAC-FN: 4th & 5th counter modules damaged in storm
FP	6/13/08 7:38	6/17/08 10:57	5960	DAC-FN: third FP module damaged in lightning storm
G1 PM	6/13/08 7:41	6/20/08 10:08	10228	FN: MFC failure
G2F1	6/13/08 8:02	6/17/08 11:31	5970	DAC-FN: counter channel problems
G2F4	6/13/08 8:11	6/17/08 11:40	5970	DAC: signal error related to counter module
G2S dP	6/14/08 17:53	6/17/08 12:08	3976	FN: sensor failure
G2 w speed sensors	6/17/08 8:10	7/5/08 4:48	25719	related to thunderstorm
OFIS dP	6/17/08 10:46	7/2/08 10:27	21582	FN: sensor is being used as a replacement elsewhere
G1F16 Ane	6/17/08 11:12	6/20/08 12:52	4421	Systematic error
G1F16 Ane	6/17/08 11:18	6/20/08 12:30	4393	Systematic error
F9F1	6/17/08 12:10	6/25/08 8:22	11293	FN: sensor failure
G2F15Ane	6/17/08 12:11	6/20/08 12:25	4335	Systematic error-FN: a broken wire
F9F3	6/17/08 12:58	7/2/08 15:21	21744	Failure
F9F2	6/17/08 13:52	6/25/08 7:46	11155	FN: sensor failure
Activity sensors	6/17/08 14:23	7/31/08 13:30	63308	FN: sensors damaged in lightning storm
TC	6/20/08 9:01	6/25/08 10:58	7318	DAC-FNTC module offline
G2F15Ane	6/20/08 14:51	7/17/08 9:47	38577	Systematic error-FN: a broken wire
Far9	6/24/08 6:44	6/25/08 8:20	1537	FN: sensors covered during room cleaning
G1E T	7/1/08 14:54	7/8/08 10:46	9833	Systematic error: instability likely from wire connection
F9F3	7/2/08 23:17	7/10/08 13:57	10961	FN: sensor not yet installed
F9F3	7/2/08 23:22	7/4/08 23:53	2912	FN: sensor replaced with current switch
G1F10	7/2/08 23:35	7/10/08 12:11	10837	DAC-FN: loose wire connection on DAQ board
G1E RH/T	7/10/08 10:36	7/11/08 11:24	1489	Systematic error: instability likely from wire connection
G1F16 Ane	7/11/08 12:22	7/17/08 11:13	8572	DAC-FN: broken wire in junction box
G2E RH/T	7/19/08 12:07	7/22/08 15:11	4505	FN: sensor replaced and rewired
Fan speed	7/21/08 16:31	7/24/08 8:55	3865	DAC-FN: DAQ module not working
Inlet RH/T	7/23/08 2:50	7/31/08 13:17	12148	FN: sensor failure

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Variable	Start Date/Time	End Date/Time	Minutes	Comment
digital	7/24/08 9:07	7/25/08 13:45	1719	DAC-FNDIO96H module not working
G2F6 Ane	7/24/08 10:10	8/15/08 11:32	31763	FN: bearing problem and sensor returned for repairs
G1 PM	7/24/08 11:30	7/25/08 21:59	2070	FN: motherboard failed
G1 Atm P	7/24/08 12:02	7/25/08 12:39	1478	FN: a motherboard failure in TEOM
G1 PM	7/25/08 22:58	7/29/08 10:07	4990	Systematic error-FN: air temperature problem
G1 PM	7/29/08 14:34	7/31/08 9:05	2552	Systematic error-FN: TEOM air cap temperature problem
G1 PM	7/31/08 11:23	8/4/08 14:05	5923	Systematic error-FN: low TEOM cap case and air temp.
Solar	8/12/08 14:40	8/29/08 12:51	24372	Systematic error-FN: needs recalibration w/ adapter
G1F11	8/12/08 23:45	8/14/08 0:14	1470	FN: sensor replaced with current switch
G2F9 Ane	8/21/08 12:13	9/19/08 12:16	41764	FN: anemometer returned to manufacturer for repairs
digital	8/21/08 13:48	8/23/08 13:28	2861	DAC-FN: DIO96H module offline
Solar	8/29/08 12:25	9/19/08 12:09	30225	FN: sensor offline for recalibration
G1 PM	9/3/08 10:41	9/23/08 11:33	28853	DAC-FN: cable problem
G2MidE T	9/11/08 6:57	9/13/08 14:25	3329	Systematic error: periodic instability in signal
G1F1 T	9/11/08 21:56	9/13/08 22:02	2887	Systematic error: temporary instability in signal
Inlet RH/T	9/12/08 19:18	9/16/08 18:05	5688	Systematic error: sensor offline temporarily
G1 Atm P	9/18/08 8:03	9/19/08 16:18	1936	FN: TEOM offline
G2 PM	9/19/08 15:54	9/23/08 9:54	5401	Systematic error-FN: signals affected by output selection
G1 Atm P	9/19/08 16:12	9/23/08 12:54	5563	Systematic error: P from G2 TEOM out of range
G1 Atm P	9/23/08 3:08	11/21/08 13:58	85611	DAC output atm P does not match atm P from file
F9 PM	9/26/08 17:56	10/3/08 13:33	9818	Low Flow-FN: flow problem
INNOVA	10/5/08 11:48	10/10/08 12:24	7237	FN: INNOVA offline to repair pulley motor
G1F16 Ane	10/17/08 14:01	11/26/08 11:49	57469	FN: bearing failure

APPENDIX D. BIOMATERIALS CHARACTERISTICS.

Table D1. Feed characteristics (mean ± SD).

Barn	Date	n	Percent (wet weight basis)		
			Nitrogen	Solids	Sulfur
Gestation	12/14/07	3	1.87 ± 0.13	86.1 ± 0.17	-
Farrowing	12/14/07	3	2.65 ± 0.10	86.3 ± 0.06	-
Feed 1	12/18/08	1	2.39	84.4	0.33
Feed 2	12/18/08	1	2.51	84.4	0.26
Feed 3	12/18/08	1	2.89	82.5	0.41

Table D2. Surface manure characteristics (mean ± SD).

Barn	Date	n	pH (SU)	Percent (wet weight basis)		
				Nitrogen	Solids	Ammonia
G1	4/9/08	12	7.72 ± 0.15	-	0.80 ± 0.30	0.22 ± 0.05
F9	4/9/08	4	6.59 ± 0.02	-	1.95 ± 0.07	0.35 ± 0.01
F9	5/12/08	4	6.75 ± 0.06	-	1.69 ± 0.02	0.36 ± 0.01
F9	8/14/08	5	6.61 ± 0.15	-	1.22 ± 0.36	0.24 ± 0.03
G1	8/14/08	9	7.76 ± 0.16	-	0.85 ± 0.45	0.26 ± 0.01
G2	8/14/08	9	7.76 ± 0.11	-	1.01 ± 0.35	0.25 ± 0.01
F9	9/12/08	4	6.47 ± 0.11	-	1.46 ± 0.47	0.29 ± 0.07
F9	10/5/08	4	6.66 ± 0.08	-	1.37 ± 0.29	0.29 ± 0.06
G1	12/23/08	18	7.81 ± 0.17	-	3.36 ± 1.93	0.31 ± 0.03
G2	12/23/08	18	7.70 ± 0.12	-	2.65 ± 1.44	0.29 ± 0.06
F9	12/23/08	8	6.32 ± 0.08	-	1.16 ± 0.12	0.12 ± 0.03
G1	3/12/09	18	7.25 ± 1.17	-	1.37 ± 0.84	0.23 ± 0.03
G2	3/12/09	16	7.46 ± 0.34	-	1.41 ± 0.40	0.19 ± 0.04
F9	3/12/09	8	6.95 ± 0.13	-	0.69 ± 0.16	0.14 ± 0.04
G1	4/11/09	6	-	0.36 ± 0.03	1.78 ± 0.63	-
G2	4/11/09	9	-	0.32 ± 0.02	1.50 ± 0.32	-
G1	7/2/09	9	7.79 ± 0.07	-	1.30 ± 0.63	0.24 ± 0.02
G2	7/2/09	9	7.83 ± 0.05	-	1.10 ± 0.33	0.24 ± 0.01
F9	7/2/09	6	6.94 ± 0.04	-	1.24 ± 0.26	0.22 ± 0.05
G1	9/4/09	2	7.61 ± 0.14	-	0.89 ± 0.28	0.20 ± 0.05
G2	9/4/09	2	7.66 ± 0.13	-	0.90 ± 0.16	0.22 ± 0.01
F9	9/4/09	2	7.00 ± 0.09	-	0.96 ± 0.33	0.13 ± 0.06

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Table D3. Loadout manure characteristics (mean ± SD).

Barn	Date	n	pH (SU)	Percent (wet weight basis)			
				Nitrogen	Solids	Ammonia	Sulfur
BG	12/10/07	24	7.94 ± 0.12	0.27 ± 0.02	1.24 ± 0.46	0.22 ± 0.01	-
G2	4/8/08	24	-	0.33 ± 0.07	1.05 ± 0.73	-	-
G1	10/5/08	18	-	0.32 ± 0.10	1.64 ± 1.85	-	-
G2	10/5/08	18	-	0.31 ± 0.06	1.76 ± 1.71	-	-
BG	4/16/09	12	7.48 ± 0.21	0.61 ± 0.19	11.7 ± 8.46	0.22 ± 0.01	0.10 ± 0.3
G1	4/22/09	9	-	0.44 ± 0.12	3.14 ± 3.24	-	0.10 ± 0.4

Table D4. Water characteristics (mean ± SD).

Barn	Date	n	mg/L			
			Nitrate/Nitrite	TKN	TKN + NO_3	Sulfur
Farrowing	12/18/08	1	4.90	1.00	5.91	20.5
Gestation	12/18/08	2	1.75 ± 0.07	1.80 ± 0.28	3.59 ± 0.36	343 ± 1.41
Farrowing	1/2/09	1	3.50	-	3.72	26.0
Gestation	1/2/09	2	2.00 ± 0.99	0.70 ± 0.00	2.34 ± 1.47	328 ± 38.9

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APPENDIX E. DAILY MEANS.

Table E1. Weather parameters

Table E1. Daily means (SD) of weather at site IA4B for July, 2007

Day	Temp., ºC	RH, %	Wind spd., m·s^{-}	Wind dir, °	Solar, W·m^{-2}	Atm P, kPa
1	21.5 (4.2)	61.3 (16.4)	3.69 (1.39)	102 (13)	227 (253)	
2	22.6 (4.5)	63.2 (14.7)	3.70 (1.52)	143 (26)	221 (248)	
3	25.4 (3.8)	69.4 (6.4)	3.83 (1.07)	209 (33)	178 (215)	
4	26.5 (3.3)	66.3 (11.9)	3.02 (1.50)	287 (42)	217 (252)	
5	26.3 (3.8)	60.5 (16.7)	2.28 (1.15)	307 (67)	226 (252)	
6	26.9 (4.7)	60.0 (14.9)	1.64 (0.73)	326 (111)	214 (245)	
7	27.5 (4.0)	62.6 (13.9)	4.62 (2.71)	208 (34)	222 (248)	
8	27.9 (3.9)	63.5 (11.4)	4.98 (1.95)	228 (15)	223 (248)	
9	26.1 (2.5)	73.1 (8.0)	2.42 (0.95)	40 (109)	166 (210)	
10	24.1 (3.2)	67.8 (15.3)	4.90 (2.72)	270 (62)	190 (219)	
11	20.0 (4.0)	62.5 (15.8)	4.63 (2.08)	295 (16)	206 (252)	
12	21.2 (4.5)	59.4 (13.4)	3.20 (1.50)	292 (40)	210 (235)	
13	20.9 (4.8)	54.9 (15.1)	2.47 (1.04)	289 (60)	228 (252)	
14	23.7 (4.5)	56.2 (10.7)	3.96 (1.59)	286 (72)	202 (239)	
15	24.3 (4.0)	58.0 (14.2)	1.61 (0.88)	357 (127)	207 (244)	
16	26.0 (4.9)	67.5 (13.1)	3.67 (1.64)	204 (61)	193 (237)	
17	27.1 (4.4)	68.2 (13.6)	4.16 (1.40)	177 (39)	179 (220)	
18	26.2 (3.5)	72.9 (10.0)	4.41 (1.67)	226 (73)	117 (183)	
19	24.0 (3.1)	74.4 (16.5)	3.54 (1.32)	349 (128)	183 (233)	
20	20.1 (3.8)	71.7 (10.7)	3.55 (0.86)	91 (26)	196 (246)	98.1 (0.1)
21	20.7 (4.1)	67.3 (15.8)	3.47 (1.30)	127 (22)	230 (254)	98.3 (0.1)
22						
23						
24						
25						
26						
27			3.12 (1.17)	336 (134)	165 (233)	97.2 (0.1)
28			2.91 (1.20)	53 (70)	226 (280)	97.5 (0.1)
29			2.93 (0.83)	80 (20)	258 (297)	97.6 (0.1)
30			2.51 (0.86)	114 (23)	232 (283)	97.8 (0.1)
31			2.53 (0.81)	124 (26)	266 (302)	97.8 (0.1)
Avg	24.2	64.8	3.38	269	207	97.8
n	21	21	26	26	26	7
SD	2.6	5.6	0.92	96	30	0.3
Min	20.0	54.9	1.61	40	117	97.2
Max	27.9	74.4	4.98	357	266	98.3

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Table E1. Daily means (SD) of weather at site IA4B for August, 2007

Day	Temp., ºC	RH, %	Wind spd, $m \cdot s^{-1}$	Wind dir., °	Solar, $W \cdot m^{-2}$	Atm P, kPa
1			2.24 (0.74)	143 (31)	261 (299)	97.6 (0.1)
2			1.73 (0.92)	326 (115)		97.6 (0.1)
3			1.87 (0.66)	26 (131)	245 (296)	97.9 (0.1)
4			4.79 (1.55)	118 (25)	110 (182)	97.4 (0.3)
5						
6			2.74 (1.15)	108 (69)	136 (205)	96.9 (0.1)
7			2.89 (1.94)	265 (91)	270 (370)	96.9 (0.1)
8			2.53 (0.92)	167 (63)	155 (199)	97.0 (0.1)
9			2.87 (1.55)	286 (52)	244 (295)	97.2 (0.2)
10			2.33 (0.78)	131 (81)	251 (294)	97.6 (0.1)
11	28.1 (4.1)	71.3 (12.3)	3.62 (1.26)	170 (27)	228 (279)	97.4 (0.1)
12	27.4 (2.5)	74.8 (11.2)	2.66 (1.35)	39 (110)	227 (290)	97.8 (0.1)
13	26.8 (3.9)	77.1 (13.9)	3.09 (0.96)	127 (41)	212 (263)	97.7 (0.2)
14	27.5 (3.2)	79.5 (10.8)	2.95 (1.19)	103 (100)	172 (229)	97.2 (0.1)
15	26.0 (2.2)	87.9 (5.6)	3.51 (2.06)	79 (101)	117 (187)	97.1 (0.1)
16	23.6 (2.2)	84.2 (13.5)	1.89 (1.20)	37 (121)	104 (172)	97.6 (0.2)
17	21.2 (3.0)	73.2 (16.5)	3.38 (1.45)	62 (100)	212 (265)	98.0 (0.1)
18	22.2 (4.3)	80.9 (7.7)	5.05 (1.68)	124 (34)	185 (237)	97.6 (0.3)
19	25.2 (2.8)	84.1 (7.9)	3.36 (1.55)	197 (59)	157 (221)	97.1 (0.1)
20	24.2 (2.5)	86.0 (8.3)	3.51 (2.02)	124 (57)	134 (211)	96.9 (0.1)
21	27.2 (3.9)	80.2 (11.7)	3.81 (1.88)	210 (60)	229 (280)	97.1 (0.1)
22	23.1 (3.5)	86.6 (8.8)	3.57 (1.48)	187 (79)	117 (200)	97.3 (0.1)
23	22.7 (2.4)	90.1 (5.4)	2.42 (1.40)	177 (74)	96 (165)	96.9 (0.1)
24	21.4 (1.4)	89.6 (6.4)	2.34 (1.43)	271 (97)	54 (80)	97.0 (0.1)
25	21.6 (4.0)	68.9 (16.5)	2.08 (1.21)	317 (99)	238 (287)	97.5 (0.1)
26	21.9 (3.5)	71.8 (11.5)	3.67 (1.74)	145 (20)	230 (277)	97.6 (0.1)
27	25.7 (4.6)	74.9 (8.6)	4.88 (1.21)	170 (22)	199 (264)	97.2 (0.1)
28	26.8 (4.1)	76.6 (12.4)	3.92 (1.56)	220 (55)	223 (273)	97.4 (0.1)
29	21.7 (2.6)	81.4 (10.3)	3.01 (1.19)	335 (141)	137 (205)	98.0 (0.2)
30	20.6 (5.0)	63.7 (18.7)	2.06 (0.95)	29 (114)	251 (284)	98.3 (0.1)
31						
Avg	24.2	79.1	3.06	136	186	97.4
n	20	20	29	29	28	29
SD	2.5	7.1	0.88	88	59	0.4
Min	20.6	63.7	1.73	26	54	96.9
Max	28.1	90.1	5.05	335	270	98.3

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Table E1. Daily means (SD) of weather at site IA4B for September, 2007

Day	Temp., ºC	RH, %	Wind spd, $m \cdot s^{-1}$	Wind dir., °	Solar, $W \cdot m^{-2}$	Atm P, kPa
1	21.4 (4.1)	68.2 (15.4)	2.32 (1.18)	149 (26)	229 (277)	98.1 (0.1)
2	22.8 (5.3)	65.9 (16.0)	2.53 (1.23)	191 (40)	227 (276)	97.9 (0.1)
3	25.0 (5.0)	61.4 (17.3)	2.03 (0.79)	204 (33)	219 (270)	97.8 (0.1)
4	25.1 (5.0)	69.3 (14.9)	2.61 (1.21)	178 (39)	203 (257)	97.4 (0.1)
5	24.9 (3.4)	77.3 (13.0)	3.42 (1.26)	163 (20)	187 (251)	97.2 (0.1)
6	23.5 (2.4)	85.1 (8.5)	3.61 (1.00)	175 (25)	106 (134)	97.0 (0.2)
7						
8			1.70 (1.01)	71 (80)		97.6 (0.1)
9			2.74 (1.88)	25 (122)		97.9 (0.2)
10			3.07 (1.11)	339 (143)		98.0 (0.1)
11			5.66 (2.83)	290 (29)		97.6 (0.2)
12			2.56 (0.85)	141 (85)		97.9 (0.2)
13			4.72 (1.95)	226 (63)		97.3 (0.2)
14			5.45 (2.71)	310 (46)		98.1 (0.3)
15			2.51 (1.21)	166 (76)		98.4 (0.3)
16			3.76 (1.12)	153 (23)		97.7 (0.2)
17			5.45 (1.25)	179 (32)		97.2 (0.1)
18			4.94 (1.77)	209 (37)		97.3 (0.1)
19	19.2 (3.6)	73.2 (17.8)	2.78 (1.04)	334 (107)		98.0 (0.2)
20	21.7 (5.4)	74.9 (11.8)	4.19 (1.17)	138 (33)		97.7 (0.4)
21	22.9 (4.6)	70.8 (12.5)	5.14 (2.47)	230 (49)	147 (219)	97.0 (0.3)
22	17.8 (4.5)	54.2 (16.0)	2.16 (1.13)	149 (82)	201 (255)	97.9 (0.1)
23	22.3 (6.1)	58.7 (9.3)	3.75 (1.44)	142 (24)	178 (232)	97.6 (0.2)
24	24.6 (2.9)	71.0 (8.9)	4.36 (1.31)	184 (25)	110 (157)	97.2 (0.1)
25	16.6 (3.5)	80.1 (5.1)	3.85 (1.99)	302 (88)	33 (50)	97.5 (0.2)
26	14.8 (4.4)	65.4 (16.8)	1.63 (1.00)	207 (60)	183 (239)	97.7 (0.2)
27	18.3 (4.5)	55.5 (19.1)	3.13 (1.44)	277 (48)	141 (210)	97.5 (0.1)
28	16.1 (5.4)	50.5 (17.3)	2.01 (0.80)	113 (100)	188 (245)	98.0 (0.1)
29	19.8 (4.5)	52.5 (8.2)	5.92 (1.61)	161 (23)	116 (178)	97.7 (0.2)
30	19.8 (4.4)	68.1 (12.9)	5.45 (1.70)	188 (32)	99 (162)	97.2 (0.3)
Avg	20.9	66.8	3.57	184	160	97.6
n	18	18	29	29	16	29
SD	3.2	9.5	1.30	73	54	0.4
Min	14.8	50.5	1.63	25	33	97.0
Max	25.1	85.1	5.92	339	229	98.4

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Table E1. Daily means (SD) of weather at site IA4B for October, 2007

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, $W \cdot m^{-2}$	Atm P, kPa
1	19.0 (3.6)	76.0 (13.5)	4.42 (2.29)	262 (59)	131 (196)	97.6 (0.3)
2	16.3 (2.4)	84.0 (5.9)	4.83 (1.81)	183 (66)	15 (26)	96.9 (0.4)
3	16.8 (5.1)	58.1 (19.9)	3.03 (1.10)	217 (47)	177 (231)	97.3 (0.1)
4	20.7 (5.8)	71.8 (7.0)	3.90 (1.05)	162 (27)	134 (192)	97.3 (0.1)
5	24.3 (3.7)	72.8 (12.1)	5.04 (1.87)	157 (17)	127 (202)	97.3 (0.1)
6	25.0 (3.5)	73.7 (11.1)	4.33 (1.19)	177 (28)	139 (200)	97.3 (0.1)
7	23.9 (1.8)	83.4 (4.6)	3.54 (0.90)	170 (28)	75 (108)	97.3 (0.1)
8	18.2 (3.2)	72.1 (18.5)	4.75 (2.22)	254 (52)	125 (203)	97.3 (0.2)
9	14.8 (4.2)	60.5 (13.5)	6.27 (3.09)	283 (39)	164 (218)	97.7 (0.1)
10	8.9 (1.3)	65.2 (6.1)	6.26 (2.22)	319 (100)	117 (178)	97.8 (0.1)
11	8.5 (2.9)	71.7 (11.3)	2.74 (1.20)	34 (120)	119 (177)	97.8 (0.2)
12	11.2 (3.5)	71.4 (10.6)	2.48 (0.87)	130 (47)	89 (149)	97.4 (0.2)
13	12.4 (1.0)	88.2 (3.0)	3.60 (1.10)	111 (25)	23 (41)	97.3 (0.1)
14	13.8 (1.6)	90.2 (2.6)	4.66 (1.57)	96 (51)	22 (44)	97.3 (0.1)
15	15.0 (2.0)	85.4 (5.1)	4.55 (1.46)	119 (37)	51 (110)	96.8 (0.1)
16	12.1 (1.2)	82.6 (4.7)	3.79 (1.73)	212 (47)	30 (52)	96.9 (0.1)
17	13.5 (2.2)	86.7 (5.7)	4.80 (1.54)	122 (20)	39 (66)	96.2 (0.6)
18	14.3 (0.8)	89.2 (2.8)	7.41 (2.87)	206 (51)	30 (52)	94.7 (0.2)
19	12.3 (1.8)	71.4 (8.8)	8.05 (3.30)	267 (18)	58 (87)	95.8 (0.4)
20	15.7 (6.5)	59.0 (14.9)	4.32 (1.63)	176 (29)	139 (191)	96.1 (0.3)
21	16.8 (3.3)	64.7 (4.8)	6.60 (2.15)	245 (66)	76 (121)	96.4 (0.6)
22	9.5 (1.9)	67.6 (10.7)	3.53 (1.59)	321 (91)	39 (63)	97.8 (0.1)
23	10.8 (5.4)	56.2 (14.4)	3.63 (1.96)	287 (55)	139 (193)	97.5 (0.2)
24	7.9 (3.1)	59.9 (13.7)	3.71 (1.49)	351 (139)	139 (194)	98.3 (0.2)
25	7.4 (4.1)	64.4 (11.4)	3.14 (1.10)	69 (25)	138 (192)	98.1 (0.3)
26	10.0 (1.3)	79.6 (2.4)	2.61 (0.85)	16 (123)	15 (25)	97.8 (0.1)
27						
28						
29	11.1 (5.4)	61.0 (10.6)	4.03 (1.83)	205 (32)	123 (175)	98.5 (0.2)
30	14.6 (4.2)	66.4 (13.3)	5.38 (1.63)	194 (29)	98 (155)	97.5 (0.3)
31	9.5 (3.4)	54.3 (14.8)	7.28 (3.87)	288 (32)	100 (161)	97.8 (0.4)
Avg	14.3	72.0	4.57	203	92	97.2
n	29	29	29	29	29	29
SD	4.8	10.6	1.45	84	49	0.8
Min	7.4	54.3	2.48	16	15	94.7
Max	25.0	90.2	8.05	351	177	98.5

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Table E1. Daily means (SD) of weather at site IA4B for November, 2007

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, $W \cdot m^{-2}$	Atm P, kPa
1	6.6 (5.1)	51.3 (15.1)	2.93 (1.12)	217 (43)	125 (176)	98.2 (0.2)
2	7.0 (4.5)	53.9 (11.0)	3.84 (1.38)	254 (60)	110 (168)	98.0 (0.2)
3	7.0 (4.4)	49.7 (12.6)	3.65 (1.79)	254 (36)	95 (151)	98.0 (0.4)
4	9.5 (4.9)	48.0 (13.9)	5.23 (1.53)	248 (41)	110 (161)	97.1 (0.3)
5	6.7 (2.9)	50.7 (9.5)	11.90 (3.70)	301 (20)	97 (161)	97.4 (0.6)
6	0.9 (2.5)	59.3 (10.9)	7.52 (3.50)	309 (71)	116 (166)	98.5 (0.2)
7	2.1 (4.8)	59.6 (13.9)	3.51 (2.05)	188 (56)	89 (143)	98.0 (0.6)
8	4.3 (3.1)	59.4 (11.8)	3.48 (1.71)	305 (53)	73 (127)	97.3 (0.2)
9	4.4 (4.3)	64.9 (12.3)	2.37 (1.32)	321 (124)	105 (155)	97.8 (0.1)
10	6.7 (4.6)	65.2 (12.9)	5.43 (2.39)	134 (28)	61 (99)	97.5 (0.5)
11	15.5 (3.3)	76.6 (7.6)	4.13 (1.62)	214 (34)	22 (35)	96.8 (0.1)
12	9.0 (3.7)	50.8 (17.0)	3.15 (1.43)	333 (137)	96 (150)	97.7 (0.3)
13	7.3 (5.4)	49.9 (12.4)	3.52 (2.08)	213 (43)	74 (109)	97.0 (0.6)
14	6.9 (2.1)	49.2 (7.7)	10.80 (3.38)	297 (16)	62 (124)	97.2 (0.3)
15	3.3 (1.4)	53.0 (6.3)	6.76 (3.60)	285 (55)	86 (140)	97.9 (0.1)
16	6.8 (3.7)	46.6 (11.4)	4.25 (2.01)	201 (52)	89 (136)	96.9 (0.4)
17	5.6 (2.3)	61.2 (12.0)	3.88 (1.55)	20 (114)	87 (138)	97.2 (0.4)
18	3.1 (1.1)	86.6 (2.8)	5.89 (1.54)	111 (18)	18 (27)	97.8 (0.2)
19	8.7 (6.3)	83.0 (13.6)	4.41 (1.90)	165 (87)	63 (112)	97.0 (0.2)
20	5.3 (1.4)	91.8 (3.5)	6.62 (1.19)	51 (76)	6 (9)	97.1 (0.2)
21	-0.5 (1.0)	85.0 (4.7)	6.96 (1.53)	345 (152)	18 (28)	97.8 (0.2)
22						
23	-4.6 (2.1)	77.9 (4.6)	3.87 (1.77)	241 (30)	92 (143)	98.6 (0.2)
24	-1.2 (1.7)	80.8 (2.1)	6.25 (1.82)	236 (13)	67 (117)	98.0 (0.1)
25	0.7 (3.0)	80.3 (7.7)	4.84 (2.96)	224 (21)	85 (133)	97.5 (0.2)
26	1.0 (2.2)	72.6 (7.9)	4.10 (2.04)	302 (80)	80 (129)	97.7 (0.3)
27	-3.8 (2.1)	59.0 (12.1)	5.30 (1.96)	70 (102)	75 (124)	98.2 (0.3)
28	-0.2 (3.2)	65.6 (12.4)	7.16 (2.54)	259 (69)	40 (75)	97.4 (0.4)
29	-1.4 (4.6)	58.1 (9.5)	3.80 (1.39)	237 (59)	79 (130)	98.0 (0.2)
30	-5.6 (2.4)	57.3 (12.0)	4.88 (2.84)	313 (78)	86 (135)	98.7 (0.3)
Avg	3.8	63.7	5.19	262	76	97.7
n	29	29	29	29	29	29
SD	4.7	13.3	2.15	84	30	0.5
Min	-5.6	46.6	2.37	20	6	96.8
Max	15.5	91.8	11.90	345	125	98.7

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Table E1. Daily means (SD) of weather at site IA4B for December, 2007

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	-1.8 (3.1)	78.7 (16.0)		124 (47)	4 (6)	97.2 (1.0)
2	-3.6 (3.7)	80.8 (4.7)	9.43 (2.64)	298 (13)	38 (67)	97.4 (0.7)
3	-5.0 (3.8)	74.6 (4.6)	4.16 (1.79)	216 (63)	73 (112)	98.3 (0.4)
4	-1.7 (1.6)	82.7 (3.9)	3.11 (1.67)	101 (75)	37 (60)	96.9 (0.6)
5	-5.7 (1.9)	77.8 (7.5)	4.96 (2.98)	6 (137)	88 (135)	97.6 (0.7)
6	-5.6 (2.7)	87.0 (4.6)	3.60 (1.22)	171 (32)	18 (27)	97.6 (0.3)
7	-5.2 (2.4)	83.6 (8.6)	2.84 (1.11)	300 (71)	55 (96)	97.8 (0.3)
8						
9						
10	-7.4 (1.7)	85.9 (2.1)	1.55 (0.61)	196 (60)	55 (99)	98.3 (0.1)
11	-2.9 (1.3)	86.8 (2.9)		355 (140)	26 (50)	97.9 (0.2)
12	-5.2 (1.3)	82.0 (3.7)		249 (103)	54 (89)	98.2 (0.3)
13	-2.2 (1.7)	81.9 (5.2)		261 (24)	88 (168)	97.6 (0.2)
14	-10.7 (1.3)	75.5 (2.7)		8 (138)	41 (62)	98.6 (0.1)
15	-8.5 (1.5)	83.3 (2.1)		11 (138)	39 (63)	97.8 (0.4)
16	-8.5 (1.8)	85.0 (2.4)	3.04 (1.26)	280 (30)	47 (75)	97.6 (0.2)
17	-7.6 (3.5)	84.2 (1.8)	2.31 (1.16)	178 (27)	39 (57)	97.6 (0.2)
18	-2.3 (1.7)	80.8 (3.0)	3.76 (1.37)	236 (51)	79 (127)	97.1 (0.2)
19	-4.2 (2.6)	83.9 (2.2)	3.13 (1.75)	144 (69)	70 (116)	97.5 (0.1)
20	-0.1 (1.6)	89.4 (2.9)	3.81 (2.03)	121 (28)	39 (61)	96.8 (0.1)
21	1.7 (0.5)	91.2 (0.7)	4.36 (2.12)	128 (28)	30 (47)	96.8 (0.1)
22	-2.5 (4.8)	89.1 (2.2)	9.15 (4.50)	299 (73)	13 (22)	96.7 (0.2)
23	-9.5 (2.7)	78.4 (2.1)	11.90 (1.72)	278 (13)	76 (124)	96.7 (0.3)
24	-4.4 (1.1)	84.7 (2.5)	5.94 (2.57)	266 (53)	30 (49)	97.5 (0.1)
25	-0.6 (4.5)	76.7 (8.7)	3.24 (1.20)	158 (32)	83 (133)	97.4 (0.1)
26	-1.8 (1.4)	86.1 (2.8)	2.79 (1.21)	356 (142)	27 (48)	97.2 (0.1)
27	-4.1 (0.9)	84.1 (3.6)	3.27 (1.27)	21 (130)	28 (45)	
28	-4.1 (1.2)	88.3 (2.2)	5.09 (1.61)	350 (117)	58 (100)	
29	-5.6 (1.2)	82.9 (3.4)	2.78 (0.86)	201 (38)	64 (105)	97.3 (0.1)
30	-6.9 (2.8)	85.9 (1.5)	1.80 (0.77)	122 (50)	52 (86)	96.8 (0.3)
31	-7.4 (1.6)	84.9 (1.9)	4.82 (4.52)	294 (82)	40 (65)	97.0 (0.4)
Avg	-4.6	83.3	4.38	258	48	97.4
n	29	29	23	29	29	27
SD	2.9	4.1	2.49	104	22	0.5
Min	-10.7	74.6	1.55	6	4	96.7
Max	1.7	91.2	11.90	356	88	98.6

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Table E1. Daily means (SD) of weather at site IA4B for January, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	-13.0 (2.1)	79.3 (3.7)	10.90 (1.99)	297 (12)	75 (123)	98.6 (0.5)
2	-14.1 (2.3)	75.1 (2.8)	4.89 (2.55)	282 (49)	87 (133)	99.7 (0.2)
3	-8.5 (5.5)	70.9 (8.0)	5.67 (1.63)	174 (42)	87 (134)	98.6 (0.6)
4						
5	2.2 (2.3)	89.0 (1.6)	4.29 (1.16)	170 (36)	49 (79)	96.4 (0.1)
6	4.0 (0.8)	88.1 (2.3)	3.09 (1.32)	215 (77)	35 (56)	96.2 (0.3)
7	3.3 (1.4)	90.5 (1.0)	2.79 (1.21)	229 (78)	14 (23)	96.5 (0.1)
8	-0.2 (1.1)	87.4 (4.5)			15 (23)	96.8 (0.3)
9	-1.4 (1.7)	82.7 (2.8)	3.80 (1.62)	150 (67)	34 (50)	97.5 (0.2)
10	0.0 (0.9)	89.5 (1.2)	5.11 (2.22)	40 (111)	15 (22)	96.4 (0.4)
11	-3.9 (1.3)	86.7 (2.0)	4.44 (2.17)	246 (76)	59 (96)	96.6 (0.2)
12	-3.7 (1.5)	87.0 (1.5)	4.69 (3.05)	315 (90)	42 (74)	97.2 (0.3)
13	-6.2 (2.3)	82.3 (3.7)	4.77 (2.15)	299 (75)	65 (106)	97.7 (0.1)
14	-10.1 (2.5)	78.0 (3.7)	7.94 (1.81)	299 (12)	94 (142)	98.1 (0.1)
15	-10.4 (4.1)	77.0 (3.0)	4.24 (2.56)	148 (75)	93 (142)	97.6 (0.4)
16	-3.7 (1.8)	81.4 (4.8)	5.19 (1.73)	268 (83)	37 (59)	97.2 (0.2)
17	-12.6 (2.4)	80.1 (4.5)	6.45 (2.16)	283 (49)	86 (134)	97.0 (0.1)
18	-15.7 (2.2)	75.5 (3.3)	6.35 (4.02)	300 (65)	80 (124)	97.7 (0.5)
19	-19.9 (2.2)	71.3 (5.7)	4.16 (1.34)	301 (36)	100 (151)	98.6 (0.1)
20	-16.6 (3.4)	72.7 (5.4)	2.36 (1.24)	56 (110)	75 (113)	99.0 (0.2)
21	-10.3 (2.2)	86.2 (1.7)	7.03 (1.29)	82 (44)	49 (78)	98.3 (0.5)
22	-13.3 (2.6)	78.3 (7.5)	5.97 (1.77)	266 (40)	104 (157)	97.9 (0.2)
23	-14.1 (3.2)	76.5 (3.1)	4.38 (2.85)	7 (129)	72 (115)	97.8 (0.3)
24	-19.5 (3.4)	72.5 (2.8)	3.22 (1.13)	242 (71)	109 (161)	98.7 (0.2)
25	-10.5 (5.2)	80.8 (6.3)	5.12 (1.63)	155 (21)	41 (63)	98.0 (0.5)
26	-5.4 (2.2)	78.9 (6.2)	4.30 (1.11)	258 (28)	101 (156)	97.3 (0.2)
27	-1.0 (4.3)	75.3 (6.9)	3.45 (1.35)	191 (36)	104 (153)	97.3 (0.3)
28	6.5 (1.6)	69.7 (6.7)	5.83 (1.48)	184 (29)	69 (115)	95.5 (0.6)
29	-9.6 (8.9)	80.4 (5.9)	12.50 (5.39)	296 (40)	26 (40)	95.8 (0.7)
30	-15.5 (2.5)	63.6 (4.4)	5.47 (2.56)	341 (105)	68 (107)	97.7 (0.3)
31	-8.9 (3.1)	78.6 (5.2)	5.62 (1.57)	79 (22)	68 (98)	98.1 (0.2)
Avg	-7.7	79.5	5.31	260	65	97.5
n	30	30	29	29	30	30
SD	7.1	6.5	2.14	91	29	1.0
Min	-19.9	63.6	2.36	7	14	95.5
Max	6.5	90.5	12.50	341	109	99.7

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Table E1. Daily means (SD) of weather at site IA4B for February, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	-5.0 (3.8)	80.8 (4.6)	2.90 (1.48)	117 (101)	80 (125)	97.4 (0.1)
2	-1.6 (1.4)	81.9 (2.9)	3.66 (1.25)	274 (81)	65 (119)	97.3 (0.3)
3	-2.4 (1.1)	88.7 (2.2)	4.28 (1.91)	108 (38)	24 (36)	97.5 (0.3)
4	0.5 (1.6)	90.6 (0.3)	4.75 (2.61)	20 (107)	25 (42)	96.5 (0.3)
5	-0.2 (0.8)	89.2 (1.9)	6.40 (1.54)	18 (111)		97.0 (0.2)
6	-3.0 (1.7)	88.2 (2.2)	5.99 (1.47)	328 (131)	82 (122)	96.7 (0.3)
7	-6.0 (1.1)	86.5 (1.5)	2.13 (0.85)	202 (60)	71 (107)	97.0 (0.2)
8	-3.5 (2.2)	83.8 (4.8)	3.68 (1.98)	203 (62)	108 (159)	96.4 (0.1)
9	-6.7 (3.7)	81.3 (5.7)	9.66 (3.92)	288 (25)		97.3 (0.7)
10	-17.4 (1.4)	64.5 (2.1)	8.91 (4.18)	311 (20)	120 (179)	99.0 (0.3)
11	-15.9 (0.7)	80.5 (3.5)	6.19 (2.07)	89 (83)	59 (80)	98.4 (0.3)
12	-13.8 (2.0)	80.8 (3.4)	4.16 (1.37)	357 (141)	117 (174)	97.7 (0.1)
13	-12.1 (5.0)	78.3 (3.1)	3.31 (2.17)	164 (80)	110 (165)	97.1 (0.3)
14						
15	-14.0 (2.9)	69.0 (6.2)	3.10 (1.53)	268 (67)	135 (190)	98.6 (0.2)
16	-6.3 (6.3)	73.9 (4.7)	4.10 (1.11)	160 (59)	134 (192)	97.4 (0.7)
17	-0.6 (1.3)	86.0 (5.0)			50 (75)	95.6 (0.5)
18	-13.5 (2.5)	73.8 (2.6)	9.57 (1.95)	294 (10)	108 (153)	97.0 (0.4)
19	-13.5 (4.3)	75.7 (4.2)	5.50 (2.96)	261 (35)	104 (148)	97.5 (0.2)
20	-18.6 (3.1)	74.2 (2.2)	5.66 (3.42)	351 (133)	149 (204)	98.6 (0.3)
21	-12.3 (3.7)	79.0 (2.8)	3.82 (1.16)	100 (17)	76 (115)	97.9 (0.4)
22	-7.5 (2.0)	75.6 (7.9)	1.19 (0.81)	19 (128)	141 (202)	97.4 (0.1)
23	-8.3 (4.1)	79.9 (4.1)	1.95 (1.26)	136 (21)		97.7 (0.1)
24						
25						
26						
27						
28						
29	1.1 (1.2)	78.5 (5.4)	7.59 (2.34)	291 (34)	165 (221)	97.6 (0.3)
Avg	-7.9	80.0	4.93	314	96	97.4
n	23	23	22	22	20	23
SD	6.0	6.5	2.33	108	39	0.8
Min	-18.6	64.5	1.19	18	24	95.6
Max	1.1	90.6	9.66	357	165	99.0

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Table E1. Daily means (SD) of weather at site IA4B for March, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	-0.8 (2.6)	81.6 (3.7)	6.36 (2.66)	95 (72)	139 (201)	97.4 (0.5)
2	5.0 (3.6)	84.1 (2.6)	6.47 (2.43)	169 (76)	113 (177)	96.2 (0.3)
3	-6.5 (2.2)	78.2 (5.0)	8.78 (4.29)	313 (49)	154 (209)	97.5 (0.3)
4	-6.4 (3.1)	72.4 (7.9)	2.90 (1.65)	71 (78)	166 (226)	97.3 (0.2)
5	-4.0 (2.5)	79.5 (2.0)	6.02 (3.62)	274 (86)	80 (110)	97.3 (0.3)
6	-6.7 (3.6)	77.2 (6.0)	3.14 (1.83)	279 (90)	148 (210)	98.0 (0.1)
7	-11.0 (1.9)	73.2 (7.7)	5.20 (2.12)	20 (120)	167 (232)	98.3 (0.2)
8	-9.8 (5.1)	66.5 (7.4)	2.60 (1.35)	16 (129)	164 (228)	97.5 (0.2)
9	-2.8 (2.1)	73.8 (7.8)	4.15 (1.60)	314 (39)	151 (223)	98.0 (0.4)
10	-3.8 (2.3)	75.3 (7.5)	3.11 (0.99)	305 (63)	168 (243)	98.7 (0.2)
11	2.1 (5.2)	74.3 (6.2)	3.92 (2.22)	284 (97)	156 (211)	97.4 (0.4)
12	5.0 (2.6)	78.4 (5.6)	5.08 (2.05)	135 (69)	140 (191)	96.5 (0.3)
13	5.9 (3.4)	74.3 (8.9)	3.72 (1.40)	231 (53)	149 (201)	96.6 (0.1)
14	4.4 (1.8)	76.1 (4.1)	3.39 (1.59)	11 (116)	167 (227)	96.5 (0.2)
15	1.0 (1.2)	77.0 (7.1)	3.82 (1.07)	343 (149)	125 (208)	97.3 (0.3)
16	1.8 (1.5)	74.6 (6.8)	4.04 (1.75)	69 (100)	105 (164)	98.4 (0.2)
17	1.9 (1.0)	87.2 (2.2)	5.84 (1.57)	105 (12)	18 (26)	97.7 (0.5)
18	3.9 (1.0)	85.9 (3.2)	4.16 (1.89)	306 (77)	47 (62)	97.0 (0.1)
19	5.1 (3.2)	71.6 (12.2)	2.84 (1.48)	320 (111)	186 (248)	97.4 (0.1)
20	7.1 (3.2)	72.5 (9.3)	5.60 (2.49)	100 (40)	163 (223)	97.7 (0.2)
21	2.9 (1.8)	80.9 (4.0)	6.33 (3.00)	29 (124)	76 (132)	97.3 (0.4)
22	1.4 (1.5)	75.2 (7.5)	3.18 (1.22)	339 (140)	77 (110)	98.4 (0.2)
23	-0.5 (0.6)	78.9 (5.0)	5.98 (2.50)	308 (40)	61 (83)	98.6 (0.1)
24			5.26 (3.10)	183 (51)	188 (249)	97.9 (0.7)
25	7.5 (3.5)	59.4 (15.5)	7.09 (3.99)	309 (68)	192 (257)	97.0 (0.5)
26	5.2 (4.8)	64.2 (16.5)	2.62 (2.10)	238 (96)	121 (164)	97.7 (0.2)
27			6.68 (2.63)	54 (69)	35 (49)	97.2 (0.2)
28			2.91 (1.01)	54 (78)	220 (272)	98.2 (0.2)
29			7.26 (2.19)	125 (29)	189 (247)	98.1 (0.4)
30	7.8 (2.6)	71.7 (7.7)	4.06 (1.62)	81 (51)	86 (130)	97.5 (0.1)
31	5.9 (2.2)	88.0 (2.6)	7.33 (3.09)	46 (110)	18 (26)	96.4 (0.5)
Avg	0.8	76.0	4.83	4	128	97.5
n	27	27	31	31	31	31
SD	5.3	6.4	1.66	116	54	0.6
Min	-11.0	59.4	2.60	11	18	96.2
Max	7.8	88.0	8.78	343	220	98.7

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Table E1. Daily means (SD) of weather at site IA4B for April, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	2.6 (2.0)	73.6 (8.1)	6.74 (3.40)	314 (81)	105 (145)	98.1 (0.6)
2	4.8 (4.7)	63.9 (13.0)	3.28 (1.57)	136 (48)	187 (252)	98.4 (0.3)
3	2.7 (1.4)	82.2 (5.6)	4.30 (1.33)	74 (37)	19 (28)	97.5 (0.2)
4	6.7 (5.3)	72.2 (16.4)	3.61 (1.68)	269 (69)	202 (265)	97.2 (0.1)
5	10.8 (4.8)	58.2 (12.6)	5.62 (2.33)	196 (43)	220 (270)	97.0 (0.2)
6	10.7 (3.7)	66.1 (6.3)	7.01 (1.78)	185 (53)	74 (95)	96.5 (0.1)
7	5.5 (3.8)	63.9 (6.4)	7.17 (3.72)	282 (60)	132 (201)	97.2 (0.3)
8	3.5 (0.9)	82.0 (3.8)	4.33 (1.17)	35 (119)	31 (39)	97.3 (0.2)
9	5.4 (2.2)	76.2 (5.9)	4.02 (1.67)	49 (110)	125 (175)	97.7 (0.1)
10	7.1 (2.8)	86.5 (3.6)	10.10 (4.25)	99 (36)	15 (22)	95.9 (0.9)
11	5.5 (2.5)	84.0 (1.6)	9.10 (2.82)	255 (55)	61 (83)	95.3 (0.5)
12	1.4 (0.6)	80.2 (5.0)	7.92 (2.42)	315 (72)	67 (92)	96.9 (0.5)
13	3.3 (2.9)	63.8 (13.0)	4.18 (1.71)	346 (152)	244 (295)	98.0 (0.2)
14	5.9 (4.9)	55.5 (16.3)	2.60 (0.89)	120 (102)	250 (295)	98.3 (0.2)
15	10.8 (6.3)	51.0 (14.7)	7.58 (2.77)	168 (17)	246 (290)	97.2 (0.5)
16	16.9 (4.6)	52.5 (7.2)	8.29 (3.25)	231 (79)	101 (133)	96.4 (0.3)
17	8.6 (1.2)	80.6 (7.2)	7.18 (1.94)	38 (63)	8 (17)	97.1 (0.1)
18	10.2 (2.0)	88.6 (2.4)	4.48 (2.12)	39 (103)	12 (14)	96.5 (0.1)
19	9.7 (2.0)	86.2 (3.7)	4.27 (2.15)	312 (75)	23 (29)	96.9 (0.2)
20	13.6 (3.3)	79.0 (7.8)	3.75 (2.33)	134 (59)	163 (236)	97.0 (0.2)
21	17.7 (3.8)	72.8 (8.9)	4.94 (1.89)	137 (82)	145 (237)	96.9 (0.1)
22	13.4 (3.7)	77.1 (10.1)	3.67 (2.06)	358 (130)	150 (199)	97.4 (0.2)
23	17.6 (5.5)	58.7 (19.1)	5.60 (1.85)	109 (22)	251 (301)	97.7 (0.3)
24	18.0 (2.4)	83.5 (4.4)	5.21 (1.88)	139 (32)	97 (159)	96.7 (0.4)
25	11.3 (6.4)	81.0 (6.5)	9.21 (3.97)	248 (74)	102 (160)	96.2 (0.3)
26	7.2 (3.9)	58.8 (13.3)	9.07 (3.73)	277 (17)	249 (299)	97.4 (0.3)
27	8.0 (3.0)	60.7 (15.0)	4.17 (1.97)	289 (46)	192 (259)	97.7 (0.3)
28	3.9 (2.1)	61.5 (12.3)	5.97 (2.72)	322 (108)	177 (228)	97.5 (0.2)
29	5.7 (3.7)	54.3 (12.1)	2.25 (1.52)	111 (97)	172 (189)	97.5 (0.3)
30	12.5 (6.2)	63.1 (9.5)	7.22 (1.98)	111 (14)	222 (265)	96.3 (0.4)
Avg	8.7	70.6	5.76	90	135	97.1
n	30	30	30	30	30	30
SD	4.8	11.4	2.12	101	81	0.7
Min	1.4	51.0	2.25	35	8	95.3
Max	18.0	88.6	10.10	358	251	98.4

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Table E1. Daily means (SD) of weather at site IA4B for May, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	19.7 (3.2)	65.4 (5.2)	7.08 (1.57)	143 (19)	120 (153)	95.5 (0.2)
2	14.7 (3.0)	75.4 (8.0)	7.46 (4.21)	208 (64)	103 (166)	95.2 (0.2)
3	9.1 (3.1)	62.8 (14.9)	10.30 (4.47)	303 (17)	255 (312)	96.7 (0.8)
4	13.4 (5.7)	49.4 (14.0)	5.12 (3.11)	229 (22)	268 (304)	97.5 (0.2)
5	18.8 (5.4)	43.1 (12.8)	4.28 (2.11)	269 (28)	261 (306)	97.4 (0.1)
6	20.9 (4.5)	55.4 (12.8)	3.93 (1.96)	201 (55)	221 (277)	96.8 (0.4)
7	16.0 (2.1)	75.6 (9.6)	4.74 (2.10)	21 (116)	132 (160)	96.4 (0.2)
8	14.4 (3.9)	56.3 (15.6)	4.71 (1.82)	76 (23)	264 (307)	96.7 (0.1)
9	14.1 (3.0)	58.9 (9.7)	2.88 (1.09)	73 (65)	167 (263)	97.0 (0.1)
10	12.4 (2.5)	72.7 (10.1)	5.45 (2.47)	93 (34)	89 (162)	96.6 (0.5)
11	10.7 (2.7)	68.3 (14.3)	8.32 (3.79)	319 (95)	217 (294)	96.7 (0.5)
12	13.6 (4.6)	57.7 (10.2)	5.86 (3.33)	123 (49)	266 (303)	97.0 (0.3)
13	14.8 (2.6)	69.1 (5.5)	6.45 (2.03)	201 (68)	42 (53)	96.8 (0.1)
14	13.3 (4.7)	55.3 (17.9)	3.83 (2.08)	342 (124)	272 (316)	97.2 (0.1)
15	14.5 (4.1)	50.5 (7.6)	3.37 (1.31)	116 (39)	249 (297)	97.3 (0.1)
16	17.9 (6.0)	47.0 (13.6)	5.45 (2.42)	254 (29)	262 (302)	96.8 (0.3)
17	21.0 (4.8)	38.6 (12.8)	6.50 (4.54)	297 (48)	250 (287)	96.1 (0.2)
18	15.1 (3.4)	40.4 (11.3)	4.59 (3.06)	333 (130)	284 (316)	96.3 (0.1)
19	15.2 (4.0)	56.3 (15.5)	3.69 (1.39)	106 (46)	182 (262)	96.0 (0.2)
20	14.1 (3.8)	56.2 (20.0)	6.07 (2.82)	328 (125)	237 (277)	96.4 (0.2)
21	15.8 (5.5)	38.6 (11.6)	2.36 (1.01)	356 (124)	288 (321)	96.4 (0.1)
22	14.4 (2.0)	60.1 (6.7)	4.25 (1.14)	100 (16)	64 (73)	96.7 (0.2)
23	12.4 (1.5)	78.2 (5.9)	8.18 (2.58)	93 (22)	134 (175)	97.3 (0.2)
24	14.2 (3.4)	75.0 (4.7)	7.42 (2.61)	114 (23)	108 (138)	97.4 (0.2)
25	21.6 (5.5)	78.8 (8.4)	6.11 (2.93)	180 (43)	167 (224)	96.5 (0.4)
26	22.0 (3.5)	64.9 (16.4)	3.94 (1.70)	289 (105)	212 (256)	
27	11.8 (1.7)	80.9 (4.0)	6.73 (1.80)	62 (31)	68 (81)	
28	13.9 (3.7)	64.1 (6.7)	4.17 (1.53)	101 (23)	173 (195)	
29	16.2 (2.3)	71.6 (9.0)	5.76 (2.56)	112 (40)	78 (165)	97.7 (0.5)
30	21.3 (3.2)	77.2 (9.4)	4.87 (1.86)	260 (81)	211 (282)	96.8 (0.1)
31	22.0 (4.2)	64.7 (11.4)	4.50 (2.18)	275 (32)	259 (290)	97.3 (0.1)
Avg	15.8	61.6	5.43	103	190	96.7
n	31	31	31	31	31	28
SD	3.5	12.3	1.73	99	75	0.6
Min	9.1	38.6	2.36	21	42	95.2
Max	22.0	80.9	10.30	356	288	97.7

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Table E1. Daily means (SD) of weather at site IA4B for June, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	23.8 (4.4)	55.0 (13.1)	2.72 (1.57)	275 (45)	277 (311)	97.5 (0.1)
2	21.2 (2.0)	75.3 (6.3)	3.81 (2.04)	106 (67)	139 (220)	97.2 (0.2)
3	18.6 (1.9)	82.9 (3.5)	6.53 (2.85)	88 (38)	111 (174)	96.3 (0.2)
4	19.7 (2.2)	85.9 (2.0)	4.36 (1.75)	86 (24)	94 (137)	96.2 (0.1)
5	24.4 (4.4)	77.6 (8.1)	6.07 (3.00)	164 (55)	173 (253)	
6	22.0 (2.1)	72.0 (10.1)	8.40 (3.74)	214 (40)	211 (271)	
7	26.0 (4.7)	74.7 (6.8)	6.66 (3.11)	198 (35)	200 (238)	
8						
9						
10						
11						
12						
13						
14	23.8 (5.1)	54.9 (12.4)	6.14 (4.17)	231 (32)		97.4 (0.1)
15	23.4 (3.3)	62.4 (10.4)	4.58 (2.29)	267 (78)		97.2 (0.1)
16	19.6 (2.8)	52.7 (10.6)	4.60 (1.83)	314 (69)		97.8 (0.1)
17	20.8 (4.4)	48.5 (11.6)	2.67 (1.38)	302 (83)		97.9 (0.2)
18	23.4 (4.4)	48.0 (12.2)	2.60 (1.27)	327 (121)		97.5 (0.1)
19	23.3 (4.6)	52.9 (14.4)	2.50 (1.17)	154 (62)		97.4 (0.1)
20	23.2 (4.2)	65.8 (11.6)	3.33 (1.49)	244 (27)		97.6 (0.1)
21	23.5 (3.6)	52.7 (14.3)	5.72 (2.37)	300 (71)		97.8 (0.1)
22	22.5 (4.0)	50.7 (17.5)	4.11 (2.34)	319 (112)		97.6 (0.1)
23	22.9 (4.1)	52.2 (10.4)	1.83 (0.86)	56 (106)		97.9 (0.1)
24	22.9 (2.5)	68.6 (8.5)	3.31 (1.27)	142 (27)		97.9 (0.2)
25	24.9 (4.7)	74.1 (10.5)	3.62 (1.61)	225 (61)		97.5 (0.1)
26	20.9 (1.0)	81.8 (3.1)	3.58 (2.74)	206 (73)		97.3 (0.2)
27	22.9 (3.6)	78.0 (10.0)	5.15 (1.82)	227 (61)		96.8 (0.1)
28	20.1 (2.0)	67.4 (11.6)	8.77 (3.52)	270 (16)		96.9 (0.1)
29	20.9 (3.5)	67.2 (13.9)	7.21 (3.31)	311 (53)		97.4 (0.3)
30	22.7 (4.2)	53.6 (16.2)	2.69 (1.62)	330 (121)		97.9 (0.1)
Avg	22.4	64.8	4.62	251	172	97.4
n	24	24	24	24	7	21
SD	1.8	12.0	1.89	82	59	0.5
Min	18.6	48.0	1.83	56	94	96.2
Max	26.0	85.9	8.77	330	277	97.9

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Table E1. Daily means (SD) of weather at site IA4B for July, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	24.1 (4.3)	57.4 (11.2)	3.43 (1.59)	214 (35)		97.5 (0.3)
2	24.9 (3.9)	66.4 (12.3)	4.45 (1.60)	261 (96)		97.0 (0.2)
3	21.5 (3.1)	59.2 (11.5)	3.66 (1.32)	71 (50)		97.8 (0.1)
4	22.2 (4.3)	59.8 (12.8)	1.93 (0.66)	134 (48)		97.9 (0.1)
5	22.6 (4.0)	60.6 (13.6)	3.74 (1.51)	154 (23)		97.6 (0.2)
6	26.2 (4.5)	69.5 (10.0)	4.00 (1.80)	186 (52)		97.1 (0.1)
7	26.9 (3.9)	74.7 (11.0)	4.47 (2.09)	213 (42)		97.1 (0.1)
8	24.5 (2.6)	76.2 (10.8)	3.53 (1.80)	287 (99)		97.2 (0.2)
9	23.8 (3.3)	67.3 (11.7)	2.46 (1.57)	132 (87)		97.7 (0.1)
10	26.0 (3.5)	75.8 (8.7)	4.20 (2.10)	203 (41)		97.4 (0.2)
11	27.5 (3.1)	74.2 (10.3)	5.00 (1.64)	186 (26)		97.1 (0.2)
12	21.3 (2.4)	68.0 (9.2)	4.81 (1.95)	283 (71)		97.5 (0.2)
13	21.7 (4.5)	60.4 (13.5)	4.75 (2.60)	276 (19)		97.5 (0.1)
14	25.3 (5.5)	60.4 (12.9)	2.22 (0.74)	229 (38)		97.4 (0.1)
15	26.3 (3.9)	70.1 (8.4)	4.09 (1.89)	217 (30)		97.6 (0.1)
16	25.8 (1.8)	75.5 (6.3)	3.28 (1.40)	196 (35)		97.9 (0.1)
17	24.2 (4.0)	77.2 (11.0)	4.47 (1.74)	175 (61)		97.7 (0.1)
18	22.4 (2.1)	83.6 (3.1)	2.23 (1.30)	182 (76)		97.5 (0.1)
19	23.9 (3.2)	79.3 (7.6)	2.18 (1.57)	221 (75)		97.4 (0.1)
20	26.5 (4.4)	73.5 (9.1)	1.51 (0.74)	255 (99)		97.5 (0.1)
21	23.7 (2.8)	73.2 (6.8)	2.63 (2.06)	65 (102)		97.5 (0.1)
22	24.3 (3.0)	71.4 (9.3)	3.04 (1.36)	56 (56)		97.7 (0.1)
23			3.47 (1.48)	118 (28)		98.0 (0.1)
24			3.87 (0.93)	117 (18)		
25			1.93 (0.95)	176 (84)		
26			1.59 (0.85)	297 (109)		97.7 (0.1)
27			2.49 (1.80)	157 (64)		97.2 (0.2)
28			2.54 (0.88)	129 (47)		97.1 (0.1)
29			3.43 (1.84)	221 (56)		97.1 (0.0)
30			2.31 (0.84)	237 (30)		97.0 (0.1)
31			2.58 (1.63)	220 (47)		96.9 (0.1)
Avg	24.4	69.7	3.24	195		97.4
n	22	22	31	31	0	29
SD	1.8	7.3	1.00	64		0.3
Min	21.3	57.4	1.51	56		96.9
Max	27.5	83.6	5.00	297		98.0

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Table E1. Daily means (SD) of weather at site IA4B for August, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	25.2 (3.1)	71.9 (12.3)	2.69 (1.33)	340 (148)		97.2 (0.1)
2	22.6 (3.7)	68.0 (11.7)	3.39 (1.38)	90 (77)		97.4 (0.1)
3	27.2 (4.5)	74.9 (6.5)	4.62 (1.38)	148 (26)		97.1 (0.1)
4	28.5 (2.4)	74.4 (7.9)	2.51 (1.21)	273 (107)		97.1 (0.1)
5	24.4 (2.5)	74.0 (11.0)	2.36 (1.24)	342 (146)		97.7 (0.2)
6	21.6 (3.1)	72.0 (8.0)	1.97 (1.22)	283 (37)		98.0 (0.1)
7						
8						
9	22.8 (3.9)	73.0 (10.3)	2.86 (1.36)	191 (65)		97.4 (0.1)
10	19.7 (2.8)	80.5 (10.1)	2.74 (1.24)	79 (45)		97.7 (0.1)
11	19.8 (3.6)	69.4 (13.1)	2.89 (0.93)	129 (23)		97.7 (0.2)
12	19.8 (2.2)	78.4 (6.7)	1.89 (1.13)	162 (71)		97.2 (0.1)
13	22.5 (5.0)	69.1 (18.2)	1.41 (1.11)	289 (92)		97.2 (0.1)
14	23.0 (4.2)	65.6 (15.4)	1.80 (1.89)	58 (106)		97.4 (0.2)
15	20.5 (3.2)	69.3 (15.7)	2.95 (1.37)	64 (27)		98.1 (0.2)
16	21.6 (4.2)	60.4 (14.7)	1.57 (0.72)	308 (119)		98.3 (0.2)
17	22.1 (4.0)	63.2 (12.0)	2.55 (0.89)	242 (26)		97.9 (0.2)
18	22.8 (4.3)	67.0 (10.9)	2.41 (0.96)	223 (33)		97.6 (0.0)
19	23.3 (3.6)	70.8 (11.5)	1.60 (0.67)	167 (80)		97.8 (0.1)
20	22.5 (3.6)	71.8 (14.5)	2.84 (1.16)	118 (21)		97.8 (0.1)
21	20.6 (1.1)	86.7 (2.7)	3.40 (1.26)	126 (23)		97.4 (0.2)
22	24.5 (3.0)	80.6 (10.1)	4.41 (1.27)	171 (18)		97.4 (0.1)
23	22.2 (2.9)	66.5 (13.1)	3.31 (1.79)	313 (92)		97.9 (0.2)
24	18.8 (4.0)	65.5 (14.3)	2.24 (1.01)	7 (153)		98.0 (0.1)
25	18.4 (4.2)	70.8 (12.6)	2.75 (0.86)	76 (29)		97.9 (0.1)
26	18.5 (4.2)	72.4 (12.2)	3.21 (1.08)	105 (15)		97.6 (0.1)
27	19.8 (3.3)	80.5 (3.9)	3.36 (1.64)	145 (24)		97.2 (0.2)
28	23.0 (3.4)	77.0 (8.9)	3.83 (1.49)	342 (106)		96.9 (0.2)
29	21.1 (4.8)	59.5 (16.1)	1.82 (0.64)	275 (105)		97.7 (0.1)
30	22.4 (4.3)	64.2 (12.4)	2.15 (0.84)	177 (40)		97.9 (0.1)
31	22.2 (4.2)	69.4 (13.9)	3.70 (1.66)	139 (17)		97.8 (0.2)
Avg	22.1	71.3	2.73	141		97.6
n	29	29	29	29	0	29
SD	2.3	6.2	0.80	95		0.3
Min	18.4	59.5	1.41	7		96.9
Max	28.5	86.7	4.62	342		98.3

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Table E1. Daily means (SD) of weather at site IA4B for September, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	25.3 (3.8)	75.9 (11.0)	4.09 (1.22)	150 (15)		97.6 (0.1)
2	23.4 (4.2)	75.4 (8.7)	5.16 (1.99)	246 (82)		97.7 (0.2)
3	16.0 (1.6)	68.3 (7.2)	3.81 (1.16)	14 (139)		98.0 (0.2)
4	14.1 (1.3)	84.8 (3.0)	3.50 (1.48)	27 (112)		97.4 (0.2)
5	15.1 (4.2)	78.8 (10.4)	2.05 (1.38)	282 (83)		97.6 (0.1)
6	15.6 (3.0)	77.8 (12.3)	1.65 (0.93)	254 (67)		97.8 (0.1)
7	16.8 (3.4)	75.1 (13.8)	2.69 (1.40)	263 (21)		97.9 (0.1)
8	12.4 (1.7)	82.6 (4.0)	2.52 (1.12)	345 (141)		98.2 (0.1)
9	13.7 (4.4)	65.9 (18.1)	2.24 (0.85)	84 (100)		98.2 (0.1)
10	16.4 (3.9)	69.9 (8.9)	4.44 (1.80)	127 (12)		97.9 (0.2)
11	20.6 (3.0)	84.7 (4.2)	4.17 (1.82)	187 (51)		97.5 (0.1)
12	20.4 (0.8)	89.6 (1.1)	2.32 (1.06)	121 (75)		97.3 (0.2)
13			4.24 (1.51)	247 (74)		96.5 (0.1)
14			7.19 (2.15)	303 (10)		97.1 (0.4)
15			3.62 (1.93)	300 (78)		98.2 (0.2)
16			3.16 (1.92)	214 (25)		98.2 (0.1)
17	20.9 (5.9)	65.5 (16.9)	1.74 (0.62)	178 (60)		98.2 (0.1)
18	20.2 (4.5)	71.7 (15.3)	2.67 (1.16)	141 (36)		
19	19.4 (4.3)	73.5 (14.9)	3.23 (1.76)	195 (33)		
20						
21	19.4 (3.4)	75.2 (11.4)	3.24 (2.01)	136 (17)	211 (289)	
22	19.6 (2.5)	80.6 (6.6)	4.17 (1.09)	146 (14)	94 (123)	
23	22.2 (3.4)	70.1 (13.4)	4.28 (1.61)	166 (35)	206 (272)	
24	21.2 (3.2)	66.5 (19.1)	2.14 (0.95)	286 (101)	192 (261)	98.5 (0.1)
25	20.2 (4.1)	67.7 (17.4)	2.54 (1.66)	128 (27)	205 (260)	98.4 (0.2)
26	21.5 (4.5)	66.5 (16.7)	2.77 (1.28)	161 (27)	213 (272)	98.0 (0.2)
27	20.6 (4.4)	67.8 (11.7)	2.56 (1.08)	308 (115)	189 (257)	97.8 (0.1)
28	16.9 (3.2)	80.6 (12.2)	3.03 (1.14)	75 (52)	148 (226)	98.0 (0.2)
29	16.2 (3.2)	71.5 (17.7)	4.42 (2.15)	330 (110)	184 (251)	97.8 (0.1)
30	12.7 (4.0)	62.9 (15.8)	4.25 (2.46)	302 (47)	218 (276)	97.8 (0.2)
Avg	18.4	74.0	3.38	208	186	97.8
n	25	25	29	29	10	24
SD	3.4	7.0	1.16	90	36	0.4
Min	12.4	62.9	1.65	14	94	96.5
Max	25.3	89.6	7.19	345	218	98.5

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Table E1. Daily means (SD) of weather at site IA4B for October, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, $W \cdot m^{-2}$	Atm P, kPa
1	11.7 (2.6)	65.4 (11.7)	3.33 (1.40)	1 (145)	168 (234)	97.8 (0.1)
2	12.6 (5.1)	64.0 (14.3)	2.71 (1.81)	290 (69)	213 (272)	97.5 (0.3)
3	12.7 (3.7)	64.2 (12.8)	3.22 (1.32)	60 (97)	213 (333)	97.6 (0.2)
4	12.7 (5.3)	66.1 (11.2)	4.12 (1.21)	106 (12)	200 (260)	98.0 (0.1)
5	18.8 (4.7)	68.9 (9.0)	4.96 (1.16)	142 (24)	158 (223)	97.6 (0.1)
6	19.9 (3.1)	71.6 (13.3)	4.74 (1.54)	130 (23)	130 (187)	97.6 (0.1)
7	13.8 (3.4)	86.9 (1.5)	5.36 (2.33)	97 (93)	28 (41)	97.3 (0.1)
8	13.8 (5.5)	64.0 (18.1)	2.70 (1.44)	260 (43)	202 (262)	97.3 (0.1)
9	14.0 (4.3)	48.8 (17.9)	2.38 (1.25)	34 (122)	198 (258)	97.8 (0.1)
10	15.7 (5.1)	56.5 (8.5)	4.80 (1.46)	126 (20)	168 (241)	97.6 (0.1)
11	19.3 (4.3)	70.0 (12.2)	4.34 (1.22)	150 (18)	178 (239)	97.9 (0.1)
12	21.3 (2.6)	73.3 (9.6)	4.97 (1.30)	156 (19)	108 (145)	98.0 (0.1)
13	16.6 (4.4)	83.4 (5.5)	4.71 (0.99)	220 (62)	44 (75)	98.0 (0.2)
14						98.3 (0.2)
15						98.0 (0.2)
16						98.5 (0.1)
17	8.5 (1.0)	72.8 (7.9)	1.82 (0.68)	102 (52)	35 (43)	98.4 (0.1)
18	8.2 (3.7)	76.9 (12.1)	2.62 (1.54)	136 (58)	174 (237)	98.4 (0.2)
19	13.6 (5.1)	69.0 (13.2)	4.98 (1.67)	176 (24)	157 (217)	97.8 (0.2)
20	12.2 (3.3)	60.1 (18.2)	4.19 (2.23)	18 (123)	160 (231)	98.3 (0.3)
21	7.4 (3.4)	59.1 (10.3)	4.92 (1.28)	91 (20)	90 (136)	98.5 (0.3)
22	8.6 (1.9)	64.5 (15.5)	9.11 (1.71)	105 (6)	59 (103)	97.8 (0.2)
23	6.8 (1.0)	76.4 (14.7)	5.82 (1.90)	102 (10)	29 (46)	97.7 (0.1)
24	7.4 (1.4)	84.1 (7.0)	3.49 (0.95)	207 (85)	77 (126)	97.1 (0.2)
25	9.8 (4.9)	70.1 (17.3)	6.18 (2.87)	243 (15)	161 (224)	96.7 (0.3)
26	6.9 (2.3)	54.2 (17.7)	12.10 (4.46)	291 (9)	151 (213)	97.5 (0.6)
27	2.8 (2.0)	56.9 (9.3)	7.35 (3.13)	299 (10)	107 (172)	98.7 (0.3)
28	2.9 (4.6)	54.2 (17.0)	3.67 (1.78)	271 (20)	158 (217)	98.8 (0.3)
29	8.4 (5.7)	44.2 (15.8)	2.09 (0.97)	145 (95)	157 (214)	98.1 (0.1)
30	12.7 (6.5)	53.7 (13.9)	3.80 (1.38)	166 (23)	153 (210)	98.0 (0.1)
31	15.9 (4.8)	64.3 (9.9)	1.70 (0.84)	185 (91)	139 (194)	98.3 (0.1)
Avg	12.0	65.8	4.51	143	136	97.9
n	28	28	28	28	28	31
SD	4.8	10.3	2.20	81	56	0.5
Min	2.8	44.2	1.70	1	28	96.7
Max	21.3	86.9	12.10	299	213	98.8

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Table E1. Daily means (SD) of weather at site IA4B for November, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	12.1 (3.6)	75.4 (4.9)	3.31 (1.08)	73 (34)	131 (186)	98.4 (0.1)
2	14.6 (4.3)	74.0 (11.7)	3.75 (0.84)	163 (36)	96 (147)	97.8 (0.2)
3	17.1 (4.2)	72.4 (13.6)	4.78 (1.39)	164 (15)	139 (194)	97.5 (0.1)
4	17.0 (3.2)	60.6 (15.6)	5.51 (1.29)	170 (21)	136 (191)	97.3 (0.3)
5	16.6 (2.9)	67.7 (7.4)	6.49 (1.75)	159 (26)	79 (134)	96.5 (0.2)
6	9.8 (2.5)	77.3 (11.1)	7.87 (3.19)	209 (51)	81 (150)	96.2 (0.2)
7	2.0 (1.0)	84.0 (3.5)	9.99 (1.83)	260 (15)	46 (67)	96.3 (0.1)
8	0.6 (0.8)	81.7 (3.3)	9.96 (1.54)	296 (9)	36 (48)	96.9 (0.3)
9	-2.5 (1.0)	76.8 (4.5)	6.42 (2.14)	304 (40)	49 (70)	97.6 (0.2)
10	-1.9 (3.0)	74.3 (6.5)	2.84 (1.09)	76 (100)	84 (140)	98.1 (0.1)
11	3.1 (1.7)	87.6 (4.9)	5.76 (1.08)	108 (9)	12 (16)	97.5 (0.3)
12	6.0 (0.6)	88.1 (2.5)	3.32 (1.07)	244 (47)	28 (43)	97.1 (0.1)
13	8.3 (2.9)	84.0 (5.8)	5.45 (1.99)	230 (26)	49 (91)	96.0 (0.3)
14	6.2 (1.6)	84.9 (3.7)	4.67 (3.35)	318 (103)	32 (57)	96.7 (0.5)
15	0.1 (1.4)	76.6 (6.0)	8.05 (3.28)	300 (17)	66 (104)	97.7 (0.1)
16	1.0 (2.8)	77.0 (6.4)	6.36 (3.64)	278 (45)	87 (155)	97.5 (0.3)
17	-0.3 (1.4)	66.4 (12.8)	6.85 (3.00)	314 (74)	117 (180)	98.7 (0.3)
18	-2.3 (3.4)	66.4 (10.8)	3.45 (1.78)	175 (89)	110 (171)	98.8 (0.6)
19	1.6 (3.8)	70.5 (6.3)	6.46 (2.57)	283 (81)	115 (169)	97.6 (0.4)
20	-2.6 (2.3)	61.6 (8.4)	8.80 (2.38)	311 (26)	79 (134)	98.9 (0.3)
21	-7.1 (3.3)	67.3 (9.2)	3.08 (1.15)	240 (68)	108 (157)	100.2 (1.0)
22	-1.2 (2.1)	74.0 (7.6)	4.60 (1.73)	148 (27)	41 (61)	100.8 (0.2)
23	3.4 (5.8)	66.0 (11.2)	3.06 (0.81)	158 (49)	95 (150)	100.1 (0.3)
24	2.1 (3.4)	66.0 (14.8)	7.57 (2.81)	298 (21)	117 (170)	100.0 (0.2)
25	-1.4 (3.3)	63.0 (11.7)	2.22 (1.27)	287 (100)	114 (164)	100.4 (0.2)
26	0.7 (4.6)	68.9 (10.2)	2.62 (1.10)	265 (77)	109 (161)	100.0 (0.1)
27	0.5 (3.8)	71.5 (9.8)	4.79 (3.02)	293 (63)	106 (162)	100.0 (0.0)
28	1.9 (4.8)	59.5 (16.8)	3.08 (1.58)	267 (30)	116 (168)	99.9 (0.2)
29	0.4 (2.2)	76.6 (10.9)	1.54 (0.55)	169 (63)	42 (60)	99.2 (0.3)
30	-0.2 (1.2)	88.7 (2.0)	4.69 (1.80)	358 (144)	58 (85)	98.4 (0.1)
Avg	3.5	73.6	5.24	249	83	98.3
n	30	30	30	30	30	30
SD	6.3	8.3	2.24	76	35	1.4
Min	-7.1	59.5	1.54	73	12	96.0
Max	17.1	88.7	9.99	358	139	100.8

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Table E1. Daily means (SD) of weather at site IA4B for December, 2008

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	-5.5 (1.9)	78.0 (3.4)	7.41 (3.46)	294 (38)	105 (157)	99.3 (0.4)
2	-3.0 (5.5)	77.9 (5.6)	3.70 (2.19)	174 (29)	101 (155)	99.2 (0.3)
3	-4.7 (3.9)	77.5 (4.7)	7.25 (2.99)	309 (77)	66 (102)	99.9 (0.5)
4	-9.7 (2.8)	71.6 (8.1)	6.13 (3.22)	283 (20)	100 (157)	101.3 (0.3)
5	-6.3 (4.3)	71.7 (3.8)	5.80 (2.66)	228 (16)	97 (153)	100.4 (0.9)
6	-6.4 (4.9)	73.5 (4.0)	9.82 (4.24)	304 (23)	104 (154)	99.9 (0.7)
7	-9.6 (2.4)	73.2 (2.1)	4.50 (1.93)	120 (72)	55 (88)	100.3 (0.5)
8	-2.9 (3.3)	81.8 (4.6)	5.76 (1.21)	93 (13)	44 (65)	99.0 (0.4)
9	-4.9 (3.2)	82.5 (3.6)			39 (60)	99.8 (0.7)
10	-9.3 (4.1)	76.5 (2.1)			63 (92)	100.6 (0.2)
11	-3.0 (1.9)	79.2 (2.8)			66 (106)	100.1 (0.1)
12	-7.1 (3.4)	75.3 (5.4)			68 (107)	100.2 (0.3)
13	3.6 (2.0)	76.4 (3.6)	6.25 (0.95)	146 (6)	90 (144)	98.6 (0.5)
14	-2.9 (9.7)	78.5 (5.8)	9.86 (3.11)	230 (70)	27 (42)	98.5 (0.7)
15	-16.5 (1.2)	68.0 (3.6)	8.43 (4.28)	300 (45)	100 (148)	101.5 (0.6)
16	-14.6 (2.0)	76.6 (4.1)	3.41 (1.88)	95 (80)	29 (43)	100.9 (0.7)
17	-12.6 (2.2)	76.3 (3.0)	1.63 (0.67)	227 (68)	78 (120)	100.6 (0.2)
18	-9.4 (3.3)	78.8 (4.5)	3.68 (2.60)	126 (36)	90 (150)	100.4 (0.4)
19	-5.7 (1.1)	81.8 (3.0)	4.74 (2.23)	45 (91)	86 (140)	99.7 (0.5)
20	-8.4 (6.5)	80.5 (4.7)	7.43 (4.75)	337 (103)	41 (61)	99.8 (0.3)
21	-19.2 (1.0)	71.6 (2.0)	11.50 (2.19)	290 (4)	93 (132)	100.7 (0.3)
22	-16.7 (3.4)	73.4 (4.7)	4.53 (2.11)	209 (71)	94 (139)	101.1 (0.4)
23	-3.7 (3.5)	77.2 (7.1)	6.12 (2.28)	165 (41)	55 (78)	99.2 (0.4)
24	-11.9 (3.2)	75.9 (4.8)	7.85 (3.11)	279 (25)	95 (147)	99.8 (0.6)
25	-9.5 (6.0)	73.7 (4.0)	6.62 (2.90)	138 (15)	58 (88)	100.3 (0.5)
26	4.5 (2.1)	87.1 (6.1)	6.42 (1.15)	148 (8)	42 (70)	98.7 (0.3)
27	-1.8 (4.0)	84.6 (4.1)			19 (29)	98.7 (0.2)
28	-3.8 (2.8)	80.9 (3.6)			179 (264)	99.8 (0.3)
29	-0.8 (2.4)	78.6 (4.1)			106 (156)	100.2 (0.4)
30	-3.5 (3.3)	78.0 (2.7)	8.97 (4.92)	315 (94)	73 (119)	99.7 (0.7)
31	-11.0 (3.3)	67.9 (5.5)	5.22 (2.98)	274 (96)	110 (160)	101.2 (0.4)
Avg	-7.0	76.9	6.38	235	77	100.0
n	31	31	24	24	31	31
SD	5.5	4.4	2.27	84	32	0.8
Min	-19.2	67.9	1.63	45	19	98.5
Max	4.5	87.1	11.50	337	179	101.5

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Table E1. Daily means (SD) of weather at site IA4B for January, 2009

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	-3.2 (2.9)	69.3 (4.0)	5.55 (1.21)	212 (48)	56 (85)	99.4 (0.3)
2	-5.4 (2.0)	69.0 (5.1)	4.41 (1.49)	50 (108)	90 (138)	99.5 (0.1)
3	-2.6 (2.3)	82.0 (6.7)	6.77 (2.11)	87 (88)	26 (36)	99.0 (0.2)
4	-9.8 (2.3)	75.2 (4.5)	8.17 (3.58)	294 (25)	97 (145)	100.7 (0.5)
5	-6.5 (4.2)	64.2 (12.3)	3.88 (1.59)	198 (39)	112 (163)	100.0 (0.6)
6	-3.8 (3.6)	66.9 (8.0)	2.48 (1.00)	190 (56)	97 (147)	98.4 (0.3)
7	-7.7 (1.5)	75.5 (2.6)	8.77 (1.67)	297 (8)	68 (107)	98.2 (0.3)
8	-8.9 (3.4)	69.4 (7.9)	4.41 (1.85)	286 (78)	111 (162)	99.5 (0.2)
9	-4.5 (1.4)	79.8 (3.1)	7.12 (1.05)	68 (29)	71 (119)	99.5 (0.4)
10	-9.4 (2.6)	78.7 (4.6)	4.71 (1.94)	329 (137)	100 (155)	100.5 (0.1)
11	-6.9 (2.4)	81.5 (2.3)	5.33 (2.89)	275 (62)	95 (154)	100.2 (0.1)
12	-5.4 (4.0)	83.1 (2.8)	8.25 (4.98)	235 (82)	54 (78)	99.8 (0.4)
13	-18.5 (2.4)	71.9 (5.0)	6.91 (3.07)	313 (92)	94 (140)	100.5 (0.5)
14	-17.7 (3.7)	74.5 (4.1)	8.38 (1.97)	341 (128)	117 (175)	100.6 (1.0)
15	-25.1 (2.3)	71.8 (1.3)	4.11 (1.61)	284 (20)	110 (158)	102.2 (0.2)
16	-17.5 (6.8)	74.4 (2.6)	4.02 (1.88)	162 (33)	91 (137)	101.3 (0.6)
17	-4.1 (3.3)	81.0 (1.7)	9.17 (3.08)	273 (50)	57 (78)	99.4 (0.2)
18	-1.8 (1.2)	82.6 (3.0)	6.19 (2.30)	301 (103)	74 (111)	99.3 (0.1)
19	-8.5 (1.8)	78.1 (2.2)	4.45 (1.60)	315 (114)	91 (214)	99.5 (2.3)
20	-9.4 (2.1)	76.5 (3.1)	2.77 (0.81)	292 (104)	124 (181)	100.3 (0.2)
21	-6.4 (2.9)	78.7 (2.7)	3.55 (1.37)	243 (47)	125 (180)	99.5 (0.1)
22	-2.2 (3.8)	77.1 (7.5)	2.03 (0.61)	211 (63)	128 (186)	99.2 (0.1)
23	-9.0 (4.5)	76.9 (4.0)	12.10 (3.20)	309 (10)	95 (145)	100.4 (0.8)
24	-17.6 (2.3)	71.3 (2.9)	4.57 (2.03)	293 (19)	131 (185)	101.6 (0.2)
25	-12.9 (0.8)	71.5 (4.5)	2.72 (1.08)	309 (43)	125 (190)	101.2 (0.1)
26	-11.9 (1.1)	64.9 (8.3)	1.80 (0.71)	4 (151)	81 (118)	101.3 (0.1)
27	-13.0 (1.7)	77.2 (3.0)	1.46 (0.81)	11 (143)	94 (138)	100.9 (0.4)
28	-11.7 (5.9)	76.4 (3.1)	3.16 (2.38)	224 (43)	120 (178)	99.5 (0.3)
29	-5.0 (1.3)	77.7 (3.1)	7.25 (1.84)	286 (14)	83 (122)	99.7 (0.3)
30	-9.0 (3.2)	71.6 (6.8)	2.20 (1.36)	198 (82)	137 (196)	100.2 (0.1)
31	0.8 (4.5)	75.4 (8.1)	5.11 (2.23)	241 (38)	135 (196)	99.0 (0.4)
Avg	-8.9	75.0	5.22	281	96	100.0
n	31	31	31	31	31	31
SD	5.7	5.0	2.52	94	27	0.9
Min	-25.1	64.2	1.46	4	26	98.2
Max	0.8	83.1	12.10	341	137	102.2

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Table E1. Daily means (SD) of weather at site IA4B for February, 2009

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	-0.8 (2.1)	71.2 (4.3)	5.41 (1.59)	284 (14)	132 (198)	99.8 (0.3)
2	-6.7 (4.3)	72.5 (5.3)	6.96 (2.60)	298 (51)	143 (203)	100.2 (0.1)
3	-15.2 (2.4)	73.5 (1.5)	7.64 (2.09)	310 (15)	146 (203)	101.0 (0.3)
4	-12.8 (3.7)	69.2 (6.6)	2.70 (1.38)	110 (101)	146 (205)	101.5 (0.2)
5	-2.9 (5.2)	62.1 (6.5)	3.85 (1.89)	152 (57)	145 (203)	100.2 (0.3)
6	3.4 (5.4)	75.9 (3.1)	4.29 (1.30)	133 (34)	125 (176)	99.2 (0.5)
7	6.1 (2.9)	73.9 (5.2)	6.86 (2.10)	273 (27)	147 (208)	99.6 (0.7)
8	0.0 (2.3)	79.4 (5.0)	3.25 (1.58)	103 (90)	144 (208)	100.8 (0.2)
9	6.9 (4.6)	82.2 (5.7)	7.93 (1.51)	135 (22)	68 (108)	98.8 (0.8)
10	10.1 (2.9)	61.6 (9.3)	6.63 (3.38)	243 (86)	160 (219)	98.4 (0.4)
11	2.2 (1.0)	79.2 (2.7)	7.16 (3.93)	318 (123)	51 (74)	98.8 (0.4)
12	2.1 (2.4)	64.2 (13.6)	5.22 (2.49)	280 (13)	160 (225)	100.1 (0.3)
13	-2.5 (1.1)	80.3 (5.1)	3.00 (1.22)	9 (139)	37 (54)	100.4 (0.1)
14	-6.2 (2.7)	75.1 (5.7)	3.09 (1.04)	308 (58)	173 (238)	100.6 (0.1)
15	-7.1 (2.3)	71.3 (6.9)	2.27 (1.03)	321 (134)	178 (244)	101.1 (0.1)
16	-5.2 (4.2)	70.1 (7.8)	3.58 (1.79)	161 (30)	160 (223)	100.7 (0.4)
17	0.8 (2.9)	75.2 (7.2)	5.04 (0.90)	141 (18)	94 (155)	98.7 (0.6)
18	-1.8 (3.7)	78.9 (9.7)	10.80 (4.47)	315 (70)	45 (69)	98.7 (0.7)
19	-8.4 (3.2)	64.9 (8.5)	5.68 (2.97)	296 (23)	180 (241)	100.3 (0.1)
20	-3.3 (3.6)	65.2 (6.1)	3.49 (2.17)	143 (45)	124 (180)	99.8 (0.3)
21	-7.6 (2.3)	73.6 (3.4)	11.40 (3.28)	300 (11)	138 (201)	100.0 (0.4)
22	-8.9 (3.2)	69.4 (7.6)	5.47 (2.33)	322 (113)	186 (245)	101.3 (0.3)
23	-6.1 (4.3)	64.9 (11.3)	3.67 (2.17)	108 (87)	171 (238)	101.4 (0.4)
24	2.4 (4.7)	61.6 (10.1)	5.60 (1.15)	144 (18)	178 (239)	100.0 (0.3)
25	5.6 (4.2)	72.6 (10.5)	4.71 (1.51)	288 (105)	177 (239)	99.7 (0.3)
26	1.7 (2.0)	86.5 (2.7)	7.37 (3.16)	48 (106)	32 (46)	99.1 (0.5)
27	-4.4 (1.6)	73.3 (4.8)	6.73 (1.86)	19 (131)	172 (236)	100.3 (0.5)
28	-5.1 (2.2)	59.7 (8.6)	5.62 (1.25)	9 (135)	185 (253)	101.2 (0.2)
Avg	-2.3	71.7	5.55	313	136	100.1
n	28	28	28	28	28	28
SD	5.9	6.7	2.22	106	47	0.9
Min	-15.2	59.7	2.27	9	32	98.4
Max	10.1	86.5	11.40	322	186	101.5

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Table E1. Daily means (SD) of weather at site IA4B for March, 2009

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	-8.1 (2.9)	59.6 (11.5)	4.79 (1.85)	12 (139)	203 (266)	101.6 (0.1)
2	-5.4 (2.7)	55.3 (13.3)	4.21 (0.99)	104 (11)	207 (268)	101.3 (0.1)
3	-3.6 (2.5)	61.9 (9.3)	6.37 (1.78)	132 (9)	112 (158)	100.8 (0.4)
4	2.7 (5.5)	58.8 (11.9)	5.95 (0.91)	139 (17)	198 (260)	99.8 (0.4)
5	11.7 (6.5)	68.5 (13.8)	5.84 (2.34)	224 (71)	198 (258)	98.5 (0.2)
6	7.6 (3.9)	69.5 (14.0)	3.86 (1.55)	334 (114)	202 (267)	99.5 (0.3)
7	4.2 (1.0)	86.6 (4.2)	5.75 (1.46)	49 (35)	32 (43)	99.4 (0.1)
8	2.5 (0.9)	89.5 (1.4)	5.49 (2.25)	352 (122)	47 (79)	99.0 (0.5)
9	2.5 (1.4)	89.6 (0.9)	5.30 (2.39)	110 (44)	37 (48)	99.8 (0.3)
10	1.0 (5.0)	88.3 (5.9)	7.86 (5.30)	333 (105)	36 (47)	99.0 (0.5)
11	-9.3 (2.1)	68.9 (5.0)	9.77 (3.45)	305 (44)	213 (284)	101.4 (0.6)
12	-7.8 (4.4)	62.8 (9.8)	3.33 (0.86)	76 (61)	225 (288)	101.8 (0.3)
13	0.0 (3.5)	64.0 (8.1)	3.03 (1.13)	186 (40)	151 (215)	100.9 (0.3)
14	3.7 (4.7)	59.8 (14.1)	2.56 (0.81)	164 (30)	233 (294)	100.1 (0.2)
15	8.1 (4.9)	58.3 (14.8)	3.26 (1.42)	145 (17)	219 (287)	99.8 (0.1)
16	12.1 (6.1)	66.3 (13.8)	4.20 (1.87)	174 (33)	225 (285)	99.9 (0.1)
17	13.3 (4.6)	64.6 (11.5)	5.32 (2.47)	271 (96)	217 (267)	99.8 (0.1)
18	7.5 (3.9)	58.3 (18.3)	3.59 (1.46)	354 (156)	153 (226)	100.5 (0.2)
19	4.5 (4.0)	59.5 (17.3)	2.87 (1.05)	29 (120)	228 (290)	101.1 (0.1)
20	6.4 (4.2)	58.2 (9.7)	5.34 (1.63)	126 (17)	131 (177)	100.7 (0.2)
21	11.7 (5.3)	55.5 (13.8)	3.78 (0.95)	149 (26)	236 (293)	100.4 (0.1)
22	11.3 (2.7)	75.2 (6.5)	7.35 (2.42)	123 (9)	178 (252)	100.1 (0.3)
23	13.8 (4.2)	71.6 (11.4)	8.60 (2.27)	132 (32)	85 (163)	99.0 (0.4)
24	9.2 (3.3)	80.4 (9.1)	8.05 (2.91)	200 (69)	74 (124)	98.4 (0.2)
25	4.1 (2.8)	66.4 (8.4)	6.57 (2.78)	252 (31)	112 (154)	98.9 (0.2)
26	5.3 (2.7)	71.8 (7.2)	4.89 (1.67)	279 (47)	157 (237)	99.4 (0.3)
27	-1.1 (2.0)	65.4 (7.7)	4.24 (1.25)	347 (157)	239 (312)	99.9 (0.1)
28	-0.7 (0.9)	78.1 (7.1)	6.64 (1.59)	32 (82)	53 (63)	99.1 (0.4)
29	2.3 (3.8)	62.0 (15.6)	5.68 (2.46)	319 (90)	270 (327)	99.0 (0.2)
30	7.0 (4.3)	62.5 (8.3)	9.04 (3.59)	110 (8)	251 (305)	98.9 (0.4)
31	5.6 (3.1)	65.5 (5.5)	10.70 (2.89)	218 (50)	115 (209)	97.9 (0.1)
Avg	3.9	67.8	5.62	116	162	99.9
n	31	31	31	31	31	31
SD	6.2	10.0	2.07	103	72	1.0
Min	-9.3	55.3	2.56	12	32	97.9
Max	13.8	89.6	10.70	354	270	101.8

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Table E1. Daily means (SD) of weather at site IA4B for April, 2009

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	5.7 (4.0)	49.7 (14.5)	7.70 (3.84)	271 (57)	247 (312)	98.6 (0.3)
2	3.5 (2.8)	58.0 (13.0)	4.80 (1.71)	13 (137)	125 (172)	98.9 (0.2)
3	5.3 (5.5)	52.8 (19.3)	2.63 (1.20)	353 (139)	270 (328)	99.1 (0.2)
4	8.2 (3.7)	50.1 (12.1)	8.34 (3.21)	87 (11)	198 (277)	99.4 (0.3)
5	2.1 (1.2)	83.1 (5.5)	9.60 (2.77)	23 (129)	33 (38)	99.1 (0.4)
6	1.0 (1.9)	70.6 (10.0)	10.90 (1.81)	311 (2)	241 (304)	99.9 (0.1)
7	2.7 (4.0)	61.1 (17.0)	5.39 (2.20)	293 (28)	282 (332)	99.5 (0.3)
8	5.5 (4.4)	60.3 (13.2)	5.97 (4.10)	301 (53)	289 (336)	99.0 (0.1)
9	7.0 (3.9)	54.6 (15.9)	3.65 (1.84)	49 (98)	160 (195)	99.2 (0.1)
10	8.2 (3.2)	42.9 (9.7)	6.27 (2.87)	35 (87)	259 (312)	99.8 (0.4)
11	8.9 (4.7)	42.5 (15.1)	3.08 (1.35)	98 (66)	287 (341)	100.6 (0.1)
12	8.0 (3.8)	40.1 (12.0)	5.49 (1.55)	101 (18)	198 (259)	100.3 (0.3)
13	4.1 (1.5)	78.1 (10.1)	6.54 (1.35)	60 (20)	35 (36)	99.2 (0.2)
14	9.1 (4.9)	57.6 (18.4)	3.77 (1.88)	17 (125)	276 (340)	99.6 (0.2)
15	11.9 (5.1)	42.3 (17.8)	3.52 (1.62)	91 (61)	305 (350)	100.3 (0.2)
16	12.2 (5.1)	53.6 (14.4)	4.89 (1.70)	120 (17)	249 (286)	100.8 (0.1)
17	14.5 (5.4)	52.5 (13.3)	4.03 (1.38)	121 (17)	295 (341)	100.6 (0.3)
18	14.0 (2.0)	74.6 (6.6)	1.97 (0.96)	108 (47)	80 (119)	99.8 (0.2)
19	10.5 (2.3)	78.3 (10.2)	4.88 (2.72)	331 (127)	120 (173)	99.5 (0.1)
20	6.2 (2.0)	69.6 (9.8)	10.10 (4.52)	302 (13)	117 (126)	99.2 (0.1)
21	8.9 (4.7)	45.1 (20.3)	10.50 (5.21)	302 (18)	313 (353)	99.2 (0.1)
22	13.9 (6.2)	40.7 (12.9)	4.65 (2.07)	294 (87)	305 (347)	99.3 (0.1)
23	17.1 (5.2)	50.6 (14.7)	5.99 (1.65)	141 (21)	217 (259)	99.0 (0.2)
24	21.5 (6.4)	62.9 (17.8)	7.14 (3.13)	212 (49)	298 (342)	98.7 (0.1)
25	9.4 (1.4)	85.2 (5.0)	5.64 (1.90)	34 (105)	34 (38)	99.5 (0.3)
26	16.2 (4.0)	86.4 (5.9)	5.25 (1.70)	142 (54)	81 (135)	99.2 (0.2)
27	9.6 (2.9)	84.1 (4.5)	5.41 (2.16)	303 (75)	85 (109)	100.0 (0.5)
28	9.3 (3.3)	78.1 (6.5)	4.00 (1.90)	81 (93)	199 (224)	100.8 (0.1)
29	11.9 (2.0)	88.9 (1.8)	5.22 (1.62)	109 (12)	68 (80)	100.2 (0.4)
30	15.8 (2.4)	81.7 (8.8)	4.54 (2.34)	317 (103)	118 (159)	99.4 (0.1)
Avg	9.4	62.5	5.73	32	193	99.6
n	30	30	30	30	30	30
SD	4.8	15.7	2.26	114	94	0.6
Min	1.0	40.1	1.97	13	33	98.6
Max	21.5	88.9	10.90	353	313	100.8

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Table E1. Daily means (SD) of weather at site IA4B for May, 2009

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	10.9 (2.5)	64.6 (12.0)	5.96 (2.19)	295 (28)	215 (296)	100.0 (0.1)
2	13.6 (4.2)	47.7 (19.1)	3.97 (1.82)	264 (21)	321 (367)	99.7 (0.2)
3	16.8 (4.3)	36.4 (12.7)	2.02 (1.27)	264 (67)	317 (360)	99.5 (0.1)
4	16.6 (3.3)	48.2 (10.5)	3.33 (1.90)	184 (54)	208 (249)	99.7 (0.1)
5	18.0 (3.8)	59.4 (12.3)	4.15 (1.92)	188 (39)	270 (338)	99.3 (0.3)
6	17.8 (2.2)	70.6 (9.2)	5.24 (3.06)	227 (39)	170 (207)	98.9 (0.1)
7	16.5 (2.6)	73.7 (9.4)	3.10 (1.87)	259 (93)	154 (204)	98.9 (0.1)
8	16.6 (4.0)	75.4 (14.7)	4.23 (3.44)	229 (77)	203 (296)	98.7 (0.2)
9	11.7 (2.9)	66.6 (12.4)	7.46 (3.71)	304 (77)	320 (360)	99.9 (0.4)
10	12.0 (3.1)	59.2 (13.7)	3.36 (1.87)	324 (129)	302 (349)	100.3 (0.1)
11	13.9 (4.6)	47.7 (18.9)	1.74 (0.88)	67 (108)	340 (367)	100.4 (0.2)
12	15.6 (4.0)	61.8 (15.4)	6.57 (2.07)	141 (15)	206 (279)	99.6 (0.5)
13	17.1 (3.1)	78.7 (10.6)	6.50 (2.24)	217 (70)	98 (161)	98.6 (0.3)
14	13.2 (4.2)	65.5 (8.1)	4.95 (2.24)	257 (73)	315 (355)	99.9 (0.3)
15	14.4 (1.5)	85.7 (4.5)	4.61 (2.32)	144 (78)	36 (59)	99.4 (0.3)
16	9.8 (3.3)	54.5 (18.1)	9.05 (4.87)	313 (53)	347 (377)	100.5 (0.3)
17	10.7 (2.4)	57.0 (13.1)	2.84 (1.73)	203 (61)	156 (173)	100.9 (0.2)
18	16.2 (5.3)	54.1 (12.3)	5.98 (1.42)	172 (27)		100.2 (0.2)
19	21.5 (5.8)	54.7 (13.2)	5.74 (1.75)	202 (29)	338 (361)	100.0 (0.1)
20	22.4 (4.4)	49.1 (13.8)	6.44 (2.66)	205 (29)	339 (368)	99.8 (0.2)
21	20.8 (4.0)	51.8 (10.0)	5.04 (1.61)	314 (113)	287 (326)	100.0 (0.2)
22	20.8 (4.6)	59.1 (9.7)	3.57 (1.48)	96 (35)	259 (317)	100.2 (0.2)
23	21.3 (3.7)	68.0 (10.8)	3.71 (2.03)	95 (68)	239 (298)	99.9 (0.1)
24	21.2 (3.7)	59.6 (20.3)	4.31 (1.02)	70 (19)	295 (336)	99.9 (0.1)
25	17.3 (2.4)	68.7 (14.0)	5.65 (1.33)	94 (10)	151 (188)	99.5 (0.2)
26	17.4 (2.3)	83.5 (4.9)	4.19 (0.75)	58 (99)	81 (104)	98.8 (0.2)
27	14.9 (1.1)	83.9 (3.8)	4.16 (1.01)	327 (116)	83 (99)	98.9 (0.2)
28	15.4 (3.6)	76.0 (8.4)	4.26 (1.45)	293 (36)	192 (202)	99.2 (0.1)
29	19.2 (4.0)	51.4 (23.1)	3.53 (2.16)	54 (104)	347 (369)	99.5 (0.1)
30	19.9 (4.4)	43.0 (16.9)	4.14 (2.61)	304 (98)	333 (374)	99.3 (0.2)
31	20.4 (4.8)	40.3 (12.3)	4.00 (2.04)	159 (77)	305 (342)	99.4 (0.4)
Avg	16.6	61.2	4.64	230	241	99.6
n	31	31	31	31	30	31
SD	3.5	12.9	1.54	86	91	0.6
Min	9.8	36.4	1.74	54	36	98.6
Max	22.4	85.7	9.05	327	347	100.9

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Table E1. Daily means (SD) of weather at site IA4B for June, 2009

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, $W \cdot m^{-2}$	Atm P, kPa
1	21.3 (1.4)	72.4 (6.5)	4.02 (1.91)	97 (97)	138 (173)	99.2 (0.3)
2	15.3 (2.0)	81.0 (5.9)	3.93 (2.08)	69 (90)	105 (114)	100.0 (0.2)
3	16.9 (3.2)	54.7 (15.5)	3.91 (2.44)	32 (107)	339 (375)	100.2 (0.1)
4	18.7 (3.9)	52.7 (16.8)	1.82 (0.94)	177 (74)	274 (316)	99.9 (0.2)
5	20.4 (5.0)	53.3 (14.9)	3.13 (1.50)	232 (47)	332 (366)	99.4 (0.1)
6	19.4 (3.8)	71.3 (11.3)	4.59 (1.93)	121 (48)	106 (195)	99.0 (0.3)
7	21.6 (2.4)	77.2 (9.6)	3.38 (1.94)	115 (87)	198 (329)	98.9 (0.1)
8	18.0 (1.7)	80.5 (4.5)	5.08 (2.84)	296 (98)	146 (192)	99.1 (0.4)
9	16.8 (2.4)	72.5 (9.2)	1.98 (1.40)	100 (72)	216 (239)	99.6 (0.1)
10	18.8 (3.1)	74.1 (8.3)	2.86 (0.73)	66 (23)	202 (241)	99.2 (0.1)
11	19.9 (3.1)	65.1 (14.8)	3.79 (1.20)	26 (103)		99.2 (0.1)
12						
13						
14						
15						
16						
17	23.5 (5.1)	79.4 (11.7)	3.01 (1.50)	154 (60)	280 (324)	99.2 (0.2)
18	24.6 (3.8)	81.7 (6.6)	5.71 (2.05)	156 (60)	209 (275)	98.7 (0.2)
19	24.3 (2.6)	77.1 (9.3)	4.33 (2.06)	256 (56)	169 (246)	98.7 (0.2)
20	25.3 (3.9)	66.3 (17.5)	2.31 (1.06)	269 (74)	317 (360)	99.2 (0.1)
21	25.8 (3.2)	81.0 (5.8)	3.82 (1.82)	136 (39)	211 (297)	98.9 (0.2)
22	29.2 (4.4)	66.5 (18.0)	1.74 (0.58)	159 (75)	347 (361)	99.0 (0.1)
23	26.8 (4.9)	76.3 (7.1)	3.45 (2.22)	153 (55)	229 (326)	99.4 (0.1)
24	25.5 (3.8)	76.3 (9.2)	1.80 (1.17)	135 (90)	244 (296)	99.5 (0.1)
25	27.7 (3.1)	73.8 (10.0)	2.96 (1.35)	282 (68)	308 (354)	99.3 (0.1)
26	26.3 (3.3)	67.1 (13.7)	1.68 (0.83)	104 (79)	232 (257)	99.4 (0.1)
27	25.2 (3.2)	71.5 (5.7)	5.90 (2.49)	235 (64)	262 (295)	99.1 (0.2)
28	21.6 (4.2)	58.1 (16.8)	6.75 (3.09)	281 (10)	352 (365)	99.4 (0.2)
29	21.6 (4.4)	57.5 (15.6)	6.36 (3.71)	298 (21)	353 (366)	98.9 (0.1)
30	18.9 (2.5)	69.1 (9.3)	4.76 (2.51)	308 (59)	233 (251)	99.0 (0.0)
Avg	22.1	70.3	3.72	151	242	99.3
n	25	25	25	25	24	25
SD	3.7	8.9	1.44	86	75	0.4
Min	15.3	52.7	1.68	26	105	98.7
Max	29.2	81.7	6.75	308	353	100.2

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Table E1. Daily means (SD) of weather at site IA4B for July, 2009

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	20.0 (2.5)	72.1 (9.1)	3.16 (1.63)	344 (139)	218 (280)	99.2 (0.1)
2	21.6 (4.0)	67.5 (12.6)	2.07 (1.29)	4 (129)	338 (363)	99.8 (0.1)
3	22.5 (3.8)	72.8 (11.7)	1.83 (1.17)	199 (48)	196 (253)	100.0 (0.1)
4	18.2 (0.9)	88.1 (2.6)	4.79 (1.66)	82 (51)	69 (89)	99.6 (0.1)
5	22.4 (4.3)	67.6 (15.8)	2.09 (1.08)	329 (116)	343 (365)	99.7 (0.1)
6	23.8 (4.0)	64.2 (14.6)	1.81 (1.36)	277 (46)		99.5 (0.1)
7	21.9 (3.7)	75.8 (11.2)	2.66 (1.52)	177 (71)	234 (323)	99.3 (0.1)
8	19.8 (2.3)	81.6 (6.3)	3.97 (2.03)	58 (107)	231 (300)	99.4 (0.2)
9	18.8 (2.7)	86.7 (2.6)	4.93 (1.89)	115 (39)	113 (168)	99.8 (0.1)
10	23.8 (3.2)	82.3 (8.0)	4.46 (3.06)	111 (54)	256 (349)	99.7 (0.1)
11	23.7 (2.1)	66.0 (12.8)	3.08 (1.77)	38 (82)	303 (326)	100.1 (0.2)
12	21.3 (2.4)	76.9 (7.6)	2.27 (1.43)	99 (67)	190 (246)	100.1 (0.1)
13	22.2 (3.4)	74.8 (9.5)	2.39 (1.15)	91 (25)	311 (359)	99.9 (0.1)
14	22.8 (2.0)	81.0 (4.1)	5.38 (1.91)	141 (21)	167 (218)	99.5 (0.2)
15						
16						
17	15.3 (2.6)	71.1 (9.7)	5.71 (2.57)	298 (13)	176 (223)	99.8 (0.1)
18	17.2 (2.5)	71.5 (9.6)	2.86 (1.32)	327 (117)	172 (216)	100.1 (0.1)
19	18.3 (3.7)	66.0 (13.1)	1.42 (1.02)	61 (103)	294 (345)	100.2 (0.1)
20	19.8 (4.3)	68.3 (11.6)	3.47 (1.21)	131 (23)	292 (351)	99.8 (0.1)
21	18.1 (1.8)	82.7 (6.4)	3.06 (1.65)	40 (103)	145 (236)	99.6 (0.1)
22	20.5 (4.6)	72.2 (16.6)	1.49 (1.05)	8 (142)	301 (355)	99.7 (0.1)
23	22.6 (3.5)	70.7 (11.9)	1.35 (0.89)	155 (59)	251 (322)	99.6 (0.1)
24	24.1 (5.0)	73.5 (11.4)	3.66 (1.91)	207 (60)	318 (342)	99.1 (0.3)
25	21.2 (3.8)	67.0 (13.2)	5.00 (2.07)	301 (9)	312 (351)	99.3 (0.1)
26	21.6 (4.2)	69.5 (12.8)	3.45 (1.63)	294 (19)	308 (352)	99.5 (0.1)
27	23.4 (4.3)	73.3 (10.7)	4.09 (2.64)	244 (22)	269 (328)	99.3 (0.2)
28	21.8 (2.9)	64.0 (14.3)	2.72 (1.39)		254 (300)	99.3 (0.1)
29	20.7 (4.3)	61.7 (13.4)	1.74 (0.78)		286 (319)	99.4 (0.1)
30	19.7 (2.5)	71.9 (12.3)	3.15 (2.00)		258 (334)	99.4 (0.1)
31	20.3 (4.5)	66.3 (15.2)	3.01 (0.93)		317 (357)	99.6 (0.1)
Avg	20.9	72.7	3.14	55	247	99.6
n	29	29	29	25	28	29
SD	2.1	6.8	1.22	107	70	0.3
Min	15.3	61.7	1.35	4	69	99.1
Max	24.1	88.1	5.71	344	343	100.2

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Table E1. Daily means (SD) of weather at site IA4B for August, 2009

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	20.2 (2.3)	65.6 (10.1)	4.36 (1.81)		304 (355)	99.5 (0.1)
2	21.8 (5.9)	65.1 (13.5)	4.17 (1.79)		312 (345)	99.3 (0.3)
3	24.7 (3.3)	69.5 (7.8)	4.37 (2.57)		287 (326)	99.1 (0.1)
4	22.7 (3.7)	73.3 (11.1)	2.06 (1.28)		255 (310)	99.5 (0.2)
5	20.2 (4.1)	66.4 (13.6)	1.45 (0.72)	17 (133)	216 (235)	100.1 (0.1)
6	22.0 (3.7)	67.0 (12.6)	1.83 (1.07)	87 (96)	253 (309)	100.1 (0.1)
7	23.0 (3.4)	83.3 (4.0)	4.59 (1.23)	138 (47)	102 (146)	99.4 (0.3)
8	28.0 (2.8)	76.3 (7.5)	4.43 (1.42)	185 (54)	234 (305)	99.1 (0.1)
9	24.1 (2.7)	80.3 (5.6)	4.83 (2.06)	206 (78)	165 (256)	99.5 (0.2)
10	22.9 (3.4)	80.9 (8.8)	2.54 (1.32)	256 (65)	198 (271)	99.7 (0.1)
11	23.8 (3.6)	70.2 (13.2)	1.68 (0.84)	323 (111)	293 (341)	100.0 (0.1)
12	24.0 (3.2)	76.4 (7.9)	3.15 (1.46)	156 (23)	268 (326)	100.0 (0.1)
13	25.3 (4.0)	75.2 (13.5)	3.10 (0.92)	140 (67)	279 (328)	99.8 (0.1)
14	25.3 (3.5)	76.7 (11.2)	3.51 (0.85)	167 (33)	276 (327)	99.8 (0.1)
15	24.0 (3.1)	75.9 (9.2)	4.18 (1.39)	154 (12)	211 (257)	99.5 (0.2)
16	23.4 (2.1)	80.0 (8.3)	4.54 (2.12)	244 (89)	201 (273)	99.3 (0.2)
17	22.2 (2.2)	79.7 (5.9)	1.85 (0.84)	302 (111)	142 (187)	99.7 (0.1)
18	21.4 (3.7)	70.1 (13.9)	2.19 (0.91)	263 (70)	264 (315)	99.8 (0.1)
19	20.4 (2.3)	85.2 (5.9)	3.51 (1.83)	166 (51)	143 (213)	98.9 (0.3)
20	18.8 (2.3)	79.1 (10.0)	5.74 (2.41)	263 (71)	231 (299)	98.6 (0.1)
21	17.4 (1.8)	80.6 (8.9)	5.77 (1.85)	294 (29)	167 (224)	99.3 (0.3)
22	18.1 (4.0)	70.3 (15.1)	2.24 (0.99)	356 (135)	283 (334)	100.0 (0.1)
23	19.8 (3.9)	68.9 (11.8)	1.66 (0.91)	183 (56)	281 (330)	100.0 (0.1)
24	20.5 (4.3)	74.9 (11.4)	4.19 (1.60)	159 (13)	279 (324)	99.8 (0.2)
25	22.5 (3.6)	82.0 (7.0)	2.51 (1.34)	140 (95)	139 (194)	99.7 (0.0)
26	21.0 (1.4)	90.7 (1.4)	3.90 (1.49)	73 (42)	36 (62)	99.8 (0.1)
27	17.4 (0.8)	90.4 (1.7)	5.63 (0.98)	56 (16)	39 (54)	99.7 (0.1)
28	19.5 (2.7)	80.1 (10.4)	3.08 (1.11)	357 (136)	184 (257)	99.7 (0.1)
29	15.8 (3.0)	71.1 (14.2)	3.95 (2.17)	323 (95)	276 (326)	99.8 (0.1)
30	13.9 (3.3)	72.4 (12.2)	2.19 (1.17)	5 (142)	183 (246)	100.4 (0.1)
31	15.3 (4.2)	66.3 (14.8)	1.51 (0.65)	81 (72)	272 (335)	100.6 (0.1)
Avg	21.3	75.6	3.38	175	219	99.7
n	31	31	31	27	31	31
SD	3.2	6.8	1.30	99	73	0.4
Min	13.9	65.1	1.45	5	36	98.6
Max	28.0	90.7	5.77	357	312	100.6

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Table E1. Daily means (SD) of weather at site IA4B for September, 2009

Day	Temp., ºC	RH, %	Wind speed,	Wind direction,	Solar, W·m^{-2}	Atm P, kPa
1	15.7 (3.9)	69.0 (13.1)	2.35 (1.18)	113 (43)	254 (322)	100.6 (0.1)
2	16.8 (4.3)	71.4 (12.9)	3.09 (1.18)	113 (36)	260 (318)	100.3 (0.1)
3	17.2 (4.2)	71.9 (12.9)	3.06 (1.14)	95 (18)	242 (308)	100.1 (0.1)
4	18.7 (4.3)	72.9 (10.8)	3.78 (1.27)	82 (19)	240 (299)	100.1 (0.1)
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
Avg	17.1	71.3	3.07	101	249	100.3
n	4	4	4	4	4	4
SD	1.1	1.4	0.51	13	8	0.2
Min	15.7	69.0	2.35	82	240	100.1
Max	18.7	72.9	3.78	113	260	100.6

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Table E2. Animal characteristics

Table E2. Daily means (SD) of animal characteristics at site IA4B for July, 2007.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	kg·m^{-2}	Inv., pigs	Mass, kg	kg·m^{-2}	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	kg·m^{-2}
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11	1,000			1,100							
12	1,000			1,100							
13	1,000			1,100							
14	1,000			1,100							
15	1,000			1,100							
16	1,000			1,100							
17	1,000			1,100							
18	1,010			1,100							
19	1,010	249	117	1,100	249	128					
20	1,010	249	117	1,110	249	128					
21	1,010	249	117	1,110	249	128					
22	1,010	249	117	1,110	249	129					
23	1,010	249	117	1,110	249	129	0	0	0	0.0	
24	1,010	249	117	1,110	249	129	0	0	0	0.0	
25	1,010	249	117	1,110	249	129	24	148	249	1.0	44.0
26	1,010	249	117	1,110	249	129	24	273	249	1.0	45.0
27	1,010	249	118	1,110	249	129	24	273	249	1.0	46.0
28	1,010	249	118	1,110	249	129	24	273	249	1.0	46.0
29	1,010	249	118	1,110	249	129	24	273	249	2.0	46.0
30	1,020	249	118	1,110	249	129	24	273	249	2.0	47.0
31	1,020	249	118	1,120	249	129	24	273	249	2.0	47.0
Avg	1010	249	117	1110	249	129	19	198	194	1.0	46.0
n	21	13	13	21	13	13	9	9	9	9	7
SD	5	0	0	5	0	0	10	113	104	1.0	1
Min	1000	249	117	1100	249	128	0	0	0	0.0	44.0
Max	1020	249	118	1120	249	129	24	273	249	2.0	47.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for August, 2007.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,020	249	118	1,120	249	130	24	273	249	2.0	48.0
2	1,020	249	118	1,120	249	130	24	273	249	2.0	48.0
3	1,020	249	118	1,120	249	130	24	272	249	3.0	49.0
4	1,020	249	118	1,120	249	130	24	271	249	3.0	49.0
5	1,020	249	118	1,120	249	130	24	270	249	3.0	49.0
6	1,020	249	118	1,120	249	130	24	269	249	3.0	50.0
7	1,020	249	119	1,120	249	130	24	267	249	4.0	50.0
8	1,020	249	119	1,120	249	130	24	265	249	4.0	51.0
9	1,020	249	119	1,120	249	130	24	262	249	4.0	51.0
10	1,020	249	119	1,120	249	130	24	260	249	4.0	51.0
11	1,030	249	119	1,130	249	131	24	259	249	5.0	52.0
12	1,030	249	119	1,130	249	131	24	258	249	5.0	52.0
13	1,030	249	119	1,130	249	131	24	257	249	5.0	53.0
14	1,030	249	119	1,130	249	131	12	61	120	3.0	
15	1,030	249	119	1,130	249	131	0	0	0	0.0	
16	1,030	249	119	1,130	249	131	0	0	0	0.0	
17	1,030	249	120	1,130	249	131	24	145	249	1.0	44.0
18	1,030	249	120	1,130	249	131	24	260	249	1.0	45.0
19	1,030	249	120	1,130	249	131	24	258	249	1.0	45.0
20	1,030	249	120	1,130	249	132	24	256	249	1.0	46.0
21	1,030	249	120	1,130	249	132	24	254	249	2.0	46.0
22	1,030	249	120	1,140	249	132	24	253	249	2.0	47.0
23	1,030	249	120	1,140	249	132	24	253	249	2.0	47.0
24	1,040	249	120	1,140	249	132	24	253	249	2.0	47.0
25	1,040	249	120	1,140	249	132	24	252	249	2.0	48.0
26	1,040	249	120	1,140	249	132	24	251	249	3.0	48.0
27	1,040	249	120	1,140	249	132	24	249	249	3.0	49.0
28	1,040	249	121	1,140	249	132	24	248	249	3.0	49.0
29	1,040	249	121	1,140	249	132	24	247	249	3.0	49.0
30	1,040	249	121	1,140	249	133	24	246	249	4.0	50.0
31	1,040	249	121	1,140	249	133	24	246	249	4.0	50.0
Avg	1030	249	119	1130	249	131	22	232	229	3.0	49.0
n	31	31	31	31	31	31	31	31	31	31	28
SD	7	0	1	8	0	1	6	73	64	1.0	2
Min	1020	249	118	1120	249	130	0	0	0	0.0	44.0
Max	1040	249	121	1140	249	133	24	273	249	5.0	53.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for September, 2007.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,040	249	121	1,140	249	133	24	246	249	4.0	50.0
2	1,040	249	121	1,150	249	133	24	246	249	4.0	51.0
3	1,040	249	121	1,150	249	133	24	244	249	4.0	51.0
4	1,040	249	121	1,150	249	133	24	242	249	5.0	51.0
5	1,050	249	121	1,150	249	133	24	147	249	5.0	48.0
6	1,050	249	121	1,150	249	133	7	8	73	1.0	
7	1,050	249	121	1,150	249	133	0	0	0	0.0	
8	1,050	249	122	1,150	249	134	24	145	249	1.0	44.0
9	1,050	249	122	1,150	249	134	24	259	249	1.0	45.0
10	1,050	249	122	1,150	249	133	24	257	249	1.0	45.0
11	1,050	249	121	1,150	249	133	24	256	249	1.0	46.0
12	1,050	249	121	1,150	249	133	24	254	249	2.0	46.0
13	1,050	249	121	1,150	249	133	24	253	249	2.0	47.0
14	1,050	249	121	1,150	249	133	24	252	249	2.0	47.0
15	1,040	249	121	1,150	249	133	24	251	249	2.0	47.0
16	1,040	249	121	1,150	249	133	24	250	249	2.0	48.0
17	1,040	249	121	1,150	249	133	24	249	249	3.0	48.0
18	1,040	249	121	1,150	249	133	24	249	249	3.0	49.0
19	1,040	249	121	1,140	249	133	24	248	249	3.0	49.0
20	1,040	249	121	1,140	249	133	24	247	249	3.0	49.0
21	1,040	249	121	1,140	249	133	24	245	249	4.0	50.0
22	1,040	249	121	1,140	249	133	24	244	249	4.0	50.0
23	1,040	249	121	1,140	249	133	24	243	249	4.0	50.0
24	1,040	249	121	1,140	249	132	24	242	249	4.0	51.0
25	1,040	249	121	1,140	249	132	24	240	249	5.0	51.0
26	1,040	249	121	1,140	249	132	24	120	249	5.0	47.0
27	1,040	249	121	1,140	249	132	0	0	0	0.0	
28	1,040	249	120	1,140	249	132	0	0	0	0.0	
29	1,040	249	120	1,140	249	132	24	145	249	1.0	44.0
30	1,040	249	120	1,140	249	132	24	259	249	1.0	45.0
Avg	1040	249	121	1150	249	133	21	201	219	3.0	48.0
n	30	30	30	30	30	30	30	30	30	30	26
SD	3	0	0	4	0	0	8	87	80	2.0	2
Min	1040	249	120	1140	249	132	0	0	0	0.0	44.0
Max	1050	249	122	1150	249	134	24	259	249	5.0	51.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for October, 2007.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,040	249	120	1,140	249	132	24	257	227	1.0	41.0
2	1,040	249	120	1,140	249	132	24	255	227	1.0	42.0
3	1,040	249	120	1,140	249	132	24	253	227	2.0	42.0
4	1,040	249	120	1,140	249	132	24	251	227	2.0	43.0
5	1,030	249	120	1,140	249	132	24	249	227	2.0	43.0
6	1,030	249	120	1,130	249	132	24	249	227	2.0	43.0
7	1,030	249	120	1,130	249	132	24	248	227	2.0	44.0
8	1,030	249	120	1,130	249	132	24	248	227	3.0	44.0
9	1,030	249	120	1,130	249	131	24	247	227	3.0	45.0
10	1,030	249	120	1,130	249	131	24	247	227	3.0	45.0
11	1,030	249	120	1,130	249	132	24	247	227	3.0	45.0
12	1,030	249	120	1,130	249	132	24	247	227	4.0	46.0
13	1,030	249	120	1,130	249	132	24	245	227	4.0	46.0
14	1,030	249	120	1,130	249	132	24	243	227	4.0	47.0
15	1,030	249	120	1,130	249	132	24	242	227	4.0	47.0
16	1,030	249	120	1,130	249	132	24	242	227	5.0	47.0
17	1,030	249	120	1,130	249	132	24	241	227	5.0	48.0
18	1,030	249	120	1,130	249	132	24	241	227	5.0	48.0
19	1,030	249	120	1,130	249	132	24	120	227	5.0	44.0
20	1,030	249	120	1,130	249	132	0	0	0	0.0	
21	1,030	249	120	1,130	249	132	0	0	0	0.0	
22	1,030	249	120	1,130	249	132	24	145	249	1.0	44.0
23	1,030	249	120	1,130	249	132	24	259	249	1.0	45.0
24	1,030	249	120	1,130	249	132	24	258	249	1.0	45.0
25	1,030	249	120	1,140	249	132	24	257	249	1.0	46.0
26	1,030	249	120	1,140	249	132	24	255	249	2.0	46.0
27	1,030	249	120	1,140	249	132	24	254	249	2.0	47.0
28	1,030	249	120	1,140	249	132	24	254	249	2.0	47.0
29	1,030	249	120	1,140	249	132	24	253	249	2.0	47.0
30	1,040	249	120	1,140	249	132	24	253	249	2.0	48.0
31	1,040	249	120	1,140	249	132	24	246	249	3.0	48.0
Avg	1030	249	120	1130	249	132	23	226	219	3.0	45.0
n	31	31	31	31	31	31	31	31	31	31	29
SD	1	0	0	1	0	0	6	66	59	1.0	2
Min	1030	249	120	1130	249	131	0	0	0	0.0	41.0
Max	1040	249	120	1140	249	132	24	259	249	5.0	48.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for November, 2007.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,040	249	120	1,140	249	132	24	240	249	3.0	48.0
2	1,040	249	120	1,140	249	132	24	240	249	3.0	49.0
3	1,040	249	120	1,140	249	132	24	240	249	3.0	49.0
4	1,040	249	120	1,140	249	132	24	240	249	4.0	50.0
5	1,040	249	120	1,140	249	132	24	240	249	4.0	50.0
6	1,040	249	120	1,140	249	132	24	240	249	4.0	50.0
7	1,040	249	120	1,140	249	132	24	240	249	4.0	51.0
8	1,040	249	120	1,140	249	132	24	240	249	5.0	51.0
9	1,040	249	120	1,140	249	132	24	240	249	5.0	52.0
10	1,040	249	120	1,140	249	132	24	240	249	5.0	52.0
11	1,040	249	120	1,140	249	132	24	240	249	5.0	52.0
12	1,040	249	120	1,140	249	132	24	120	249	5.0	48.0
13	1,040	249	120	1,140	249	132	0	0	0	0.0	
14	1,040	249	120	1,140	249	132	0	0	0	0.0	
15	1,040	249	120	1,140	249	132	24	159	249	1.0	44.0
16	1,040	249	120	1,140	249	132	24	263	249	1.0	45.0
17	1,040	249	120	1,140	249	132	24	260	249	1.0	45.0
18	1,040	249	120	1,140	249	132	24	259	249	1.0	46.0
19	1,040	249	120	1,140	249	132	24	258	249	2.0	46.0
20	1,040	249	120	1,140	249	132	24	256	249	2.0	47.0
21	1,040	249	120	1,140	249	132	24	253	249	2.0	47.0
22	1,040	249	120	1,140	249	132	24	252	249	2.0	47.0
23	1,040	249	120	1,140	249	132	24	251	249	2.0	48.0
24	1,040	249	121	1,140	249	132	24	250	249	3.0	48.0
25	1,040	249	121	1,140	249	132	24	248	249	3.0	49.0
26	1,040	249	121	1,140	249	132	24	247	249	3.0	49.0
27	1,040	249	121	1,140	249	132	24	246	249	3.0	49.0
28	1,040	249	121	1,140	249	132	24	244	249	4.0	50.0
29	1,040	249	121	1,140	249	132	24	243	249	4.0	50.0
30	1,040	249	121	1,140	249	132	24	242	249	4.0	50.0
Avg	1040	249	120	1140	249	132	22	223	233	3.0	49.0
n	30	30	30	30	30	30	30	30	30	30	28
SD	1	0	0	1	0	0	6	66	62	1.0	2
Min	1040	249	120	1140	249	132	0	0	0	0.0	44.0
Max	1040	249	121	1140	249	132	24	263	249	5.0	52.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for December, 2007.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,040	249	121	1,140	249	132	24	241	249	5.0	52.0
2	1,040	249	121	1,140	249	132	24	241	249	5.0	52.0
3	1,040	249	121	1,140	249	132	24	121	249	5.0	48.0
4	1,040	249	121	1,140	249	132	0	0	0	0.0	
5	1,040	249	121	1,140	249	132	0	0	0	0.0	
6	1,040	249	121	1,140	249	132	24	145	249	1.0	44.0
7	1,040	249	121	1,140	249	132	24	259	249	1.0	45.0
8	1,040	249	121	1,140	249	133	24	257	249	1.0	45.0
9	1,040	249	121	1,140	249	132	24	254	249	1.0	46.0
10	1,040	249	120	1,140	249	132	24	251	249	2.0	46.0
11	1,030	249	120	1,140	249	132	24	249	249	2.0	47.0
12	1,030	249	120	1,130	249	131	24	247	249	2.0	47.0
13	1,030	249	120	1,130	249	131	24	246	249	2.0	47.0
14	1,030	249	119	1,130	249	131	24	246	249	2.0	48.0
15	1,030	249	119	1,120	249	130	24	246	249	3.0	48.0
16	1,020	249	119	1,120	249	130	24	245	249	3.0	49.0
17	1,020	249	118	1,120	249	130	24	245	249	3.0	49.0
18	1,020	249	118	1,120	249	130	24	245	249	3.0	49.0
19	1,020	249	118	1,110	249	129	24	245	249	4.0	50.0
20	1,010	249	118	1,110	249	129	24	244	249	4.0	50.0
21	1,010	249	117	1,110	249	129	24	243	249	4.0	50.0
22	1,010	249	117	1,110	249	128	24	243	249	4.0	51.0
23	1,010	249	117	1,100	249	128	24	243	249	5.0	51.0
24	1,000	249	116	1,100	249	128	24	243	249	5.0	52.0
25	1,000	249	116	1,100	249	127	24	121	249	5.0	48.0
26	998	249	116	1,100	249	127	0	0	0	0.0	
27	996	249	116	1,090	249	127	0	0	0	0.0	
28	993	249	115	1,090	249	126	24	145	249	1.0	44.0
29	991	249	115	1,090	249	126	24	258	249	1.0	45.0
30	988	249	115	1,080	249	126	24	256	249	1.0	45.0
31	986	249	114	1,080	249	126	24	255	249	1.0	46.0
Avg	1020	249	118	1120	249	130	21	201	217	2.0	48.0
n	31	31	31	31	31	31	31	31	31	31	27
SD	19	0	2	20	0	2	8	87	84	2.0	2
Min	986	249	114	1080	249	126	0	0	0	0.0	44.0
Max	1040	249	121	1140	249	133	24	259	249	5.0	52.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for January, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	983	249	114	1,080	249	125	24	253	249	1.0	46.0
2	981	249	114	1,080	249	125	24	250	249	2.0	46.0
3	978	249	114	1,070	249	125	24	249	249	2.0	47.0
4	976	249	113	1,070	249	124	24	248	249	2.0	47.0
5	974	249	113	1,070	249	124	24	248	249	2.0	47.0
6	971	249	113	1,070	249	124	24	248	249	2.0	48.0
7	969	249	112	1,060	249	123	24	247	249	3.0	48.0
8	966	249	112	1,060	249	123	24	246	249	3.0	49.0
9	964	249	112	1,060	249	123	24	245	249	3.0	49.0
10	962	249	112	1,060	249	123	24	244	249	3.0	49.0
11	960	249	111	1,050	249	122	24	243	249	4.0	50.0
12	959	249	111	1,050	249	122	24	243	249	4.0	50.0
13	957	249	111	1,050	249	122	24	242	249	4.0	50.0
14	955	249	111	1,050	249	122	24	242	249	4.0	51.0
15	953	249	111	1,050	249	121	24	241	249	5.0	51.0
16	951	249	110	1,040	249	121	24	121	249	5.0	47.0
17	949	249	110	1,040	249	121	0	0	0	0.0	
18	948	249	110	1,040	249	121	0	0	0	0.0	
19	946	249	110	1,040	249	120	24	145	249	1.0	44.0
20	944	249	110	1,040	249	120	24	258	249	1.0	45.0
21	942	249	109	1,030	249	120	24	254	249	1.0	45.0
22	940	249	109	1,030	249	120	24	251	249	1.0	46.0
23	938	249	109	1,030	249	119	24	249	249	2.0	46.0
24	937	249	109	1,030	249	119	24	247	249	2.0	47.0
25	935	249	108	1,030	249	119	24	245	249	2.0	47.0
26	933	249	108	1,020	249	119	24	244	249	2.0	47.0
27	931	249	108	1,020	249	119	24	244	249	2.0	48.0
28	929	249	108	1,020	249	118	24	244	249	3.0	48.0
29	927	249	108	1,020	249	118	24	243	249	3.0	48.0
30	925	249	107	1,020	249	118	24	243	249	3.0	49.0
31	924	249	107	1,010	249	118	24	243	249	3.0	49.0
Avg	952	249	110	1040	249	121	23	223	233	2.0	48.0
n	31	31	31	31	31	31	31	31	31	31	29
SD	17	0	2	19	0	2	6	65	61	1.0	2
Min	924	249	107	1010	249	118	0	0	0	0.0	44.0
Max	983	249	114	1080	249	125	24	258	249	5.0	51.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for February, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	922	249	107	1,010	249	117	24	243	249	3.0	49.0
2	920	249	107	1,010	249	117	24	222	249	4.0	49.0
3	918	249	107	1,010	249	117	24	180	249	4.0	48.0
4	916	249	106	1,010	249	117	24	150	249	4.0	48.0
5	914	249	106	1,000	249	116	24	133	249	4.0	47.0
6	913	249	106	1,000	249	116	24	123	249	5.0	47.0
7	911	249	106	999	249	116	8	20	83	2.0	
8	909	249	105	997	249	116	0	0	0	0.0	
9	909	249	105	997	249	116	0	0	0	0.0	
10	911	249	106	999	249	116	24	145	249	1.0	44.0
11	913	249	106	1,000	249	116	24	257	249	1.0	45.0
12	914	249	106	1,000	249	116	24	252	249	1.0	45.0
13	916	249	106	1,000	249	117	24	249	249	1.0	46.0
14	918	249	107	1,010	249	117	24	247	249	2.0	46.0
15	920	249	107	1,010	249	117	24	244	249	2.0	46.0
16	922	249	107	1,010	249	117	24	241	249	2.0	47.0
17	924	249	107	1,010	249	118	24	240	249	2.0	47.0
18	925	249	107	1,010	249	118	24	239	249	2.0	48.0
19	927	249	108	1,020	249	118	24	239	249	3.0	48.0
20	929	249	108	1,020	249	118	24	239	249	3.0	48.0
21	931	249	108	1,020	249	118	24	238	249	3.0	49.0
22	933	249	108	1,020	249	119	24	238	249	3.0	49.0
23	934	249	108	1,020	249	119	24	237	249	4.0	50.0
24	936	249	109	1,030	249	119	24	237	249	4.0	50.0
25	938	249	109	1,030	249	119	24	237	249	4.0	50.0
26	940	249	109	1,030	249	120	24	237	249	4.0	51.0
27	942	249	109	1,030	249	120	24	237	249	5.0	51.0
28	944	249	109	1,030	249	120	24	118	249	5.0	47.0
29	945	249	110	1,040	249	120	0	0	0	0.0	
Avg	924	249	107	1010	249	118	21	188	218	3.0	48.0
n	29	29	29	29	29	29	29	29	29	29	25
SD	11	0	1	12	0	1	8	84	80	1.0	2
Min	909	249	105	997	249	116	0	0	0	0.0	44.0
Max	945	249	110	1040	249	120	24	257	249	5.0	51.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for March, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	947	249	110	1,040	249	121	0	0	0	0.0	
2	949	249	110	1,040	249	121	24	210	249	1.0	45.0
3	951	249	110	1,040	249	121	24	315	249	1.0	45.0
4	953	249	111	1,040	249	121	24	305	249	1.0	46.0
5	955	249	111	1,050	249	121	24	292	249	1.0	46.0
6	956	249	111	1,050	249	122	24	283	249	2.0	47.0
7	958	249	111	1,050	249	122	24	279	249	2.0	47.0
8	960	249	111	1,050	249	122	24	277	249	2.0	47.0
9	961	249	112	1,050	249	122	24	276	249	2.0	48.0
10	961	249	111	1,050	249	122	24	274	249	2.0	48.0
11	961	249	111	1,050	249	122	24	273	249	3.0	49.0
12	960	249	111	1,050	249	122	24	271	249	3.0	49.0
13	960	249	111	1,050	249	122	24	269	249	3.0	49.0
14	960	249	111	1,050	249	122	24	265	249	3.0	50.0
15	960	249	111	1,050	249	122	24	261	249	4.0	50.0
16	960	249	111	1,050	249	122	24	259	249	4.0	50.0
17	960	249	111	1,050	249	122	24	256	249	4.0	51.0
18	959	249	111	1,050	249	122	24	254	249	4.0	51.0
19	959	249	111	1,050	249	122	24	253	249	5.0	52.0
20	959	249	111	1,050	249	122	24	126	249	5.0	48.0
21	959	249	111	1,050	249	122	0	0	0	0.0	
22	959	249	111	1,050	249	122	0	0	0	0.0	
23	959	249	111	1,050	249	122	24	193	249	1.0	45.0
24	959	249	111	1,050	249	122	24	295	249	1.0	45.0
25	958	249	111	1,050	249	122	24	287	249	1.0	46.0
26	958	249	111	1,050	249	122	24	282	249	1.0	46.0
27	958	249	111	1,050	249	122	24	280	249	2.0	47.0
28	958	249	111	1,050	249	122	24	279	249	2.0	47.0
29	958	249	111	1,050	249	122	24	278	249	2.0	47.0
30	958	249	111	1,050	249	122	24	276	249	2.0	48.0
31	957	249	111	1,050	249	122	24	275	249	2.0	48.0
Avg	958	249	111	1050	249	122	22	240	225	2.0	48.0
n	31	31	31	31	31	31	31	31	31	31	28
SD	3	0	0	4	0	0	7	86	74	1.0	2
Min	947	249	110	1040	249	121	0	0	0	0.0	45.0
Max	961	249	112	1050	249	122	24	315	249	5.0	52.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for April, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	957	249	111	1,050	249	122	24	275	249	3.0	49.0
2	957	249	111	1,050	249	122	24	273	249	3.0	49.0
3	957	249	111	1,050	249	122	24	272	249	3.0	50.0
4	957	249	111	1,050	249	122	24	268	249	3.0	50.0
5	957	249	111	1,050	249	122	24	264	249	4.0	50.0
6	956	249	111	1,050	249	122	24	262	249	4.0	51.0
7	956	249	111	1,050	249	122	24	260	249	4.0	51.0
8	956	249	111	1,050	249	122	24	259	249	4.0	51.0
9	956	249	111	1,050	249	122	24	259	249	5.0	52.0
10	957	249	111	1,050	249	122	24	258	249	5.0	52.0
11	957	249	111	1,050	249	122	24	257	249	5.0	53.0
12	958	249	111	1,050	249	122	24	255	249	5.0	53.0
13	959	249	111	1,050	249	122	24	254	249	5.0	53.0
14	959	249	111	1,050	249	122	24	253	249	6.0	54.0
15	960	249	111	1,050	249	122	24	253	249	6.0	54.0
16	960	249	111	1,050	249	122	24	126	249	6.0	49.0
17	961	249	111	1,050	249	122	0	0	0	0.0	
18	961	249	112	1,060	249	122	24	147	249	1.0	44.0
19	962	249	112	1,060	249	122	24	291	249	1.0	45.0
20	963	249	112	1,060	249	123	24	283	249	1.0	45.0
21	963	249	112	1,060	249	123	24	278	249	1.0	46.0
22	964	249	112	1,060	249	123	24	274	249	1.0	46.0
23	964	249	112	1,060	249	123	24	271	249	2.0	46.0
24	965	249	112	1,060	249	123	24	269	249	2.0	47.0
25	965	249	112	1,060	249	123	24	268	249	2.0	47.0
26	966	249	112	1,060	249	123	24	267	249	2.0	48.0
27	966	249	112	1,060	249	123	24	266	249	2.0	48.0
28	967	249	112	1,060	249	123	24	264	249	3.0	48.0
29	968	249	112	1,060	249	123	24	263	249	3.0	49.0
30	968	249	112	1,060	249	123	24	263	249	3.0	49.0
Avg	961	249	111	1050	249	122	23	248	241	3.0	49.0
n	30	30	30	30	30	30	30	30	30	30	29
SD	4	0	0	4	0	1	4	57	45	2.0	3
Min	956	249	111	1050	249	122	0	0	0	0.0	44.0
Max	968	249	112	1060	249	123	24	291	249	6.0	54.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for May, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	969	249	112	1,060	249	123	24	262	249	3.0	50.0
2	969	249	112	1,060	249	123	24	260	249	4.0	50.0
3	970	249	113	1,060	249	124	24	258	249	4.0	50.0
4	970	249	113	1,070	249	124	24	255	249	4.0	51.0
5	971	249	113	1,070	249	124	24	252	249	4.0	51.0
6	972	249	113	1,070	249	124	24	249	249	5.0	51.0
7	972	249	113	1,070	249	124	24	247	249	5.0	52.0
8	973	249	113	1,070	249	124	24	245	249	5.0	52.0
9	974	249	113	1,070	249	124	24	243	249	5.0	52.0
10	975	249	113	1,070	249	124	24	241	249	5.0	53.0
11	976	249	113	1,070	249	124	24	240	249	6.0	53.0
12	977	249	113	1,070	249	124	24	120	249	6.0	48.0
13	978	249	113	1,070	249	125	0	0	0	0.0	
14	979	249	114	1,070	249	125	24	126	249	1.0	44.0
15	980	249	114	1,080	249	125	24	253	249	1.0	45.0
16	981	249	114	1,080	249	125	24	251	249	1.0	45.0
17	982	249	114	1,080	249	125	24	250	249	1.0	45.0
18	983	249	114	1,080	249	125	24	249	249	1.0	46.0
19	984	249	114	1,080	249	125	24	249	249	2.0	46.0
20	985	249	114	1,080	249	125	24	249	249	2.0	47.0
21	986	249	114	1,080	249	126	24	248	249	2.0	47.0
22	987	249	115	1,080	249	126	24	248	249	2.0	47.0
23	988	249	115	1,080	249	126	24	247	249	2.0	48.0
24	989	249	115	1,090	249	126	24	246	249	3.0	48.0
25	990	249	115	1,090	249	126	24	246	249	3.0	49.0
26	991	249	115	1,090	249	126	24	246	249	3.0	49.0
27	992	249	115	1,090	249	126	24	245	249	3.0	49.0
28	993	249	115	1,090	249	126	24	243	249	4.0	50.0
29	994	249	115	1,090	249	127	24	240	249	4.0	50.0
30	995	249	115	1,090	249	127	24	240	249	4.0	50.0
31	996	249	116	1,090	249	127	24	239	249	4.0	51.0
Avg	981	249	114	1080	249	125	23	232	241	3.0	49.0
n	31	31	31	31	31	31	31	31	31	31	30
SD	9	0	1	9	0	1	4	53	44	2.0	3
Min	969	249	112	1060	249	123	0	0	0	0.0	44.0
Max	996	249	116	1090	249	127	24	262	249	6.0	53.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for June, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	997	249	116	1,090	249	127	24	236	249	5.0	51.0
2	998	249	116	1,100	249	127	24	235	249	5.0	51.0
3	999	249	116	1,100	249	127	24	118	249	5.0	48.0
4	1,000	249	116	1,100	249	127	0	0	0	0.0	
5	1,000	249	116	1,100	249	128	0	0	0	0.0	
6	1,000	249	116	1,100	249	128	24	196	249	1.0	45.0
7	1,000	249	116	1,100	249	128	24	259	249	1.0	45.0
8	1,000	249	117	1,100	249	128	24	256	249	1.0	45.0
9	1,010	249	117	1,100	249	128	24	255	249	1.0	46.0
10	1,010	249	117	1,100	249	128	24	254	249	2.0	46.0
11	1,010	249	117	1,100	249	128	24	252	249	2.0	47.0
12	1,010	249	117	1,110	249	128	24	250	249	2.0	47.0
13	1,010	249	117	1,110	249	128	24	250	249	2.0	47.0
14	1,010	249	117	1,110	249	128	24	249	249	2.0	48.0
15	1,010	249	117	1,110	249	128	24	249	249	3.0	48.0
16	1,010	249	117	1,110	249	129	24	248	249	3.0	49.0
17	1,010	249	117	1,110	249	129	24	248	249	3.0	49.0
18	1,010	249	117	1,110	249	129	24	247	249	3.0	49.0
19	1,010	249	117	1,110	249	129	24	247	249	4.0	50.0
20	1,010	249	117	1,110	249	129	24	247	249	4.0	50.0
21	1,010	249	117	1,110	249	129	24	247	249	4.0	51.0
22	1,010	249	118	1,110	249	129	24	247	249	4.0	51.0
23	1,010	249	118	1,110	249	129	24	247	249	5.0	51.0
24	1,010	249	118	1,110	249	129	24	124	249	5.0	48.0
25	1,010	249	118	1,110	249	129	0	0	0	0.0	
26	1,010	249	118	1,110	249	129	0	0	0	0.0	
27	1,020	249	118	1,110	249	129	24	190	249	1.0	45.0
28	1,020	249	118	1,120	249	129	24	254	249	1.0	45.0
29	1,020	249	118	1,120	249	129	24	253	249	1.0	45.0
30	1,020	249	118	1,120	249	130	24	253	249	1.0	46.0
Avg	1010	249	117	1110	249	128	21	204	216	2.0	48.0
n	30	30	30	30	30	30	30	30	30	30	26
SD	6	0	1	6	0	1	8	87	85	2.0	2
Min	997	249	116	1090	249	127	0	0	0	0.0	45.0
Max	1020	249	118	1120	249	130	24	259	249	5.0	51.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for July, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,020	249	118	1,120	249	130	24	251	249	2.0	47.0
2	1,020	249	118	1,120	249	130	24	249	249	2.0	47.0
3	1,020	249	118	1,120	249	130	24	244	249	2.0	47.0
4	1,020	249	118	1,120	249	130	24	238	249	2.0	48.0
5	1,020	249	118	1,120	249	130	24	235	249	3.0	48.0
6	1,020	249	118	1,120	249	130	24	232	249	3.0	48.0
7	1,020	249	118	1,120	249	130	24	230	249	3.0	49.0
8	1,020	249	119	1,120	249	130	24	229	249	3.0	49.0
9	1,020	249	119	1,120	249	130	24	228	249	4.0	49.0
10	1,020	249	119	1,120	249	130	24	227	249	4.0	50.0
11	1,020	249	119	1,120	249	130	24	227	249	4.0	50.0
12	1,020	249	119	1,120	249	130	24	227	249	4.0	50.0
13	1,020	249	119	1,120	249	130	24	226	249	5.0	51.0
14	1,030	249	119	1,130	249	131	24	226	249	5.0	51.0
15	1,030	249	119	1,130	249	131	24	226	249	5.0	51.0
16	1,030	249	119	1,130	249	131	24	113	249	5.0	48.0
17	1,030	249	119	1,130	249	131	0	0	0	0.0	
18	1,030	249	119	1,130	249	131	0	0	0	0.0	
19	1,030	249	119	1,130	249	131	24	189	299	1.0	53.0
20	1,030	249	119	1,130	249	131	24	250	272	1.0	49.0
21	1,030	249	119	1,130	249	131	24	247	249	1.0	45.0
22	1,030	249	119	1,130	249	131	24	245	249	1.0	46.0
23	1,030	249	120	1,130	249	131	24	243	249	2.0	46.0
24	1,030	249	120	1,130	249	131	24	242	249	2.0	46.0
25	1,030	249	120	1,130	249	131	24	241	249	2.0	47.0
26	1,030	249	120	1,130	249	131	24	240	249	2.0	47.0
27	1,030	249	120	1,130	249	131	24	240	249	2.0	48.0
28	1,030	249	120	1,130	249	131	24	239	249	3.0	48.0
29	1,030	249	120	1,130	249	131	24	239	249	3.0	48.0
30	1,030	249	120	1,130	249	132	24	238	249	3.0	49.0
31	1,030	249	120	1,130	249	132	24	238	249	3.0	49.0
Avg	1030	249	119	1130	249	131	23	216	236	3.0	48.0
n	31	31	31	31	31	31	31	31	31	31	29
SD	5	0	1	5	0	1	6	62	63	1.0	2
Min	1020	249	118	1120	249	130	0	0	0	0.0	45.0
Max	1030	249	120	1130	249	132	24	251	299	5.0	53.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for August, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,030	249	120	1,130	249	132	24	238	249	4.0	50.0
2	1,040	249	120	1,140	249	132	24	236	249	4.0	50.0
3	1,040	249	120	1,140	249	132	24	235	249	4.0	50.0
4	1,040	249	120	1,140	249	132	24	234	249	4.0	51.0
5	1,040	249	120	1,140	249	132	24	232	249	5.0	51.0
6	1,040	249	120	1,140	249	132	24	115	249	5.0	47.0
7	1,040	249	120	1,140	249	132	0	0	0	0.0	
8	1,040	249	121	1,140	249	132	0	0	0	0.0	
9	1,040	249	121	1,140	249	132	24	201	249	1.0	45.0
10	1,040	249	120	1,140	249	132	24	264	249	1.0	45.0
11	1,040	249	120	1,140	249	132	24	262	249	1.0	45.0
12	1,040	249	120	1,140	249	132	24	260	249	1.0	46.0
13	1,040	249	120	1,140	249	132	24	259	249	2.0	46.0
14	1,040	249	120	1,140	249	132	24	257	249	2.0	47.0
15	1,040	249	120	1,140	249	132	24	256	249	2.0	47.0
16	1,040	249	120	1,140	249	132	24	255	249	2.0	47.0
17	1,040	249	120	1,140	249	132	24	254	249	2.0	48.0
18	1,040	249	120	1,140	249	132	24	254	249	3.0	48.0
19	1,040	249	120	1,140	249	132	24	253	249	3.0	49.0
20	1,030	249	120	1,130	249	132	24	253	249	3.0	49.0
21	1,030	249	120	1,130	249	132	24	252	249	3.0	49.0
22	1,030	249	120	1,130	249	132	24	251	249	4.0	50.0
23	1,030	249	120	1,130	249	132	24	251	249	4.0	50.0
24	1,030	249	120	1,130	249	132	24	251	249	4.0	51.0
25	1,030	249	120	1,130	249	131	24	251	249	4.0	51.0
26	1,030	249	120	1,130	249	131	24	250	249	5.0	51.0
27	1,030	249	120	1,130	249	131	24	125	249	5.0	48.0
28	1,030	249	120	1,130	249	131	14	73	146	1.0	
29	1,030	249	120	1,130	249	131	24	249	249	1.0	45.0
30	1,030	249	120	1,130	249	131	24	248	249	1.0	45.0
31	1,030	249	120	1,130	249	131	24	248	249	1.0	45.0
Avg	1040	249	120	1140	249	132	22	218	230	3.0	48.0
n	31	31	31	31	31	31	31	31	31	31	28
SD	2	0	0	2	0	0	6	73	63	2.0	2
Min	1030	249	120	1130	249	131	0	0	0	0.0	45.0
Max	1040	249	121	1140	249	132	24	264	249	5.0	51.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for September, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,030	249	120	1,130	249	131	24	247	249	1.0	46.0
2	1,030	249	120	1,130	249	131	24	245	249	2.0	46.0
3	1,030	249	120	1,130	249	131	24	244	249	2.0	46.0
4	1,030	249	119	1,130	249	131	24	243	249	2.0	47.0
5	1,030	249	119	1,130	249	131	24	242	249	2.0	47.0
6	1,030	249	119	1,130	249	131	24	240	249	2.0	48.0
7	1,030	249	119	1,130	249	131	24	240	249	3.0	48.0
8	1,030	249	119	1,130	249	131	24	239	249	3.0	48.0
9	1,030	249	119	1,130	249	131	24	239	249	3.0	49.0
10	1,030	249	119	1,130	249	131	24	238	249	3.0	49.0
11	1,030	249	119	1,120	249	130	24	237	249	4.0	50.0
12	1,030	249	119	1,120	249	130	24	236	249	4.0	50.0
13	1,020	249	119	1,120	249	130	24	235	249	4.0	50.0
14	1,020	249	119	1,120	249	130	24	234	249	4.0	51.0
15	1,020	249	119	1,120	249	130	24	234	249	5.0	51.0
16	1,020	249	119	1,120	249	130	24	117	249	5.0	47.0
17	1,020	249	118	1,110	249	129	0	0	0	0.0	
18	1,020	249	118	1,110	249	129	24	145	249	1.0	44.0
19	1,020	249	118	1,110	249	129	24	288	249	1.0	45.0
20	1,020	249	118	1,110	249	129	24	284	249	1.0	45.0
21	1,020	249	118	1,110	249	129	24	282	249	1.0	46.0
22	1,020	249	118	1,110	249	128	24	278	249	1.0	46.0
23	1,020	249	118	1,110	249	128	24	276	249	2.0	46.0
24	1,020	249	118	1,100	249	128	24	276	249	2.0	47.0
25	1,010	249	118	1,100	249	128	24	275	249	2.0	47.0
26	1,010	249	118	1,100	249	128	24	274	249	2.0	48.0
27	1,010	249	118	1,100	249	128	24	273	249	2.0	48.0
28	1,010	249	117	1,100	249	127	24	271	249	3.0	49.0
29	1,010	249	117	1,100	249	127	24	269	249	3.0	49.0
30	1,010	249	117	1,090	249	127	24	259	249	3.0	49.0
Avg	1020	249	119	1120	249	129	23	239	241	2.0	48.0
n	30	30	30	30	30	30	30	30	30	30	29
SD	6	0	1	12	0	1	4	57	45	1.0	2
Min	1010	249	117	1090	249	127	0	0	0	0.0	44.0
Max	1030	249	120	1130	249	131	24	288	249	5.0	51.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for October, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,010	249	117	1,090	249	127	24	248	249	3.0	49.0
2	1,010	249	117	1,090	249	127	24	247	249	4.0	50.0
3	1,010	249	117	1,090	249	126	24	247	249	4.0	50.0
4	1,010	249	117	1,090	249	126	24	246	249	4.0	51.0
5	1,010	249	117	1,090	249	126	24	246	249	4.0	51.0
6	1,010	249	117	1,080	249	126	24	246	249	5.0	51.0
7	1,010	249	117	1,080	249	126	24	246	249	5.0	52.0
8	1,000	249	117	1,080	249	125	24	245	249	5.0	52.0
9	1,000	249	116	1,080	249	125	24	245	249	5.0	53.0
10	1,000	249	116	1,080	249	125	24	245	249	5.0	53.0
11	1,000	249	116	1,080	249	125	24	245	249	6.0	53.0
12	1,000	249	116	1,080	249	125	24	245	249	6.0	54.0
13	1,000	249	116	1,070	249	125	24	123	249	6.0	49.0
14	1,000	249	116	1,070	249	124	0	0	0	0.0	
15	999	249	116	1,070	249	124	24	143	249	1.0	44.0
16	998	249	116	1,070	249	124	24	284	249	1.0	45.0
17	997	249	116	1,070	249	124	24	278	249	1.0	45.0
18	996	249	116	1,070	249	124	24	275	249	1.0	46.0
19	996	249	116	1,060	249	123	24	274	249	1.0	46.0
20	995	249	115	1,060	249	123	24	271	249	2.0	46.0
21	994	249	115	1,060	249	123	24	269	249	2.0	47.0
22	993	249	115	1,060	249	123	24	267	249	2.0	47.0
23	992	249	115	1,060	249	123	24	266	249	2.0	48.0
24	993	249	115	1,060	249	123	24	264	249	2.0	48.0
25	995	249	115	1,060	249	123	24	260	249	3.0	48.0
26	997	249	116	1,070	249	124	24	253	249	3.0	49.0
27	999	249	116	1,070	249	124	24	250	249	3.0	49.0
28	1,000	249	116	1,080	249	125	24	249	249	3.0	49.0
29	1,000	249	116	1,080	249	125	24	248	249	4.0	50.0
30	1,010	249	117	1,080	249	126	24	246	249	4.0	50.0
31	1,010	249	117	1,090	249	126	24	246	249	4.0	51.0
Avg	1000	249	116	1070	249	125	23	239	241	3.0	49.0
n	31	31	31	31	31	31	31	31	31	31	30
SD	5	0	1	10	0	1	4	54	44	2.0	3
Min	992	249	115	1060	249	123	0	0	0	0.0	44.0
Max	1010	249	117	1090	249	127	24	284	249	6.0	54.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for November, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,010	249	117	1,090	249	127	24	246	249	4.0	51.0
2	1,010	249	117	1,100	249	127	24	245	249	5.0	51.0
3	1,010	249	118	1,100	249	128	24	245	249	5.0	52.0
4	1,020	249	118	1,110	249	128	24	123	249	5.0	48.0
5	1,020	249	118	1,110	249	129	0	0	0	0.0	
6	1,020	249	118	1,110	249	129	24	131	249	1.0	44.0
7	1,020	249	119	1,120	249	130	24	260	249	1.0	45.0
8	1,020	249	119	1,120	249	130	24	255	249	1.0	45.0
9	1,030	249	119	1,120	249	130	24	253	249	1.0	45.0
10	1,030	249	119	1,120	249	130	24	252	249	1.0	46.0
11	1,030	249	119	1,120	249	130	24	250	249	2.0	46.0
12	1,030	249	119	1,120	249	130	24	250	249	2.0	47.0
13	1,030	249	119	1,120	249	130	24	249	249	2.0	47.0
14	1,030	249	119	1,120	249	130	24	249	249	2.0	47.0
15	1,030	249	119	1,120	249	130	24	248	249	2.0	48.0
16	1,030	249	119	1,120	249	130	24	248	249	3.0	48.0
17	1,030	249	119	1,120	249	130	24	248	249	3.0	49.0
18	1,030	249	119	1,120	249	130	24	247	249	3.0	49.0
19	1,030	249	119	1,120	249	130	24	246	249	3.0	49.0
20	1,030	249	119	1,120	249	130	24	246	249	4.0	50.0
21	1,030	249	119	1,120	249	130	24	245	249	4.0	50.0
22	1,030	249	119	1,120	249	130	24	244	249	4.0	50.0
23	1,030	249	119	1,120	249	130	24	243	249	4.0	51.0
24	1,030	249	120	1,120	249	130	24	243	249	5.0	51.0
25	1,030	249	120	1,120	249	130	24	242	249	5.0	52.0
26	1,030	249	120	1,120	249	130	24	242	249	5.0	52.0
27	1,030	249	120	1,120	249	130	24	121	249	5.0	48.0
28	1,030	249	120	1,120	249	130	0	0	0	0.0	
29	1,030	249	120	1,120	249	130	24	142	249	1.0	44.0
30	1,030	249	120	1,120	249	130	24	282	249	1.0	45.0
Avg	1030	249	119	1120	249	130	22	216	233	3.0	48.0
n	30	30	30	30	30	30	30	30	30	30	28
SD	6	0	1	9	0	1	6	71	62	2.0	2
Min	1010	249	117	1090	249	127	0	0	0	0.0	44.0
Max	1030	249	120	1120	249	130	24	282	249	5.0	52.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for December, 2008.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,030	249	120	1,120	249	130	24	278	249	1.0	45.0
2	1,030	249	120	1,120	249	130	24	273	249	1.0	46.0
3	1,030	249	120	1,120	249	130	24	270	249	1.0	46.0
4	1,030	249	120	1,120	249	130	24	270	249	2.0	46.0
5	1,030	249	120	1,120	249	130	24	269	249	2.0	47.0
6	1,030	249	120	1,120	249	130	24	269	249	2.0	47.0
7	1,030	249	120	1,120	249	130	24	269	249	2.0	48.0
8	1,030	249	120	1,120	249	131	24	269	249	2.0	48.0
9	1,030	249	120	1,120	249	131	24	268	249	3.0	49.0
10	1,040	249	120	1,120	249	131	24	268	249	3.0	49.0
11	1,040	249	120	1,120	249	131	24	268	249	3.0	49.0
12	1,040	249	120	1,120	249	131	24	268	249	3.0	50.0
13	1,040	249	120	1,120	249	131	24	267	249	4.0	50.0
14	1,040	249	120	1,120	249	131	24	267	249	4.0	51.0
15	1,040	249	120	1,120	249	131	24	267	249	4.0	51.0
16	1,040	249	120	1,120	249	131	24	267	249	4.0	52.0
17	1,040	249	120	1,120	249	131	24	266	249	5.0	52.0
18	1,040	249	120	1,120	249	131	24	265	249	5.0	52.0
19	1,040	249	120	1,120	249	131	24	265	249	5.0	53.0
20	1,040	249	120	1,120	249	131	24	265	249	5.0	53.0
21	1,040	249	121	1,120	249	131	24	264	249	5.0	54.0
22	1,040	249	121	1,120	249	131	24	264	249	6.0	54.0
23	1,040	249	120	1,120	249	130	24	132	249	6.0	49.0
24	1,030	249	120	1,120	249	130	0	0	0	0.0	
25	1,030	249	119	1,120	249	130	24	143	249	1.0	44.0
26	1,030	249	119	1,120	249	130	24	284	249	1.0	45.0
27	1,020	249	119	1,110	249	129	24	279	249	1.0	45.0
28	1,020	249	118	1,110	249	129	24	276	249	1.0	46.0
29	1,010	249	118	1,110	249	129	24	275	249	1.0	46.0
30	1,010	249	117	1,110	249	128	24	275	249	2.0	46.0
31	1,010	249	117	1,100	249	128	24	274	249	2.0	47.0
Avg	1030	249	120	1120	249	130	23	253	241	3.0	49.0
n	31	31	31	31	31	31	31	31	31	31	30
SD	8	0	1	6	0	1	4	57	44	2.0	3
Min	1010	249	117	1100	249	128	0	0	0	0.0	44.0
Max	1040	249	121	1120	249	131	24	284	249	6.0	54.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for January, 2009.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,000	249	116	1,100	249	128	24	273	249	2.0	47.0
2	999	249	116	1,100	249	127	24	272	249	2.0	48.0
3	995	249	115	1,100	249	127	24	271	249	2.0	48.0
4	991	249	115	1,090	249	127	24	270	249	3.0	49.0
5	987	249	115	1,090	249	127	24	269	249	3.0	49.0
6	984	249	114	1,090	249	126	24	268	249	3.0	49.0
7	980	249	114	1,090	249	126	24	267	249	3.0	50.0
8	976	249	113	1,080	249	126	24	266	249	4.0	50.0
9	972	249	113	1,080	249	125	24	265	249	4.0	51.0
10	968	249	112	1,080	249	125	24	264	249	4.0	51.0
11	964	249	112	1,080	249	125	24	263	249	4.0	51.0
12	961	249	111	1,070	249	125	24	262	249	5.0	52.0
13	957	249	111	1,070	249	124	24	261	249	5.0	52.0
14	953	249	111	1,070	249	124	24	260	249	5.0	53.0
15	949	249	110	1,070	249	124	24	130	249	5.0	48.0
16	945	249	110	1,060	249	123	0	0	0	0.0	
17	942	249	109	1,060	249	123	0	0	0	0.0	
18	938	249	109	1,060	249	123	24	58	249	1.0	44.0
19	934	249	108	1,060	249	122	24	174	249	1.0	44.0
20	940	249	109	1,060	249	123	24	232	249	1.0	45.0
21	956	249	111	1,080	249	125	24	232	249	1.0	46.0
22	972	249	113	1,090	249	127	24	233	249	2.0	46.0
23	988	249	115	1,110	249	128	24	233	249	2.0	46.0
24	1,000	249	116	1,120	249	130	24	233	249	2.0	47.0
25	1,020	249	118	1,130	249	132	24	233	249	2.0	47.0
26	1,040	249	120	1,150	249	133	24	233	249	2.0	48.0
27	1,050	249	122	1,160	249	135	24	234	249	3.0	48.0
28	1,070	249	124	1,180	249	137	24	234	249	3.0	48.0
29	1,080	249	125	1,190	249	138	24	234	249	3.0	48.0
30	1,070	249	124	1,180	249	137	24	233	249	3.0	49.0
31	1,060	249	123	1,170	249	136	24	231	249	3.0	49.0
Avg	989	249	115	1100	249	128	23	222	233	3.0	48.0
n	31	31	31	31	31	31	31	31	31	31	29
SD	42	0	5	40	0	5	6	73	61	1.0	2
Min	934	249	108	1060	249	122	0	0	0	0.0	44.0
Max	1080	249	125	1190	249	138	24	273	249	5.0	53.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for February, 2009.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,050	249	122	1,160	249	134	24	230	249	4.0	49.0
2	1,040	249	120	1,150	249	133	24	229	249	4.0	49.0
3	1,020	249	119	1,130	249	131	24	228	249	4.0	50.0
4	1,010	249	118	1,120	249	130	24	226	249	4.0	50.0
5	1,000	249	116	1,110	249	129	24	225	249	4.0	50.0
6	1,000	249	116	1,110	249	128	24	224	249	4.0	50.0
7	1,010	249	117	1,100	249	128	24	223	249	5.0	51.0
8	1,010	249	117	1,100	249	128	24	194	249	5.0	50.0
9	1,010	249	118	1,100	249	128	12	28	125	2.0	
10	1,020	249	118	1,100	249	127	12	14	125	0.0	
11	1,020	249	118	1,100	249	127	24	113	249	1.0	44.0
12	1,020	249	119	1,090	249	127	24	213	249	1.0	45.0
13	1,020	249	118	1,090	249	127	24	228	249	1.0	45.0
14	1,020	249	118	1,100	249	127	24	230	249	1.0	45.0
15	1,020	249	118	1,100	249	127	24	231	249	1.0	46.0
16	1,020	249	118	1,100	249	127	24	232	249	2.0	46.0
17	1,020	249	118	1,100	249	127	24	233	249	2.0	47.0
18	1,020	249	118	1,100	249	128	24	235	249	2.0	47.0
19	1,010	249	118	1,100	249	128	24	236	249	2.0	47.0
20	1,010	249	117	1,100	249	128	24	234	249	3.0	48.0
21	1,010	249	117	1,100	249	128	24	233	249	3.0	48.0
22	1,010	249	117	1,110	249	128	24	231	249	3.0	48.0
23	1,000	249	116	1,110	249	129	24	230	249	3.0	49.0
24	1,000	249	116	1,110	249	129	24	228	249	4.0	49.0
25	997	249	116	1,110	249	129	24	227	249	4.0	49.0
26	994	249	115	1,110	249	129	24	225	249	4.0	50.0
27	990	249	115	1,110	249	129	24	224	249	4.0	50.0
28	986	249	114	1,110	249	129	24	223	249	4.0	50.0
Avg	1010	249	117	1110	249	129	23	208	241	3.0	48.0
n	28	28	28	28	28	28	28	28	28	28	26
SD	13	0	2	15	0	2	3	57	32	1.0	2
Min	986	249	114	1090	249	127	12	14	125	0.0	44.0
Max	1050	249	122	1160	249	134	24	236	249	5.0	51.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for March, 2009.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	982	249	114	1,110	249	129	24	222	249	5.0	51.0
2	978	249	113	1,110	249	129	24	221	249	5.0	51.0
3	974	249	113	1,110	249	129	24	193	249	5.0	50.0
4	970	249	113	1,110	249	129	12	28	125	3.0	
5	967	249	112	1,110	249	129	12	34	125	0.0	
6	970	249	113	1,110	249	129	24	239	249	1.0	45.0
7	973	249	113	1,110	249	129	24	272	249	1.0	45.0
8	977	249	113	1,110	249	129	24	271	249	1.0	45.0
9	980	249	114	1,110	249	129	24	270	249	1.0	46.0
10	984	249	114	1,110	249	129	24	269	249	1.0	46.0
11	987	249	115	1,110	249	129	24	268	249	2.0	47.0
12	991	249	115	1,110	249	129	24	267	249	2.0	47.0
13	992	249	115	1,110	249	129	24	265	249	2.0	47.0
14	993	249	115	1,110	249	129	24	263	249	2.0	48.0
15	994	249	115	1,110	249	129	24	261	249	3.0	48.0
16	995	249	116	1,120	249	129	24	259	249	3.0	49.0
17	997	249	116	1,120	249	130	24	257	249	3.0	49.0
18	998	249	116	1,120	249	130	24	255	249	3.0	49.0
19	999	249	116	1,120	249	130	24	253	249	4.0	50.0
20	1,000	249	116	1,120	249	130	24	251	249	4.0	50.0
21	998	249	116	1,120	249	130	24	250	249	4.0	50.0
22	996	249	116	1,120	249	130	24	249	249	4.0	51.0
23	994	249	115	1,120	249	130	24	248	249	4.0	51.0
24	992	249	115	1,120	249	130	24	247	249	5.0	52.0
25	990	249	115	1,120	249	130	24	246	249	5.0	52.0
26	988	249	115	1,120	249	130	24	245	249	5.0	52.0
27	987	249	114	1,120	249	130	24	244	249	5.0	53.0
28	985	249	114	1,120	249	130	24	243	249	6.0	53.0
29	983	249	114	1,120	249	130	24	212	249	6.0	52.0
30	981	249	114	1,120	249	130	12	30	125	3.0	
31	979	249	114	1,120	249	130	12	17	125	0.0	
Avg	986	249	114	1120	249	129	23	221	233	3.0	49.0
n	31	31	31	31	31	31	31	31	31	31	27
SD	9	0	1	6	0	1	4	77	42	2.0	2
Min	967	249	112	1110	249	129	12	17	125	0.0	45.0
Max	1000	249	116	1120	249	130	24	272	249	6.0	53.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for April, 2009.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	977	249	113	1,120	249	130	24	139	249	1.0	44.0
2	976	249	113	1,120	249	130	24	261	249	1.0	45.0
3	978	249	113	1,120	249	130	24	277	249	1.0	45.0
4	981	249	114	1,120	249	130	24	276	249	1.0	46.0
5	984	249	114	1,110	249	129	24	274	249	1.0	46.0
6	987	249	115	1,110	249	129	24	272	249	2.0	47.0
7	990	249	115	1,110	249	129	24	270	249	2.0	47.0
8	993	249	115	1,110	249	128	24	269	249	2.0	47.0
9	995	249	115	1,100	249	128	24	267	249	2.0	48.0
10	993	249	115	1,100	249	128	24	267	249	3.0	48.0
11	989	249	115	1,100	249	128	24	267	249	3.0	49.0
12	986	249	114	1,100	249	128	24	267	249	3.0	49.0
13	983	249	114	1,100	249	128	24	267	249	3.0	50.0
14	980	249	114	1,100	249	128	24	267	249	4.0	50.0
15	976	249	113	1,100	249	128	24	267	249	4.0	51.0
16	974	249	113	1,100	249	128	24	267	249	4.0	51.0
17	976	249	113	1,100	249	128	24	266	249	4.0	51.0
18	979	249	114	1,100	249	128	24	265	249	4.0	52.0
19	982	249	114	1,110	249	128	24	264	249	5.0	52.0
20	984	249	114	1,110	249	128	24	230	249	5.0	51.0
21	987	249	115	1,110	249	129	12	33	125	2.0	
22	990	249	115	1,110	249	129	12	33	125	0.0	
23	993	249	115	1,110	249	129	24	234	249	1.0	45.0
24	994	249	115	1,110	249	129	24	267	249	1.0	45.0
25	995	249	115	1,110	249	128	24	267	249	1.0	45.0
26	996	249	116	1,100	249	128	24	267	249	1.0	46.0
27	997	249	116	1,100	249	128	24	267	249	1.0	46.0
28	998	249	116	1,100	249	127	24	267	249	2.0	47.0
29	999	249	116	1,100	249	127	24	267	249	2.0	47.0
30	1,000	249	116	1,090	249	127	24	265	249	2.0	47.0
Avg	987	249	115	1110	249	128	23	246	241	2.0	48.0
n	30	30	30	30	30	30	30	30	30	30	28
SD	8	0	1	7	0	1	3	62	31	1.0	2
Min	974	249	113	1090	249	127	12	33	125	0.0	44.0
Max	1000	249	116	1120	249	130	24	277	249	5.0	52.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for May, 2009.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	998	249	116	1,090	249	127	24	249	249	2.0	48.0
2	997	249	116	1,090	249	127	24	230	249	3.0	48.0
3	995	249	115	1,090	249	127	24	212	249	3.0	48.0
4	993	249	115	1,090	249	127	24	193	249	3.0	48.0
5	991	249	115	1,090	249	127	24	175	249	3.0	47.0
6	990	249	115	1,090	249	127	24	156	249	4.0	47.0
7	989	249	115	1,090	249	127	24	140	249	4.0	47.0
8	990	249	115	1,100	249	127	24	137	249	4.0	47.0
9	993	249	115	1,100	249	128	24	136	249	4.0	47.0
10	995	249	115	1,100	249	128	24	135	249	4.0	48.0
11	997	249	116	1,100	249	128	24	134	249	5.0	48.0
12	1,000	249	116	1,110	249	128	24	117	249	5.0	47.0
13	1,000	249	116	1,110	249	129	12	17	125	2.0	
14	1,000	249	117	1,110	249	129	12	33	125	0.0	
15	1,010	249	117	1,110	249	129	24	228	249	1.0	45.0
16	1,020	249	118	1,100	249	128	24	237	249	1.0	45.0
17	1,020	249	119	1,090	249	126	24	210	249	1.0	45.0
18	1,030	249	120	1,080	249	125	24	182	249	1.0	45.0
19	1,040	249	121	1,070	249	124	24	158	249	1.0	45.0
20	1,040	249	121	1,070	249	124	24	152	249	2.0	45.0
21	1,040	249	120	1,070	249	124	24	149	249	2.0	45.0
22	1,030	249	120	1,070	249	124	24	146	249	2.0	46.0
23	1,030	249	119	1,070	249	124	24	143	249	2.0	46.0
24	1,020	249	119	1,070	249	125	24	139	249	3.0	46.0
25	1,020	249	118	1,080	249	125	24	136	249	3.0	46.0
26	1,020	249	118	1,080	249	125	24	133	249	3.0	46.0
27	1,010	249	118	1,080	249	125	24	130	249	3.0	46.0
28	1,010	249	117	1,080	249	125	24	127	249	4.0	47.0
29	1,010	249	117	1,080	249	125	24	127	249	4.0	47.0
30	1,010	249	117	1,070	249	125	24	127	249	4.0	47.0
31	1,010	249	118	1,070	249	124	24	127	249	4.0	47.0
Avg	1010	249	117	1090	249	126	23	152	241	3.0	46.0
n	31	31	31	31	31	31	31	31	31	31	29
SD	16	0	2	14	0	2	3	50	31	1.0	1
Min	989	249	115	1070	249	124	12	17	125	0.0	45.0
Max	1040	249	121	1110	249	129	24	249	249	5.0	48.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for June, 2009.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,010	249	118	1,070	249	124	24	127	249	4.0	47.0
2	1,020	249	118	1,060	249	123	24	127	249	5.0	48.0
3	1,020	249	118	1,060	249	123	24	127	249	5.0	48.0
4	1,020	249	118	1,070	249	124	24	126	249	5.0	48.0
5	1,020	249	119	1,070	249	124	24	125	249	5.0	48.0
6	1,030	249	119	1,070	249	125	24	124	249	6.0	48.0
7	1,030	249	119	1,080	249	125	24	123	249	6.0	48.0
8	1,030	249	120	1,080	249	126	24	122	249	6.0	49.0
9	1,030	249	120	1,090	249	126	24	106	249	6.0	48.0
10	1,040	249	120	1,090	249	126	12	15	125	3.0	
11	1,040	249	120	1,090	249	127	0	0	0	0.0	
12	1,040	249	120	1,100	249	127	0	0	0	0.0	
13	1,030	249	120	1,100	249	128	0	0	0	0.0	
14	1,030	249	119	1,100	249	128	0	0	0	0.0	
15	1,020	249	119	1,110	249	128	0	0	0	0.0	
16	1,020	249	118	1,110	249	129	12	1	125	0.0	
17	1,020	249	118	1,110	249	129	23	5	249	1.0	42.0
18	1,010	249	117	1,110	249	129	23	28	249	1.0	42.0
19	1,010	249	117	1,110	249	129	23	144	249	1.0	42.0
20	1,010	249	117	1,110	249	129	23	163	249	1.0	43.0
21	1,010	249	117	1,110	249	129	23	162	249	1.0	43.0
22	1,010	249	117	1,110	249	129	23	161	249	1.0	43.0
23	1,010	249	117	1,110	249	129	23	160	249	1.0	43.0
24	1,010	249	117	1,110	249	129	23	159	249	2.0	43.0
25	1,010	249	117	1,110	249	128	23	158	249	2.0	44.0
26	1,010	249	117	1,110	249	128	23	158	249	2.0	44.0
27	1,010	249	117	1,110	249	129	23	158	249	2.0	44.0
28	1,010	249	117	1,110	249	129	23	158	249	3.0	44.0
29	1,010	249	118	1,110	249	129	23	159	249	3.0	45.0
30	1,010	249	118	1,110	249	129	23	159	249	3.0	45.0
Avg	1020	249	118	1100	249	127	19	102	200	3.0	45.0
n	30	30	30	30	30	30	30	30	30	30	23
SD	10	0	1	17	0	2	9	65	95	2.0	2
Min	1010	249	117	1060	249	123	0	0	0	0.0	42.0
Max	1040	249	120	1110	249	129	24	163	249	6.0	49.0

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Table E2. Daily means (SD) of animal characteristics at site IA4B for July, 2009.

Day	Barn 1			Barn 2			Farrowing room 9				
	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., pigs	Mass, kg	$kg \cdot m^{-2}$	Inv., sows	Inv., piglets	Sow mass, kg	Piglet mass, kg	$kg \cdot m^{-2}$
1	1,020	249	118	1,110	249	129	23	159	249	3.0	45.0
2	1,020	249	118	1,110	249	129	23	159	249	4.0	46.0
3	1,020	249	119	1,110	249	129	23	159	249	4.0	46.0
4	1,030	249	119	1,110	249	129	23	160	249	4.0	46.0
5	1,030	249	120	1,120	249	130	23	160	249	4.0	46.0
6	1,040	249	120	1,120	249	130	23	160	249	4.0	47.0
7	1,040	249	121	1,120	249	130	23	160	249		
8	1,040	249	121	1,120	249	130	23	161	249		
9	1,050	249	121	1,120	249	130	23	161	249		
10	1,050	249	121	1,120	249	130	23	161	249		
11	1,050	249	121	1,120	249	130	23	161	249		
12	1,040	249	121	1,120	249	130	23	161	249		
13	1,040	249	121	1,120	249	130	23	161	249		
14	1,040	249	121	1,120	249	130	23	161	249		
15	1,040	249	121	1,120	249	130	23	161	249		
16	1,040	249	121	1,120	249	130	23	161			
17	1,030	249	120	1,120	249	130	23	160			
18	1,030	249	119	1,120	249	130	23	159			
19	1,020	249	118	1,120	249	129	23	158			
20	1,010	249	117	1,110	249	129	23	138			
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
Avg	1030	249	120	1120	249	130	23	159	249	4.0	46.0
n	20	20	20	20	20	20	20	20	15	6	6
SD	11	0	1	5	0	1	0	5	0	0.0	0
Min	1010	249	117	1110	249	129	23	138	249	3.0	45.0
Max	1050	249	121	1120	249	130	23	161	249	4.0	47.0

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Table E3. Building environment.

Table E3. Daily means (SD) of environmental parameters at site IA4B for July, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Q, dsm^3s^{-1}	Temp., °C	RH, %	ΔP, Pa	Q, dsm^3s^{-1}	Temp., °C	RH, %	ΔP, Pa	Q, dsm^3s^{-1}
1	22.4 (1.1)	58.0 (9.4)	-28.1 (8.9)		23.8 (1.6)	54.4 (8.8)	-11.5 (5.9)				-19.4 (10.9)	
2	22.7 (1.2)	61.9 (7.5)	-29.9 (8.7)		24.3 (1.7)	58.0 (7.3)	-13.0 (6.2)				-21.4 (13.0)	
3	24.7 (2.0)	68.5 (4.0)	-28.3 (3.3)		25.9 (1.6)	65.2 (3.2)	-12.7 (3.8)				-37.1 (16.6)	
4	26.0 (1.4)	63.3 (8.4)	-26.3 (1.4)		26.3 (1.5)	62.6 (7.4)	-14.3 (2.1)				-43.2 (10.0)	
5	25.9 (1.5)	58.5 (12.1)	-24.0 (1.1)		26.1 (1.7)	57.7 (11.1)	-14.2 (3.0)				-34.7 (9.6)	
6	25.4 (1.3)	60.4 (8.8)	-29.0 (5.7)		25.6 (1.5)	61.7 (6.2)	-13.8 (2.8)				-32.8 (11.1)	
7	25.8 (1.4)	63.8 (10.1)	-36.0 (0.9)		26.3 (1.5)	63.2 (8.3)	-15.6 (2.5)				-40.8 (12.0)	
8	26.2 (1.5)	64.8 (8.4)	-36.0 (0.5)		26.5 (1.6)	65.4 (7.4)	-16.0 (1.7)				-44.6 (4.7)	
9	25.7 (0.9)	71.8 (5.3)	-35.4 (1.2)		25.8 (0.9)	73.4 (3.1)	-16.2 (1.1)				-40.8 (2.3)	
10	24.5 (1.0)	68.3 (9.2)	-33.2 (6.1)		24.6 (1.1)	69.2 (7.6)	-13.5 (3.3)				-42.1 (12.2)	
11	21.5 (0.5)	60.6 (5.1)	-25.1 (8.7)		21.6 (0.9)	59.3 (5.4)	-6.3 (2.1)				-31.0 (16.3)	
12	21.4 (1.0)	59.9 (3.8)	-25.9 (9.9)		21.7 (1.4)	59.3 (4.0)	-9.4 (5.4)				-29.3 (14.7)	
13	21.0 (0.8)	56.9 (5.3)	-25.5 (9.7)		21.4 (1.2)	54.8 (6.0)	-7.8 (3.7)				-25.3 (13.6)	
14	22.4 (1.5)	61.3 (5.9)	-30.3 (8.7)		23.0 (1.6)	58.1 (4.9)	-9.4 (4.5)				-36.2 (13.3)	
15	22.7 (1.1)	64.7 (7.8)	-31.9 (7.0)		23.2 (1.2)	60.8 (6.3)	-10.6 (2.9)				-34.8 (12.4)	
16	24.4 (1.9)	71.3 (6.1)	-33.7 (5.2)		25.0 (2.0)	66.7 (5.6)	-11.9 (2.3)				-42.0 (11.0)	
17	25.3 (1.4)	73.9 (5.0)	-37.0 (1.0)		25.9 (1.6)	67.0 (6.9)	-16.8 (3.2)				-44.9 (4.0)	
18	25.6 (1.0)	75.2 (2.5)	-36.1 (1.6)		26.0 (1.3)	71.3 (3.3)	-16.2 (2.9)				-45.8 (5.4)	
19	24.6 (1.2)	70.3 (12.8)	-22.5 (13.3)		24.2 (1.0)	72.4 (7.8)	-15.8 (3.7)				-39.8 (8.5)	
20	22.4 (0.9)	66.7 (5.0)	-21.5 (10.6)		21.8 (1.0)	65.8 (3.4)	-12.0 (4.4)				-21.0 (9.0)	
21	21.2 (0.8)	67.1 (4.5)	-23.9 (7.5)	44.4 (9.0)	21.6 (1.3)	61.5 (7.1)	-11.2 (5.1)	45.3 (8.6)	26.1 (1.7)	57.4 (6.0)	-22.9 (9.6)	2.7 (0.8)
22												
23												
24												
25												
26												
27	24.4 (0.7)	75.2 (2.5)	-34.8 (1.0)		24.9 (0.9)	77.8 (1.8)	-16.7 (1.0)	68.0 (1.1)	29.0 (1.4)	68.4 (3.6)	-39.2 (7.5)	2.7 (0.4)
28	23.9 (0.4)	70.2 (8.5)	-35.3 (0.6)		24.5 (0.8)	72.0 (7.8)	-16.7 (0.6)	67.7 (0.8)	28.4 (2.1)	62.5 (9.9)	-38.3 (4.9)	2.9 (0.3)
29	23.6 (1.1)	70.4 (6.6)	-35.2 (0.4)		24.3 (1.4)	71.2 (6.3)	-16.8 (0.6)	67.5 (1.0)	28.8 (2.6)	60.8 (7.2)	-33.8 (7.5)	2.8 (0.5)
30	24.3 (0.7)	69.4 (7.5)	-35.1 (0.7)		24.9 (1.1)	70.5 (6.9)	-16.8 (0.7)	67.4 (0.9)	27.7 (2.0)	67.3 (5.0)	-38.3 (3.4)	3.0 (0.2)
31	23.5 (1.1)	68.8 (5.5)	-34.9 (1.2)		24.2 (1.5)	69.2 (6.1)	-17.1 (0.9)	67.5 (1.1)	27.0 (2.0)	67.6 (3.9)	-32.6 (9.5)	2.8 (0.5)
Avg	23.9	66.2	-30.6		24.4	64.9	-13.5	63.9	27.8	64.0	-35.1	2.8
n	26	26	26	1	26	26	26	6	6	6	26	6
SD	1.6	5.3	4.90		1.6	6.1	3.00	8.30	1.0	4.1	7.70	0.11
Min	21.0	56.9	-37.0		21.4	54.4	-17.1	45.3	26.1	57.4	-45.8	2.7
Max	26.2	75.2	-21.5		26.5	77.8	-6.3	68.0	29.0	68.4	-19.4	3.0

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Table E3. Daily means (SD) of environmental parameters at site IA4B for August, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	24.1 (1.2)	69.5 (7.0)	-34.5 (1.2)		25.0 (1.5)	70.5 (6.5)	-16.8 (0.8)	67.4 (0.8)	27.5 (2.5)	70.0 (5.1)	-38.9 (3.2)	3.0 (0.1)
2	24.9 (1.2)	70.5 (4.0)	-34.3 (0.9)		25.4 (1.6)	74.2 (1.9)	-16.1 (0.8)	68.1 (1.0)	27.9 (2.8)	70.2 (3.9)	-39.1 (6.1)	2.9 (0.3)
3	22.6 (1.1)	61.9 (8.9)	-33.9 (1.1)		23.3 (1.6)	65.4 (7.3)	-16.2 (0.5)	68.8 (0.8)	25.9 (1.5)	64.9 (4.7)	-31.9 (9.9)	2.7 (0.6)
4	23.3 (1.0)	72.2 (5.1)	-33.4 (0.9)		23.9 (1.1)	74.1 (6.6)	-18.4 (1.6)	65.7 (2.3)	25.6 (1.8)	74.2 (4.1)	-31.8 (3.5)	3.2 (0.3)
5												
6	26.3 (0.8)	76.4 (1.4)	-32.8 (0.7)		26.6 (1.0)	80.6 (1.3)	-16.4 (0.8)	66.8 (0.6)	29.2 (1.7)	77.2 (1.8)	-39.8 (2.5)	2.9 (0.1)
7	25.7 (1.0)	73.0 (3.8)	-32.1 (1.1)		26.0 (1.3)	79.0 (1.6)	-15.7 (1.6)	68.1 (1.6)	28.9 (2.3)	73.8 (3.1)	-42.4 (4.6)	2.8 (0.2)
8	24.3 (0.7)	74.9 (3.1)	-31.8 (1.0)		24.6 (0.8)	78.7 (2.3)	-16.7 (1.0)	67.4 (1.0)	27.5 (1.6)	73.8 (3.0)	-39.8 (2.2)	3.0 (0.1)
9	25.2 (1.5)	71.6 (6.7)	-30.2 (0.6)		25.3 (1.2)	77.8 (3.7)	-15.1 (0.9)	69.1 (1.2)	28.8 (2.2)	72.4 (4.5)	-43.9 (3.4)	2.9 (0.1)
10	25.9 (1.3)	71.7 (7.2)	-30.7 (1.5)	56.5 (2.6)	26.1 (1.9)	71.0 (8.3)	-16.3 (1.0)	66.9 (2.3)	29.1 (2.6)	70.2 (5.4)	-41.0 (3.1)	3.0 (0.2)
11	26.8 (1.7)	72.8 (5.3)	-31.3 (0.9)		27.0 (1.9)	70.9 (6.5)	-17.3 (2.3)	65.6 (1.4)	30.0 (2.9)	69.4 (5.4)	-41.8 (0.9)	3.0 (0.1)
12	27.0 (1.0)	71.5 (7.4)	-30.8 (0.9)		26.8 (0.9)	75.6 (3.7)	-14.9 (1.4)	62.9 (1.3)	30.0 (1.8)	70.1 (4.2)	-41.3 (1.4)	3.0 (0.0)
13	26.4 (1.2)	73.6 (7.2)	-31.4 (1.2)		26.3 (1.2)	75.3 (5.1)	-15.5 (1.2)	62.5 (1.0)	29.4 (2.3)	71.7 (4.7)	-40.6 (2.4)	3.1 (0.1)
14	27.0 (1.0)	76.0 (4.9)	-31.4 (1.0)		26.9 (1.0)	78.4 (2.2)	-14.1 (1.2)	63.3 (1.5)			-43.1 (2.7)	
15	26.6 (0.7)	80.9 (1.7)	-31.4 (0.9)		26.6 (0.8)	80.8 (1.2)	-16.2 (1.5)	63.1 (6.1)			-42.0 (3.8)	
16	25.0 (0.5)	76.5 (7.4)	-21.0 (6.1)		24.5 (0.7)	77.6 (3.8)	-16.1 (0.8)	67.7 (0.9)	27.4 (0.8)	72.6 (5.6)	-38.1 (7.7)	
17	22.8 (1.0)	65.2 (10.1)	-27.6 (6.5)	56.1 (6.5)	22.1 (1.1)	69.9 (7.0)	-16.8 (0.9)	68.2 (1.2)	27.8 (0.5)	58.8 (3.6)	-22.5 (9.7)	2.1 (0.8)
18	23.1 (2.3)	73.5 (3.7)	-32.7 (1.3)	56.6 (2.4)	22.7 (2.3)	74.5 (3.1)	-19.6 (2.6)	65.0 (2.4)	28.5 (1.3)	64.2 (5.1)	-25.2 (16.9)	2.4 (0.7)
19	25.7 (1.1)	78.0 (4.0)	-32.8 (1.3)	59.7 (1.5)	25.4 (1.0)	78.5 (2.6)	-16.7 (2.0)	67.5 (1.2)	29.2 (1.6)	71.2 (3.5)	-41.5 (5.7)	2.7 (0.3)
20	25.0 (1.0)	78.7 (4.4)	-32.7 (1.2)	58.6 (2.3)	24.6 (0.9)	78.9 (2.5)	-17.1 (1.8)	66.6 (2.3)	28.4 (1.1)	71.2 (2.5)	-37.6 (9.3)	2.6 (0.5)
21	25.8 (1.8)	77.6 (5.7)	-31.9 (1.7)	60.2 (2.4)	25.6 (1.9)	78.8 (3.1)	-15.9 (1.8)	67.9 (2.4)	29.8 (2.7)	70.7 (3.8)	-42.2 (8.4)	2.6 (0.4)
22	24.5 (1.1)	78.7 (4.3)	-32.5 (1.6)	59.8 (2.1)	24.3 (1.2)	78.6 (1.6)	-16.6 (2.3)	67.7 (1.9)	27.2 (2.3)	72.3 (3.4)	-41.0 (5.0)	2.9 (0.2)
23	23.5 (1.0)	83.1 (1.5)	-32.3 (2.8)	59.5 (4.2)	23.5 (1.0)	80.7 (1.1)	-16.2 (1.5)	67.7 (1.4)	26.5 (1.6)	75.4 (1.7)	-40.8 (4.4)	2.9 (0.2)
24	22.7 (0.4)	82.4 (2.3)	-31.6 (1.1)	59.4 (1.3)	22.7 (0.5)	79.9 (1.2)	-15.8 (1.1)	68.6 (1.0)	25.4 (0.3)	75.2 (1.9)	-39.5 (6.8)	2.8 (0.4)
25	21.6 (1.4)	66.1 (11.4)	-29.5 (0.9)	60.8 (0.9)	21.2 (1.2)	71.0 (5.3)	-15.9 (0.6)	69.4 (1.0)	26.3 (1.0)	60.7 (5.7)	-28.8 (12.1)	2.3 (0.9)
26	22.1 (1.6)	67.9 (7.5)	-31.1 (1.0)	58.1 (1.8)	21.8 (1.5)	69.3 (5.6)	-19.0 (2.7)	66.6 (2.3)	26.4 (1.3)	62.5 (3.2)	-29.7 (12.6)	2.5 (0.9)
27	24.5 (2.1)	72.1 (4.8)	-32.6 (1.0)	56.9 (1.4)	24.7 (2.5)	72.5 (3.8)	-19.6 (2.5)	65.9 (1.5)	28.6 (3.0)	68.5 (3.5)	-36.9 (9.9)	2.8 (0.4)
28	26.1 (1.4)	74.2 (5.8)	-31.2 (1.1)	59.1 (1.7)	26.2 (1.5)	74.5 (4.5)	-16.4 (1.5)	68.1 (1.7)	29.6 (2.7)	69.2 (5.0)	-44.5 (3.6)	2.9 (0.2)
29	23.1 (0.9)	74.4 (6.1)	-30.5 (1.0)	60.1 (1.0)	22.8 (1.1)	76.5 (2.8)	-17.1 (1.7)	68.5 (1.3)	25.8 (1.2)	69.4 (5.7)	-37.6 (9.1)	2.9 (0.6)
30	20.4 (1.5)	64.9 (10.0)	-30.9 (1.0)	61.7 (1.2)	20.3 (1.7)	67.4 (7.9)	-15.9 (1.4)	69.9 (0.6)	25.4 (0.9)	57.7 (4.5)	-23.9 (11.4)	2.3 (1.1)
31												
Avg	24.6	73.4	-31.4	58.9	24.6	75.2	-16.6	66.9	27.9	69.5	-37.5	2.8
n	29	29	29	15	29	29	29	29	27	27	29	26
SD	1.7	5.1	2.40	1.60	1.8	4.2	1.20	1.90	1.5	4.9	6.10	0.26
Min	20.4	61.9	-34.5	56.1	20.3	65.4	-19.6	62.5	25.4	57.7	-44.5	2.1
Max	27.0	83.1	-21.0	61.7	27.0	80.8	-14.1	69.9	30.0	77.2	-22.5	3.2

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Table E3. Daily means (SD) of environmental parameters at site IA4B for September, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	21.8 (1.5)	65.6 (7.6)	-25.5 (0.7)	56.9 (0.8)	21.2 (1.4)	67.3 (7.6)	-16.9 (1.2)	68.6 (1.4)	26.0 (1.7)	58.4 (5.0)	-27.0 (10.8)	2.6 (0.8)
2	22.4 (2.3)	63.6 (9.5)	-24.8 (0.8)	57.6 (0.8)	22.1 (2.3)	66.4 (8.1)	-16.1 (1.0)	69.1 (0.9)	27.1 (2.7)	57.1 (6.7)	-32.0 (12.7)	2.6 (0.8)
3	23.8 (1.9)	61.3 (11.2)	-24.4 (0.8)	57.6 (0.7)	23.4 (1.9)	64.6 (9.5)	-15.7 (0.5)	68.9 (0.7)	27.8 (3.2)	57.1 (9.2)	-33.4 (9.7)	2.9 (0.5)
4	24.2 (1.9)	68.8 (7.7)	-27.1 (3.2)	58.6 (1.6)	24.2 (2.2)	69.1 (7.0)	-16.2 (0.6)	67.9 (1.1)	28.6 (3.4)	61.1 (8.0)	-33.7 (9.9)	2.9 (0.5)
5	24.5 (0.8)	75.4 (5.2)	-32.3 (0.9)	59.0 (1.5)	24.9 (1.2)	72.5 (6.3)	-17.6 (2.1)	66.8 (1.7)			-37.5 (3.6)	
6	24.0 (0.6)	79.2 (3.2)	-32.3 (0.9)	59.6 (1.5)	24.4 (1.0)	76.3 (3.8)	-16.9 (1.2)	67.1 (1.3)			-35.4 (5.5)	
7												
8	20.8 (1.3)	65.4 (8.5)	-31.5 (0.7)		21.5 (2.0)	63.5 (8.5)	-14.8 (0.6)		27.9 (0.9)	54.8 (3.1)	-16.2 (9.5)	1.6 (0.9)
9	20.1 (0.5)	70.3 (3.3)	-32.9 (1.3)		20.2 (0.9)	69.6 (3.4)	-16.4 (2.2)		27.7 (0.7)	56.4 (2.6)	-13.3 (8.3)	1.2 (0.8)
10	16.9 (1.0)	74.0 (1.0)	-33.3 (1.3)		16.6 (1.1)	75.0 (1.4)	-16.5 (1.6)		26.9 (0.3)	53.9 (2.6)	-9.3 (6.3)	0.9 (0.8)
11	16.5 (1.8)	57.5 (15.0)	-25.1 (5.6)		15.6 (1.9)	62.5 (13.2)	-27.0 (13.8)		26.8 (1.0)	43.8 (7.3)	-20.1 (13.7)	1.0 (0.7)
12	16.5 (2.0)	52.8 (8.3)	-18.9 (1.6)		16.1 (3.0)	53.6 (10.3)	-31.3 (7.6)		26.9 (1.2)	41.4 (4.7)	-8.2 (8.0)	0.9 (0.8)
13	19.7 (2.6)	52.9 (6.5)	-18.8 (1.8)		20.4 (3.0)	50.6 (5.3)	-23.7 (1.7)		27.3 (1.4)	45.8 (3.0)	-22.6 (19.1)	1.5 (1.1)
14	16.2 (1.0)	50.1 (8.1)	-23.1 (4.3)		16.4 (1.3)	47.6 (6.1)	-23.6 (2.2)		25.6 (0.6)	42.3 (3.9)	-14.3 (9.9)	0.8 (0.7)
15	14.7 (1.8)	50.9 (9.4)	-18.3 (1.2)		14.7 (2.1)	51.5 (8.9)	-23.6 (1.6)		25.0 (0.8)	42.9 (5.7)	-7.5 (7.4)	0.9 (0.8)
16	18.7 (2.3)	56.4 (4.7)	-17.1 (2.0)		19.1 (2.7)	55.5 (4.5)	-25.3 (2.1)		25.5 (0.6)	50.4 (3.4)	-18.2 (12.4)	2.0 (1.2)
17	22.8 (2.1)	62.2 (5.7)	-23.2 (4.8)		23.8 (2.6)	60.3 (4.4)	-23.7 (7.0)		28.0 (2.8)	57.8 (4.9)	-33.6 (13.4)	2.6 (0.7)
18	22.3 (0.8)	71.9 (4.2)	-31.3 (2.8)		23.5 (1.2)	67.1 (5.7)	-14.1 (2.4)		26.3 (1.7)	63.1 (4.3)	-38.5 (10.2)	2.9 (0.5)
19	19.6 (0.6)	70.2 (6.0)	-31.9 (0.7)		20.6 (1.0)	67.0 (7.3)	-11.0 (1.0)		25.6 (1.2)	58.2 (7.4)	-22.6 (9.9)	2.3 (0.8)
20	20.8 (2.3)	73.8 (2.6)	-32.7 (1.2)		22.1 (2.8)	68.2 (5.2)	-13.1 (2.2)		27.4 (2.2)	61.2 (4.0)	-26.7 (15.0)	2.8 (0.6)
21	22.2 (1.5)	71.7 (5.1)	-32.8 (1.8)		23.5 (1.8)	66.5 (6.4)	-12.8 (2.9)		27.3 (2.8)	61.5 (7.4)	-38.1 (13.9)	2.7 (0.6)
22	17.5 (1.2)	59.3 (8.6)	-31.4 (0.8)		18.4 (1.5)	57.1 (9.2)	-12.8 (1.4)		25.5 (0.8)	46.9 (7.1)	-17.7 (11.4)	2.2 (1.0)
23	19.9 (2.8)	63.9 (4.7)	-32.8 (1.0)		21.2 (3.2)	59.8 (5.3)	-15.0 (2.3)		27.7 (2.8)	52.2 (5.2)	-27.0 (14.0)	2.8 (0.7)
24	23.0 (1.0)	72.7 (4.0)	-32.4 (1.3)		24.1 (1.1)	69.2 (4.8)	-14.1 (2.2)		27.9 (2.3)	63.8 (5.8)	-38.0 (4.7)	3.2 (0.2)
25	19.7 (2.1)	69.0 (4.9)	-27.0 (5.2)		20.5 (2.0)	69.9 (3.3)	-12.1 (1.3)		25.4 (0.7)	61.0 (4.9)	-21.5 (11.2)	2.0 (0.9)
26	17.6 (1.7)	53.1 (7.7)	-19.1 (1.4)		18.2 (2.0)	58.8 (9.0)	-11.1 (0.6)		25.2 (0.4)	50.6 (5.9)	-13.4 (9.3)	2.0 (0.8)
27	19.9 (1.5)	47.2 (10.5)	-19.3 (1.9)	28.7 (0.6)	20.2 (1.7)	50.2 (12.0)	-8.4 (1.5)	45.3 (1.0)			-20.6 (11.9)	
28	18.9 (1.5)	43.6 (9.2)	-19.3 (1.7)	32.5 (4.4)	18.7 (2.0)	46.8 (9.6)	-8.7 (0.8)	45.1 (0.9)			-10.3 (10.0)	
29	20.3 (2.0)	47.4 (5.7)	-20.5 (3.1)	44.9 (5.8)	20.7 (2.1)	49.3 (5.3)	-16.1 (4.0)	51.5 (5.3)	27.2 (0.8)	45.4 (4.2)	-19.5 (15.9)	2.0 (1.0)
30	20.9 (1.6)	59.6 (7.1)	-19.4 (2.1)	50.8 (2.1)	21.4 (1.8)	60.3 (7.0)	-13.6 (3.8)	55.9 (2.0)	27.4 (0.9)	53.7 (5.4)	-22.5 (14.9)	1.9 (1.1)
Avg	20.2	62.4	-26.1	50.6	20.6	61.9	-16.8	60.6	26.8	53.6	-23.4	2.0
n	29	29	29	10	29	29	29	10	25	25	29	25
SD	2.6	9.6	5.70	10.90	2.8	8.3	5.50	9.60	1.0	6.9	9.70	0.75
Min	14.7	43.6	-33.3	28.7	14.7	46.8	-31.3	45.1	25.0	41.4	-38.5	0.8
Max	24.5	79.2	-17.1	59.6	24.9	76.3	-8.4	69.1	28.6	63.8	-7.5	3.2

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Table E3. Daily means (SD) of environmental parameters at site IA4B for October, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	20.0 (1.2)	65.0 (7.8)	-19.6 (1.6)	50.5 (1.8)	20.5 (1.4)	65.8 (7.1)	-8.1 (1.9)	59.5 (3.2)	27.2 (0.7)	58.9 (6.4)	-24.5 (11.4)	1.8 (1.0)
2	18.8 (0.9)	69.3 (6.0)	-19.5 (1.9)	49.8 (2.0)	19.1 (1.2)	70.4 (5.6)	-11.2 (4.3)	57.1 (3.7)	27.4 (0.4)	58.9 (4.5)	-14.9 (11.8)	1.5 (0.7)
3	17.5 (1.8)	51.8 (12.5)	-17.9 (1.1)	50.6 (1.0)	17.7 (2.2)	53.0 (12.4)	-9.7 (1.6)	58.0 (1.4)	27.0 (0.5)	43.5 (8.1)	-17.3 (13.4)	1.6 (1.1)
4	20.3 (3.0)	64.1 (3.7)	-18.4 (1.5)	47.6 (2.0)	20.9 (3.3)	65.2 (3.4)	-11.9 (2.1)	55.5 (1.9)	27.9 (1.5)	56.3 (6.0)	-25.0 (14.3)	2.5 (1.1)
5	23.4 (1.5)	65.8 (7.6)	-28.7 (6.4)	53.3 (5.0)	24.3 (1.7)	66.4 (6.2)	-14.7 (5.0)	55.2 (3.8)	28.6 (2.0)	61.2 (5.4)	-30.3 (9.2)	2.8 (0.6)
6	24.3 (1.4)	67.9 (7.0)	-31.0 (0.8)	58.2 (1.9)	24.9 (1.4)	67.6 (5.8)	-13.0 (1.8)	59.6 (1.3)	28.6 (2.3)	63.6 (5.4)	-35.6 (7.5)	3.0 (0.4)
7	24.0 (0.6)	76.1 (2.1)	-30.8 (0.8)	57.7 (1.3)	24.6 (0.7)	75.9 (1.6)	-12.6 (1.7)	59.2 (1.1)	27.4 (1.4)	71.7 (2.2)	-36.3 (1.3)	3.2 (0.1)
8	20.7 (1.5)	63.0 (12.9)	-22.8 (4.8)	42.1 (10.6)	20.6 (2.0)	63.3 (13.3)	-6.3 (3.8)	56.4 (8.4)	25.4 (0.4)	58.5 (12.2)	-31.9 (14.8)	2.2 (0.8)
9	18.0 (1.0)	52.8 (7.4)	-19.1 (2.0)	31.3 (2.3)	17.6 (1.6)	53.2 (7.7)	-4.2 (1.7)		24.8 (0.4)	46.7 (5.4)	-29.0 (22.1)	1.6 (0.8)
10	15.5 (0.4)	54.1 (2.4)	-16.7 (4.8)	28.6 (1.3)	14.7 (0.6)	54.2 (3.2)	-11.6 (5.5)		24.2 (0.3)	47.6 (2.5)	-21.7 (9.7)	0.9 (0.7)
11	15.2 (0.9)	55.9 (4.8)	-10.2 (3.0)	27.7 (0.8)	15.3 (1.6)	53.7 (4.9)	-14.4 (3.5)	29.0 (1.5)	24.3 (0.8)	49.3 (4.8)	-17.9 (10.7)	1.0 (0.7)
12	16.7 (1.5)	55.1 (4.5)	-9.5 (3.2)	25.7 (2.9)	17.1 (1.5)	54.1 (2.8)	-18.0 (0.9)	27.4 (0.4)	24.4 (0.6)	49.9 (3.2)	-18.7 (11.3)	1.2 (0.8)
13	18.2 (0.4)	63.0 (4.5)	-20.8 (9.6)	29.7 (5.0)	18.2 (0.7)	61.6 (2.7)	-18.8 (1.2)	26.8 (0.5)	24.5 (0.2)	57.4 (2.3)	-15.1 (7.3)	1.1 (0.7)
14	17.8 (0.4)	68.7 (1.4)	-28.6 (1.5)	32.0 (2.0)	18.8 (0.5)	64.7 (2.5)	-19.9 (3.2)	26.4 (1.4)	24.6 (0.1)	60.5 (2.1)	-18.7 (8.2)	1.1 (0.7)
15	18.4 (0.8)	67.8 (3.7)	-28.6 (1.8)	31.7 (1.9)	19.2 (0.7)	63.3 (1.8)	-26.9 (5.4)	31.1 (3.6)	24.8 (0.3)	60.0 (1.6)	-24.7 (13.9)	1.3 (0.7)
16	17.2 (0.6)	64.7 (2.3)	-27.6 (1.7)	34.0 (0.5)	17.1 (0.8)	61.5 (2.4)	-30.4 (1.4)	35.0 (0.5)	24.2 (0.3)	57.0 (1.8)	-22.0 (10.5)	1.0 (0.7)
17	17.5 (1.1)	66.8 (2.5)	-28.2 (1.9)	31.3 (2.0)	17.4 (1.3)	64.8 (1.8)	-30.9 (2.1)	33.1 (1.9)	24.4 (0.5)	60.4 (2.8)	-22.0 (9.3)	1.3 (0.6)
18	18.5 (0.4)	69.0 (1.9)	-31.7 (3.7)	27.0 (1.9)	18.5 (0.5)	64.6 (2.2)	-34.4 (3.4)	33.1 (1.6)			-40.2 (16.9)	
19	17.0 (0.5)	57.7 (4.8)	-32.6 (4.7)	28.0 (0.6)	16.4 (1.0)	55.2 (3.8)	-38.3 (4.4)	37.8 (1.5)			-43.4 (24.4)	
20	17.5 (2.5)	51.9 (8.3)	-27.6 (2.6)	26.9 (1.0)	17.4 (3.2)	51.1 (7.4)	-37.4 (1.8)	35.6 (1.5)			-30.0 (26.7)	
21	19.8 (1.0)	55.5 (2.3)	-37.6 (5.5)	28.4 (2.3)	19.8 (1.5)	52.3 (2.3)	-39.6 (2.9)	36.0 (1.8)			-39.8 (24.7)	
22	15.6 (0.9)	58.2 (5.6)	-33.2 (4.0)	27.4 (1.4)	14.8 (1.2)	53.3 (4.5)	-34.9 (2.8)	36.1 (1.9)			-13.8 (8.5)	
23	14.9 (2.2)	51.7 (10.0)	-21.0 (6.0)	21.1 (4.1)	14.8 (3.3)	51.0 (5.9)	-21.8 (7.8)	28.3 (5.7)			-20.8 (16.9)	
24	14.8 (0.9)	51.9 (6.2)	-19.6 (4.0)	18.9 (0.8)	15.8 (1.0)	48.5 (5.9)	-15.5 (2.8)	23.2 (0.5)			-13.1 (9.2)	
25	14.4 (1.5)	53.0 (6.4)	-17.1 (1.5)	19.2 (0.6)	14.9 (1.7)	45.2 (5.0)	-14.2 (1.2)	23.2 (0.5)			-16.0 (13.4)	
26	15.9 (0.6)	60.5 (3.2)	-20.3 (2.7)	18.5 (0.6)	16.5 (0.6)	51.0 (7.4)	-14.0 (0.6)	23.2 (0.2)	24.9 (0.2)	48.3 (2.3)	-18.8 (9.0)	0.8 (0.7)
27												
28												
29	15.7 (2.0)	52.7 (5.8)	-24.4 (2.0)	18.0 (0.5)	16.3 (2.0)	54.9 (4.6)	-21.0 (5.0)	24.6 (2.1)	23.8 (1.3)	44.2 (2.7)	-37.0 (28.1)	0.9 (0.6)
30	17.7 (1.5)	55.5 (5.7)	-26.2 (2.0)	18.3 (0.7)	18.2 (1.8)	56.8 (6.0)	-27.1 (3.7)	25.6 (1.4)	24.1 (1.2)	48.9 (3.6)	-49.4 (26.2)	1.2 (0.6)
31	16.7 (1.4)	50.3 (7.3)	-27.9 (6.3)	17.1 (1.4)	16.3 (2.1)	51.6 (6.1)	-27.6 (7.0)	27.3 (1.2)	23.4 (0.5)	43.0 (5.8)	-39.3 (20.9)	0.9 (0.6)
Avg	18.0	60.0	-24.0	32.8	18.2	58.4	-20.3	37.9	25.5	54.6	-26.4	1.6
n	29	29	29	29	29	29	29	27	21	21	29	21
SD	2.6	7.0	6.70	12.50	2.8	7.4	10.20	13.40	1.7	7.5	9.90	0.73
Min	14.4	50.3	-37.6	17.1	14.7	45.2	-39.6	23.2	23.4	43.0	-49.4	0.8
Max	24.3	76.1	-9.5	58.2	24.9	75.9	-4.2	59.6	28.6	71.7	-13.1	3.2

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Table E3. Daily means (SD) of environmental parameters at site IA4B for November, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	13.5 (1.5)	50.5 (8.6)	-22.1 (1.9)	18.4 (0.5)	13.4 (2.3)	55.5 (7.0)	-15.9 (3.0)	24.8 (2.7)	23.2 (0.9)	41.7 (6.0)	-18.1 (13.6)	0.7 (0.7)
2	13.8 (1.3)	51.0 (6.2)	-23.6 (1.6)	18.2 (0.3)	14.8 (1.5)	55.0 (4.4)	-14.1 (1.6)	23.2 (0.4)	23.0 (0.7)	42.4 (4.1)	-21.9 (15.6)	0.9 (0.7)
3	13.3 (1.2)	50.1 (7.1)	-22.9 (1.2)	18.5 (0.3)	14.4 (1.4)	53.4 (6.8)	-13.9 (2.3)	23.3 (0.6)	22.6 (0.6)	41.7 (4.9)	-22.2 (14.0)	0.9 (0.7)
4	14.5 (1.4)	46.5 (7.6)	-23.9 (1.4)	18.2 (0.4)	15.7 (1.3)	51.0 (6.0)	-14.3 (1.3)	23.2 (0.7)	23.1 (1.0)	40.4 (6.0)	-31.7 (15.2)	1.0 (0.7)
5	14.8 (0.7)	51.1 (5.4)	-35.9 (7.2)	15.6 (1.9)	15.3 (1.3)	52.7 (4.3)	-25.4 (9.5)		22.7 (0.4)	43.5 (2.9)	-53.6 (18.7)	0.7 (0.5)
6	12.5 (1.0)	58.9 (6.7)	-22.4 (6.6)	13.8 (3.2)	12.0 (0.8)	56.3 (4.1)	-17.3 (5.5)	21.7 (0.7)	22.1 (0.4)	47.5 (2.8)	-29.4 (16.0)	0.6 (0.6)
7	12.3 (2.2)	60.8 (5.9)	-10.3 (4.1)		12.0 (2.0)	57.4 (7.1)	-13.2 (3.2)	21.4 (0.8)	22.1 (0.6)	49.6 (3.7)	-13.2 (9.5)	0.6 (0.6)
8	13.6 (0.6)	55.5 (4.6)	-10.2 (5.7)	13.5 (5.1)	13.5 (0.8)	54.8 (5.3)	-13.0 (2.0)	22.0 (0.3)	22.5 (0.5)	49.8 (3.6)	-16.3 (9.7)	0.7 (0.7)
9	12.3 (0.8)	56.0 (6.0)	-16.9 (7.8)	17.3 (2.1)	13.1 (1.3)	57.5 (4.9)	-13.2 (1.1)	22.4 (0.2)	22.1 (0.5)	50.2 (4.3)	-12.4 (9.5)	0.5 (0.6)
10	12.8 (1.3)	57.9 (5.4)	-28.1 (5.7)	18.7 (2.3)	14.0 (1.7)	57.2 (4.4)	-18.9 (4.7)	20.9 (1.2)	22.0 (0.5)	50.2 (3.7)	-12.6 (8.5)	0.4 (0.5)
11	17.3 (1.5)	63.3 (5.8)	-27.9 (7.5)	19.3 (3.7)	18.4 (1.1)	63.0 (6.4)	-23.6 (6.9)	31.7 (6.4)	23.4 (0.9)	58.7 (5.6)	-48.3 (24.9)	0.9 (0.5)
12	15.2 (1.2)	52.9 (7.4)	-30.3 (5.6)	21.0 (2.2)	14.0 (1.8)	49.6 (8.1)	-28.4 (4.3)	36.4 (2.2)	22.7 (0.8)	55.9 (4.1)	-20.0 (14.8)	0.3 (0.4)
13	13.4 (1.6)	55.9 (8.2)	-14.1 (2.7)	13.4 (0.4)	12.4 (2.3)	50.4 (6.6)	-20.3 (4.0)	27.2 (1.4)	23.5 (1.5)	49.6 (8.2)	-16.5 (12.9)	0.4 (0.5)
14	14.4 (0.5)	52.5 (5.5)	-29.9 (10.3)	14.4 (1.5)	13.3 (0.7)	48.1 (2.9)	-31.4 (9.9)	26.8 (1.7)	24.7 (0.2)	47.2 (4.5)	-49.7 (22.5)	0.4 (0.4)
15	12.2 (0.4)	53.5 (5.2)	-27.6 (4.7)	17.5 (0.8)	12.4 (0.8)	54.7 (5.0)	-22.5 (8.0)	24.0 (1.5)	24.5 (0.2)	44.5 (4.2)	-26.3 (14.9)	0.5 (0.5)
16	12.9 (1.2)	49.6 (6.1)	-23.4 (2.0)	17.8 (0.7)	14.2 (1.4)	51.9 (4.5)	-17.2 (3.2)	22.2 (0.7)	24.6 (0.4)	39.4 (3.2)	-17.2 (13.1)	0.6 (0.6)
17	13.8 (0.7)	54.9 (6.5)	-18.6 (2.5)	14.6 (2.6)	15.0 (0.7)	55.5 (5.1)	-14.3 (0.8)	22.7 (0.4)	24.4 (0.4)	42.8 (3.2)	-13.0 (7.7)	0.5 (0.6)
18	13.7 (0.2)	62.8 (5.3)	-16.7 (2.4)	11.6 (1.1)	14.1 (0.3)	61.4 (4.3)	-18.1 (2.8)	21.4 (1.0)	23.8 (0.2)	48.5 (1.4)	-8.6 (6.4)	0.5 (0.6)
19	14.7 (1.5)	62.6 (5.0)	-21.9 (6.0)	16.0 (2.4)	15.5 (2.2)	61.9 (4.1)	-16.8 (2.9)	22.2 (0.6)	24.1 (0.9)	51.4 (3.5)	-28.0 (24.9)	0.8 (0.6)
20	14.5 (0.4)	65.1 (4.0)	-25.6 (4.4)	13.9 (2.6)	15.9 (0.8)	62.9 (4.0)	-17.8 (3.3)	21.6 (0.8)	23.0 (0.4)	52.6 (1.9)	-16.5 (8.8)	0.7 (0.7)
21	12.4 (0.7)	64.8 (4.9)	-28.1 (4.9)	11.3 (0.6)	12.1 (1.1)	64.4 (4.5)	-23.2 (3.0)	22.2 (0.8)	22.0 (0.1)	50.9 (1.6)	-21.8 (9.0)	0.5 (0.6)
22												
23	10.0 (0.5)	65.4 (4.6)	-13.9 (1.4)	13.5 (0.3)	8.7 (0.9)	64.9 (3.9)	-16.2 (2.5)	23.3 (0.6)	21.8 (0.3)	50.4 (2.5)	-13.9 (8.5)	0.4 (0.5)
24	11.0 (0.6)	63.0 (3.4)	-14.9 (1.4)	13.4 (0.2)	10.4 (0.9)	62.0 (3.2)	-18.6 (2.3)	22.5 (0.4)	21.8 (0.2)	52.0 (1.8)	-22.5 (9.7)	0.5 (0.5)
25	11.6 (0.8)	63.0 (3.9)	-14.6 (2.9)	13.3 (0.4)	11.2 (1.3)	61.0 (3.3)	-18.3 (3.9)	22.3 (0.7)	21.9 (0.4)	52.6 (2.2)	-19.3 (13.7)	0.5 (0.5)
26	12.1 (0.5)	62.0 (4.7)	-15.2 (4.0)	12.8 (0.6)	11.5 (0.7)	60.9 (3.4)	-15.8 (2.7)	23.1 (0.4)	22.0 (0.4)	51.9 (2.4)	-16.0 (10.0)	0.5 (0.6)
27	11.0 (0.3)	60.8 (4.8)	-15.6 (3.6)	12.3 (1.0)	9.7 (0.4)	61.1 (4.2)	-16.8 (3.3)	22.7 (1.1)	21.8 (0.3)	50.7 (3.4)	-13.5 (9.9)	0.4 (0.5)
28	12.0 (0.6)	59.5 (5.0)	-17.2 (3.9)	12.8 (0.4)	10.4 (1.2)	58.4 (3.8)	-19.4 (3.5)	22.6 (1.1)	21.9 (0.3)	51.1 (2.4)	-25.9 (16.0)	0.5 (0.6)
29	11.1 (1.1)	58.6 (5.3)	-12.5 (1.6)	13.4 (0.4)	9.2 (1.7)	59.1 (4.4)	-15.2 (1.9)	23.2 (0.6)	21.9 (0.6)	51.5 (3.4)	-14.6 (8.4)	0.5 (0.6)
30	8.5 (2.7)	61.5 (5.6)	-12.6 (6.1)	23.4 (12.5)	8.2 (0.9)	60.7 (4.5)	-16.4 (4.2)	24.0 (2.4)	22.1 (0.3)	52.6 (2.9)	-16.2 (10.5)	0.4 (0.5)
Avg	12.9	57.6	-20.6	15.6	12.9	57.3	-18.3	23.7	22.8	48.7	-22.0	0.6
n	29	29	29	28	29	29	29	28	29	29	29	29
SD	1.7	5.4	6.70	3.00	2.3	4.6	4.50	3.20	0.9	4.7	11.10	0.17
Min	8.5	46.5	-35.9	11.3	8.2	48.1	-31.4	20.9	21.8	39.4	-53.6	0.3
Max	17.3	65.4	-10.2	23.4	18.4	64.9	-13.0	36.4	24.7	58.7	-8.6	1.0

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Table E3. Daily means (SD) of environmental parameters at site IA4B for December, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	7.8 (2.8)	66.5 (5.3)	-24.4 (6.8)	25.0 (16.2)	8.8 (2.9)	62.2 (7.2)	-22.4 (9.9)	19.5 (7.6)	22.6 (0.3)	50.5 (2.2)	-10.4 (8.8)	0.6 (0.6)
2	9.7 (1.1)	67.3 (2.7)	-30.9 (3.9)	18.2 (0.9)	10.2 (2.6)	61.1 (2.6)	-29.7 (9.1)	18.8 (2.3)	22.0 (0.5)	53.4 (1.8)	-41.4 (17.4)	0.5 (0.5)
3	7.8 (1.2)	66.7 (3.4)	-21.6 (2.3)	19.8 (0.4)	7.3 (2.0)	65.9 (4.3)	-19.9 (5.2)	17.9 (2.7)	22.0 (0.4)	53.3 (2.7)	-13.7 (9.4)	0.5 (0.6)
4	9.4 (0.9)	66.4 (3.3)	-19.9 (1.7)	19.5 (0.5)	10.5 (1.7)	66.6 (5.4)	-14.7 (1.9)	15.7 (0.6)			-7.9 (6.3)	
5	9.2 (0.6)	65.1 (3.5)	-21.5 (8.3)	15.9 (1.6)	10.6 (0.9)	62.6 (4.6)	-18.4 (5.7)	15.0 (1.1)			-12.2 (8.4)	
6	8.7 (1.0)	67.1 (2.9)	-14.6 (4.1)	15.6 (0.8)	9.8 (1.5)	64.3 (4.4)	-15.5 (1.8)	15.6 (0.3)	22.7 (1.5)	61.9 (6.8)	-9.1 (5.8)	0.3 (0.4)
7	9.6 (0.9)	65.1 (3.0)	-13.6 (1.4)	15.5 (0.2)	11.8 (0.7)	60.4 (4.7)	-13.0 (0.9)	15.8 (0.2)	24.4 (0.2)	52.8 (2.1)	-11.9 (8.2)	0.6 (0.6)
8												
9												
10	8.6 (1.4)	67.2 (4.0)	-12.0 (5.2)	14.3 (2.2)	10.1 (0.8)	63.6 (5.9)	-13.0 (2.7)	15.3 (1.7)	24.0 (0.2)	52.2 (3.6)	-9.2 (7.3)	0.5 (0.6)
11	11.6 (0.8)	65.3 (3.8)	-13.7 (4.1)	13.0 (2.5)	11.8 (0.6)	64.1 (5.5)	-14.1 (2.8)	15.8 (1.6)	24.3 (0.2)	50.0 (1.7)	-13.6 (7.5)	0.4 (0.5)
12	12.2 (0.3)	64.7 (4.6)	-8.4 (5.5)	11.8 (2.6)	11.3 (0.4)	71.2 (5.5)	-10.4 (3.1)	16.1 (2.5)	24.2 (0.2)	50.0 (2.0)	-9.4 (6.0)	0.4 (0.5)
13	12.9 (0.2)	65.0 (4.0)	-10.4 (5.1)	12.9 (2.7)	12.1 (0.5)	66.9 (3.8)	-13.1 (3.6)	16.6 (1.9)	23.8 (0.3)	50.1 (1.9)	-23.9 (11.9)	0.4 (0.5)
14	11.1 (0.8)	67.2 (5.0)	-8.2 (7.0)	11.8 (2.8)	11.1 (0.3)	67.7 (3.7)	-8.2 (3.8)	15.2 (3.0)	23.3 (0.2)	51.2 (2.8)	-9.2 (5.7)	0.3 (0.4)
15	11.2 (0.4)	66.9 (4.7)	-8.6 (4.8)	11.0 (1.8)	11.1 (0.3)	65.0 (4.0)	-9.9 (4.5)	14.6 (2.9)	23.3 (0.2)	52.3 (1.7)	-11.0 (5.9)	0.3 (0.4)
16	11.5 (0.5)	66.4 (4.2)	-7.7 (5.1)	11.1 (2.0)	11.4 (0.3)	62.4 (3.3)	-8.8 (4.2)	15.0 (2.7)	23.2 (0.1)	51.9 (2.0)	-13.6 (7.0)	0.4 (0.5)
17	11.8 (0.4)	67.2 (4.9)	-11.1 (6.5)		11.5 (0.4)	64.2 (3.8)	-12.0 (4.9)	14.9 (2.4)	23.2 (0.2)	53.1 (3.3)	-10.2 (6.0)	0.4 (0.5)
18	12.7 (0.3)	64.6 (4.2)	-10.5 (5.4)	13.5 (2.6)	12.0 (0.4)	60.8 (3.4)	-10.7 (3.7)	16.9 (2.0)	23.1 (0.2)	52.5 (2.1)	-15.6 (8.9)	0.5 (0.5)
19	12.5 (0.4)	65.4 (4.6)	-9.6 (5.6)	12.5 (2.5)	11.7 (0.4)	61.5 (3.8)	-9.5 (4.3)	17.7 (2.4)	23.0 (0.3)	54.1 (2.7)	-8.3 (6.2)	0.4 (0.5)
20	13.1 (0.3)	66.8 (3.9)	-13.5 (6.2)	14.2 (3.2)	12.5 (0.3)	61.6 (3.7)	-12.0 (4.2)	19.0 (2.8)	23.0 (0.3)	54.7 (2.5)	-10.2 (7.7)	0.5 (0.6)
21	13.5 (0.2)	67.9 (3.8)	-15.1 (5.0)	15.1 (2.7)	12.9 (0.2)	61.7 (3.2)	-14.9 (5.2)	20.5 (2.9)	22.7 (0.1)	55.5 (2.3)	-12.8 (8.6)	0.6 (0.6)
22	12.9 (1.0)	67.4 (3.7)	-23.0 (9.0)		12.2 (1.1)	60.8 (3.1)	-21.1 (8.0)		22.2 (0.5)	55.9 (2.0)	-39.7 (21.6)	0.5 (0.5)
23	10.7 (0.4)	66.9 (3.8)	-16.3 (5.0)		10.0 (0.7)	59.3 (4.0)	-17.5 (6.2)		21.2 (0.2)	55.2 (4.8)	-69.9 (16.0)	0.4 (0.4)
24	12.1 (0.4)	66.5 (3.8)	-11.2 (6.1)	12.0 (2.5)	12.2 (0.3)	59.4 (3.5)	-9.5 (3.1)		22.1 (0.2)	53.9 (3.8)	-27.1 (17.7)	0.6 (0.6)
25	12.6 (0.8)	64.5 (4.8)	-10.1 (3.3)	14.2 (1.8)	12.3 (0.6)	59.8 (2.8)	-10.7 (3.6)	18.2 (2.3)	22.4 (0.4)	55.8 (2.2)	-11.8 (8.1)	0.5 (0.6)
26	12.9 (0.3)	65.4 (3.3)	-9.6 (4.2)	12.4 (2.4)	12.2 (0.2)	59.9 (2.9)	-8.5 (2.8)	17.8 (1.7)	21.7 (0.5)	60.7 (3.7)	-11.1 (5.6)	0.3 (0.4)
27	12.6 (0.3)	64.1 (4.4)	-9.3 (4.7)		11.8 (0.2)	59.7 (3.4)	-9.2 (3.2)		19.8 (0.8)	70.1 (10.6)	-11.7 (9.7)	
28	12.9 (0.2)	62.4 (4.1)	-10.5 (4.0)		12.0 (0.2)	61.2 (5.0)	-9.6 (3.0)		22.0 (1.6)	56.8 (4.5)	-14.8 (8.8)	
29	12.8 (0.2)	63.6 (4.2)	-6.0 (3.9)		11.6 (0.2)	60.8 (3.4)	-9.0 (3.1)	17.5 (1.5)	24.5 (0.3)	52.1 (2.0)	-9.3 (5.0)	0.3 (0.3)
30	12.4 (0.4)	63.7 (4.7)	-6.3 (4.2)	11.5 (2.1)	11.2 (0.4)	64.0 (3.5)	-7.8 (3.1)	17.9 (2.0)	24.3 (0.2)	51.8 (2.0)	-7.8 (5.5)	0.2 (0.1)
31	12.2 (0.6)	64.1 (5.2)	-13.2 (5.5)	10.6 (1.8)	11.2 (0.3)	62.4 (3.5)	-10.3 (4.1)		24.1 (0.4)	52.6 (1.9)	-21.1 (14.4)	0.2 (0.2)
Avg	11.4	65.8	-13.5	14.4	11.2	62.8	-13.2	16.8	22.9	54.2	-16.5	0.4
n	29	29	29	23	29	29	29	23	27	27	29	25
SD	1.7	1.4	5.90	3.40	1.2	2.8	5.00	1.60	1.1	4.2	13.10	0.12
Min	7.8	62.4	-30.9	10.6	7.3	59.3	-29.7	14.6	19.8	50.0	-69.9	0.2
Max	13.5	67.9	-6.0	25.0	12.9	71.2	-7.8	20.5	24.5	70.1	-7.8	0.6

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Table E3. Daily means (SD) of environmental parameters at site IA4B for January, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	10.0 (0.9)	64.0 (4.0)	-15.5 (4.9)	9.7 (1.1)	8.6 (1.6)	57.1 (3.2)	-16.7 (5.7)		23.3 (0.2)	52.2 (1.7)	-44.4 (13.7)	0.3 (0.3)
2	9.8 (0.9)	67.2 (4.7)	-6.3 (3.0)	10.3 (0.5)	7.7 (1.0)	56.1 (2.9)	-9.4 (2.6)	17.8 (0.3)	24.0 (0.5)	52.5 (1.8)	-14.5 (8.1)	0.2 (0.1)
3	10.2 (0.9)	65.7 (4.4)	-11.6 (6.3)		9.5 (1.3)	54.7 (3.9)	-17.7 (7.7)	16.7 (1.2)	24.0 (0.3)	52.4 (2.6)	-12.8 (8.7)	0.2 (0.1)
4												
5	13.8 (0.4)	65.6 (3.6)	-11.2 (3.6)	14.9 (1.4)	12.9 (0.3)	59.0 (4.8)	-14.7 (4.2)	19.2 (2.7)	24.1 (0.3)	51.3 (1.5)	-17.2 (8.9)	0.4 (0.5)
6	14.6 (0.3)	66.3 (3.9)	-11.7 (3.7)	14.9 (2.0)	13.4 (0.5)	58.0 (2.4)	-13.7 (4.6)	21.0 (2.5)	24.2 (0.2)	52.7 (1.7)	-18.0 (9.4)	0.5 (0.6)
7	14.5 (0.4)	67.0 (3.8)	-12.3 (2.8)	14.9 (1.5)	13.6 (0.2)	57.0 (2.9)	-11.5 (4.4)	20.2 (2.9)	23.8 (0.2)	53.8 (1.9)	-19.2 (9.2)	0.6 (0.6)
8	13.7 (0.3)	67.6 (4.7)	-12.8 (5.1)	12.7 (2.4)	13.0 (0.3)	56.5 (2.3)	-11.0 (4.3)	17.8 (2.0)	23.2 (0.2)	53.3 (2.4)	-26.0 (12.0)	0.5 (0.5)
9	13.2 (0.2)	66.8 (4.3)	-9.3 (4.3)	12.8 (2.4)	12.6 (0.3)	56.1 (3.3)	-10.0 (4.2)	17.9 (2.0)	23.1 (0.2)	53.3 (2.0)	-12.5 (7.5)	0.4 (0.5)
10	13.5 (0.3)	68.2 (3.7)	-14.4 (4.4)	14.0 (2.5)	13.0 (0.3)	58.0 (5.1)	-12.1 (4.0)	18.3 (2.5)	22.9 (0.2)	55.2 (2.4)	-20.0 (13.4)	0.4 (0.5)
11	13.2 (0.2)	67.5 (4.2)	-10.1 (5.1)	12.3 (2.4)	12.5 (0.3)	61.2 (3.8)	-9.0 (2.8)	17.6 (1.7)	22.5 (0.2)	54.0 (2.2)	-18.6 (12.1)	0.5 (0.5)
12	13.0 (0.2)	67.4 (4.2)	-10.7 (4.8)	11.7 (2.3)	12.3 (0.3)	61.7 (3.6)	-9.4 (3.7)	17.5 (1.5)	22.2 (0.2)	53.9 (2.0)	-17.8 (11.1)	0.5 (0.5)
13	12.6 (0.4)	67.4 (4.2)	-9.5 (4.7)	11.2 (2.0)	11.9 (0.2)	60.8 (3.1)	-8.0 (3.0)	17.5 (1.7)	21.9 (0.2)	52.9 (2.2)	-18.7 (9.4)	0.5 (0.6)
14	11.8 (0.5)	67.1 (4.6)	-11.4 (4.7)	10.5 (1.7)	11.6 (0.4)	59.8 (3.5)	-9.6 (3.9)		21.7 (0.3)	54.3 (2.9)	-30.0 (12.7)	0.5 (0.5)
15	11.2 (0.7)	68.3 (5.9)	-6.1 (4.0)		11.1 (0.3)	62.7 (3.3)	-10.1 (6.0)	16.5 (2.0)	21.9 (0.5)	56.2 (3.1)	-8.1 (5.5)	0.4 (0.5)
16	12.8 (0.5)	63.2 (4.5)	-10.3 (4.1)		12.0 (0.4)	61.1 (3.0)	-11.7 (3.6)	17.2 (2.0)	22.3 (0.3)	57.0 (3.8)	-16.1 (8.4)	0.4 (0.4)
17	11.3 (0.6)	66.2 (5.9)	-8.6 (4.2)	10.2 (1.3)	11.3 (0.4)	60.8 (3.3)	-7.3 (3.3)		21.7 (0.3)	58.2 (1.8)	-22.6 (11.9)	0.2 (0.3)
18	9.4 (0.8)	71.6 (4.9)	-9.9 (6.0)	10.1 (0.9)	10.2 (0.5)	61.7 (3.1)	-8.3 (5.8)				-20.5 (18.6)	
19	9.2 (0.6)	72.4 (3.6)	-7.8 (2.2)	10.0 (0.4)	10.2 (0.4)	63.2 (3.1)	-4.2 (2.8)		19.0 (0.9)	57.5 (2.6)	-12.5 (5.3)	0.2 (0.0)
20	8.9 (0.8)	72.5 (3.7)	-6.8 (1.0)	10.1 (0.1)	9.9 (0.4)	65.8 (3.8)	-5.3 (2.9)	17.1 (2.3)	20.0 (1.1)	54.2 (3.1)	-5.4 (2.0)	0.2 (0.0)
21	10.8 (0.9)	70.4 (3.9)	-16.6 (6.5)	9.7 (0.7)	9.3 (0.5)		-11.7 (4.2)		22.8 (1.2)	52.0 (4.6)	-6.6 (5.3)	0.2 (0.2)
22	11.2 (0.8)	69.8 (5.2)	-11.9 (6.8)	10.0 (1.2)	7.2 (2.0)		-3.7 (5.0)		23.6 (0.3)	50.5 (3.2)	-19.9 (8.9)	0.3 (0.3)
23	9.8 (0.5)	68.5 (4.1)	-12.6 (8.0)	10.5 (1.5)	8.8 (0.4)		-4.7 (2.9)		23.7 (0.4)	46.4 (1.8)	-12.6 (8.4)	0.2 (0.3)
24	8.9 (1.1)	72.5 (4.4)	-8.5 (3.1)	10.0 (0.6)	8.7 (0.5)		-3.6 (2.2)		23.2 (0.5)	47.4 (2.8)	-8.7 (4.0)	0.2 (0.1)
25	10.0 (1.6)	68.5 (3.0)	-13.5 (7.2)		9.5 (0.3)		-10.8 (5.8)		23.0 (0.3)	46.6 (2.4)	-9.3 (5.4)	0.3 (0.4)
26	11.9 (0.4)	64.7 (3.0)	-18.1 (10.8)	11.2 (1.9)	10.2 (0.4)		-5.4 (2.6)		22.5 (0.3)	46.2 (1.9)	-18.3 (8.6)	0.4 (0.5)
27	12.4 (0.6)	63.4 (3.0)	-18.8 (10.3)	11.6 (1.8)	11.0 (0.7)		-8.3 (5.2)		23.0 (0.5)	47.9 (2.4)	-15.5 (8.9)	0.4 (0.5)
28	14.1 (0.6)	62.0 (3.4)	-27.6 (8.0)	13.6 (1.3)	13.0 (0.5)		-17.0 (5.4)		23.1 (0.3)	48.7 (1.9)	-25.6 (11.6)	0.6 (0.6)
29	10.9 (2.3)	63.6 (2.7)	-33.6 (7.9)	9.6 (2.5)	6.9 (5.0)		-24.7 (11.8)		21.9 (0.9)	47.9 (2.8)	-62.2 (29.0)	
30	9.8 (1.3)	65.9 (3.4)	-8.9 (4.5)	10.0 (0.8)	6.6 (3.2)		-5.0 (3.1)		21.9 (0.7)	51.7 (4.6)	-14.7 (13.7)	0.3 (0.4)
31	11.1 (0.5)	67.2 (2.7)	-14.6 (8.3)	10.7 (1.6)	10.4 (0.9)		-7.5 (3.3)		22.9 (0.4)	56.5 (1.8)	-4.9 (2.8)	0.2 (0.2)
Avg	11.6	67.3	-12.7	11.4	10.6	59.5	-10.1	18.0	22.7	52.3	-18.4	0.4
n	30	30	30	26	30	19	30	14	29	29	30	28
SD	1.7	2.7	5.80	1.70	2.0	2.8	4.70	1.30	1.2	3.4	11.30	0.13
Min	8.9	62.0	-33.6	9.6	6.6	54.7	-24.7	16.5	19.0	46.2	-62.2	0.2
Max	14.6	72.5	-6.1	14.9	13.6	65.8	-3.6	21.0	24.2	58.2	-4.9	0.6

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Table E3. Daily means (SD) of environmental parameters at site IA4B for February, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	11.8 (0.6)	65.5 (3.3)	-18.6 (10.6)	11.8 (1.9)	11.0 (0.4)		-5.9 (3.1)		22.7 (0.4)	55.7 (3.0)	-7.7 (4.6)	0.3 (0.3)
2	12.8 (0.3)	62.8 (2.2)	-24.9 (9.2)	12.8 (1.7)	11.8 (0.3)		-5.9 (2.2)		23.0 (0.2)	51.9 (1.6)	-11.2 (7.7)	0.3 (0.4)
3	12.8 (0.2)	64.3 (3.5)	-25.6 (8.7)	12.4 (1.5)	12.0 (0.2)		-8.4 (3.7)		23.1 (0.2)	51.6 (1.4)	-6.8 (4.6)	0.3 (0.4)
4	13.6 (0.4)	65.7 (3.4)	-30.5 (5.6)	12.4 (1.5)	12.3 (0.2)		-9.8 (5.0)		23.2 (0.2)	52.6 (2.0)	-9.7 (6.8)	0.3 (0.4)
5	13.2 (0.3)	64.6 (3.0)	-37.1 (7.7)	11.9 (1.5)	12.0 (0.2)		-10.4 (3.7)		22.9 (0.2)	52.6 (1.7)	-15.3 (6.4)	0.3 (0.4)
6	13.0 (0.2)	65.2 (3.4)	-32.0 (12.3)	10.7 (1.4)	11.3 (0.3)		-11.7 (4.9)		22.9 (0.2)	53.9 (2.3)	-18.6 (7.8)	0.3 (0.3)
7	12.8 (0.3)	64.7 (4.2)	-19.1 (11.3)	10.8 (1.7)	11.1 (0.3)		-5.9 (3.2)		20.1 (3.1)	61.2 (7.7)	-9.7 (6.9)	0.2 (0.0)
8	13.2 (0.3)	63.7 (4.0)	-19.8 (10.0)	11.5 (1.9)	10.9 (0.3)		-7.8 (4.1)		18.7 (4.3)	63.8 (8.1)	-11.2 (7.3)	0.2 (0.0)
9	12.6 (0.8)	62.5 (4.0)	-25.6 (9.9)	9.8 (2.0)	9.5 (1.3)		-14.3 (7.9)		23.9 (0.4)	48.6 (2.3)	-40.1 (21.8)	0.2 (0.3)
10	9.4 (0.5)	65.1 (5.4)	-17.7 (7.0)	9.2 (0.6)	6.5 (1.6)		-11.8 (8.3)		23.4 (0.3)	49.8 (3.3)	-28.8 (16.2)	0.2 (0.2)
11	9.6 (0.5)	68.9 (6.0)	-15.7 (4.7)	9.6 (0.5)	8.7 (0.3)		-8.6 (4.3)		23.3 (0.5)	49.8 (1.7)	-3.6 (2.0)	0.2 (0.0)
12	10.4 (0.7)	66.1 (4.8)	-12.9 (6.7)	10.0 (1.1)	8.8 (0.3)		-5.0 (2.9)		23.8 (0.5)	51.2 (2.7)	-9.8 (5.8)	0.2 (0.2)
13	10.8 (1.1)	69.1 (4.7)	-16.4 (8.7)	9.8 (1.3)	9.3 (0.4)		-7.4 (5.3)		23.7 (0.5)	49.9 (3.8)	-7.6 (4.2)	0.2 (0.3)
14												
15	10.9 (0.5)	66.2 (5.3)	-11.6 (7.3)	10.1 (1.0)	8.8 (0.6)		-5.2 (3.1)		23.9 (0.5)	47.2 (3.7)	-9.5 (5.2)	0.3 (0.3)
16	11.7 (1.2)	65.1 (3.9)	-17.8 (10.6)	11.3 (1.7)	9.4 (0.7)		-9.9 (5.3)		24.1 (0.5)	44.8 (2.5)	-9.5 (6.7)	0.3 (0.4)
17	13.4 (0.2)	64.5 (4.0)	-35.7 (12.6)	10.7 (1.5)	10.3 (0.5)		-15.8 (8.9)		24.0 (0.3)	46.8 (2.1)	-39.1 (23.8)	0.4 (0.4)
18	11.7 (0.6)	66.0 (5.9)	-19.4 (7.6)		6.9 (1.0)		-12.0 (6.0)		23.0 (0.3)	46.7 (3.3)	-48.4 (16.4)	0.4 (0.4)
19	11.1 (1.1)	71.1 (4.7)	-14.2 (7.0)		8.0 (0.7)		-7.4 (5.5)		23.2 (0.4)	48.4 (2.6)	-18.7 (12.8)	0.3 (0.3)
20	10.1 (1.0)	67.9 (5.9)	-12.5 (4.8)		6.5 (1.3)		-9.5 (5.6)		23.3 (0.7)	51.8 (3.7)	-17.9 (14.9)	0.2 (0.2)
21	11.1 (0.9)	67.8 (4.8)	-18.0 (8.4)		7.9 (0.5)		-6.8 (3.5)		23.4 (0.6)	49.5 (2.4)	-5.5 (4.1)	0.3 (0.3)
22	12.4 (0.3)	64.0 (4.1)	-17.9 (11.0)		8.6 (0.4)		-5.1 (3.8)		23.6 (0.5)	48.0 (2.7)	-8.7 (6.1)	0.4 (0.5)
23	12.2 (0.6)	64.5 (4.7)	-19.8 (11.1)		8.6 (0.5)		-7.8 (5.1)		23.4 (0.6)	48.7 (3.2)	-9.0 (7.0)	0.4 (0.5)
24												
25												
26												
27												
28												
29	14.0 (0.2)	62.5 (3.1)	-24.1 (7.7)		12.0 (0.4)	55.3 (3.6)	-10.0 (3.9)				-37.6 (19.6)	
Avg	11.9	65.6	-21.2	10.9	9.7		-8.8		23.0	51.1	-16.7	0.3
n	23	23	23	16	23	1	23	0	22	22	23	22
SD	1.3	2.1	7.00	1.10	1.8		2.90		1.2	4.4	12.60	0.07
Min	9.4	62.5	-37.1	9.2	6.5		-15.8		18.7	44.8	-48.4	0.2
Max	14.0	71.1	-11.6	12.8	12.3		-5.0		24.1	63.8	-3.6	0.4

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Table E3. Daily means (SD) of environmental parameters at site IA4B for March, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	14.0 (0.4)	61.5 (3.7)	-29.2 (10.9)		10.5 (0.6)	62.2 (5.4)	-14.5 (7.2)	17.9 (2.3)			-8.1 (3.9)	
2	14.8 (0.6)	62.3 (3.6)	-34.3 (8.2)		12.2 (0.8)	60.5 (3.1)	-18.6 (6.0)	19.7 (3.6)			-24.7 (14.9)	
3	12.8 (0.6)	61.8 (4.3)	-15.2 (9.1)		10.4 (0.6)	57.1 (3.5)	-15.1 (7.6)				-35.7 (19.6)	
4	12.4 (0.5)	62.0 (4.2)	-17.6 (10.0)		9.6 (0.8)	63.9 (5.6)	-7.1 (4.4)	17.6 (2.7)			-8.2 (5.6)	
5	13.1 (0.3)	61.6 (4.1)	-18.8 (9.4)		10.6 (0.5)	61.5 (4.1)	-9.2 (4.9)		24.0 (0.4)	50.7 (2.4)	-21.8 (15.6)	0.4 (0.4)
6	12.4 (0.2)	62.0 (4.4)	-15.9 (10.1)		10.3 (0.7)	60.8 (5.9)	-5.8 (4.0)	17.4 (2.4)	24.0 (0.6)	47.2 (2.8)	-13.4 (9.7)	0.4 (0.4)
7	11.5 (0.5)	63.5 (5.4)	-13.9 (9.9)		9.7 (0.4)	63.5 (3.0)	-6.3 (3.8)		24.1 (0.4)	47.6 (2.2)	-12.2 (6.2)	0.3 (0.3)
8	11.2 (0.9)	64.8 (4.2)	-13.6 (10.3)		9.0 (0.7)	67.1 (4.8)	-6.0 (4.3)	16.8 (2.2)	23.6 (0.4)	46.7 (3.3)	-9.1 (6.6)	0.3 (0.4)
9	12.6 (0.2)	61.8 (4.0)	-19.7 (10.0)		10.9 (0.4)	58.7 (4.0)	-6.6 (4.1)	18.0 (2.2)	23.4 (0.3)	45.1 (2.6)	-19.8 (10.8)	0.5 (0.5)
10	12.7 (0.3)	62.6 (4.1)	-17.8 (9.8)		10.4 (0.4)	59.9 (4.5)	-6.2 (3.8)	17.6 (3.0)	23.2 (0.5)	46.0 (2.6)	-16.5 (10.3)	0.5 (0.6)
11	13.7 (0.8)	61.6 (4.1)	-24.9 (9.9)		11.4 (0.9)	60.6 (4.9)	-10.8 (5.3)	19.3 (2.9)	23.2 (0.4)	47.9 (2.0)	-22.5 (14.9)	0.6 (0.6)
12	14.6 (0.6)	61.6 (4.0)	-31.9 (8.6)		12.3 (0.8)	57.2 (3.3)	-14.1 (6.9)	19.8 (2.8)	23.7 (0.6)	48.5 (2.0)	-21.1 (14.8)	0.7 (0.7)
13	14.8 (0.6)	59.8 (4.3)	-32.3 (11.5)		13.1 (0.7)	52.7 (5.1)	-13.2 (6.5)	22.2 (4.3)	23.6 (0.6)	49.3 (3.1)	-23.6 (11.8)	0.8 (0.7)
14	14.6 (0.4)	59.4 (4.2)	-31.2 (8.0)		13.2 (0.5)	52.8 (3.7)	-11.6 (4.4)	21.7 (2.8)	23.4 (0.4)	49.1 (2.2)	-18.0 (10.9)	0.8 (0.7)
15	13.8 (0.3)	60.7 (4.3)	-25.0 (4.4)		12.9 (0.3)	54.3 (3.4)	-9.7 (4.7)	20.1 (2.5)	22.8 (0.2)	50.5 (2.5)	-16.9 (9.7)	0.7 (0.7)
16	13.9 (0.4)	60.3 (3.9)	-27.8 (6.9)		12.0 (0.5)	56.3 (4.2)	-10.2 (4.9)	20.1 (2.6)	23.0 (0.3)	51.2 (2.2)	-11.6 (8.6)	0.7 (0.7)
17	13.8 (0.3)	64.1 (4.0)	-31.7 (7.3)		11.5 (0.3)	63.4 (3.2)	-13.5 (4.9)	18.7 (2.3)	23.1 (0.2)	55.2 (2.5)	-10.2 (8.7)	0.7 (0.7)
18	14.1 (0.3)	64.9 (3.6)	-25.6 (9.4)		12.6 (0.4)	57.7 (3.4)	-10.7 (4.7)	20.4 (2.6)	23.0 (0.2)	56.6 (2.5)	-19.5 (11.3)	0.8 (0.7)
19	14.4 (0.7)	59.7 (5.4)	-26.8 (8.7)		13.2 (0.6)	52.1 (4.6)	-11.5 (7.0)	21.9 (4.2)	23.1 (0.6)	53.0 (4.8)	-20.6 (13.0)	0.9 (0.7)
20	15.4 (0.8)	60.3 (5.2)	-37.6 (12.5)		14.1 (0.7)	50.3 (3.6)	-17.9 (8.4)		23.4 (0.5)	53.1 (3.7)	-18.3 (12.1)	1.0 (0.8)
21	14.6 (0.6)	61.8 (4.0)	-32.1 (9.8)		13.2 (0.6)	54.1 (4.5)	-17.4 (9.0)		22.0 (1.8)	65.8 (11.7)	-17.4 (16.1)	
22	13.3 (0.4)	61.2 (3.9)	-22.1 (4.3)		12.7 (0.2)	52.5 (3.3)	-8.6 (3.1)	9.2 (2.9)	24.9 (0.4)	67.1 (3.1)	-9.9 (5.2)	0.2 (0.2)
23	12.8 (0.2)	63.3 (4.0)	-19.4 (6.3)		12.6 (0.2)	52.8 (3.3)	-8.9 (3.9)		24.8 (0.1)	65.0 (1.8)	-17.1 (8.8)	0.2 (0.3)
24	13.2 (0.8)	61.8 (5.1)	-25.5 (11.1)		12.6 (0.7)	51.1 (4.3)	-16.6 (10.3)	9.0 (2.7)	24.8 (0.3)	59.2 (9.8)	-12.5 (9.2)	0.4 (0.5)
25	15.1 (0.7)	55.3 (7.6)	-31.6 (10.1)		14.2 (0.5)	44.8 (5.2)	-18.2 (8.0)	13.2 (4.0)	24.8 (0.2)	45.5 (5.5)	-40.4 (29.7)	0.6 (0.5)
26	14.4 (0.9)	57.3 (6.8)	-26.3 (11.1)		13.6 (0.7)	47.4 (5.5)	-11.6 (5.7)	12.2 (4.4)	24.8 (0.3)	49.0 (7.4)	-17.2 (12.6)	0.7 (0.7)
27	13.8 (0.6)	63.8 (4.0)	-26.4 (5.8)		13.1 (0.4)	53.9 (3.7)	-14.3 (5.6)	10.6 (3.0)	24.6 (0.2)	53.3 (3.5)	-13.0 (8.8)	0.6 (0.7)
28	12.8 (0.6)	61.8 (4.8)	-20.6 (7.6)		12.6 (0.5)	51.3 (4.1)	-8.8 (4.6)	9.8 (3.9)	24.7 (0.5)	47.3 (5.2)	-12.7 (9.6)	0.7 (0.7)
29	13.7 (1.0)	57.8 (5.2)	-30.6 (10.3)		13.5 (0.8)	48.6 (4.7)	-19.0 (8.8)		24.9 (0.6)	45.2 (4.3)	-11.1 (8.8)	0.7 (0.7)
30	15.4 (0.6)	59.4 (5.0)	-36.5 (10.4)	17.4 (1.5)	14.9 (0.4)	49.4 (3.9)	-16.3 (5.5)		24.6 (0.5)	45.8 (2.9)	-23.2 (13.7)	1.1 (0.7)
31	15.1 (0.5)	65.7 (3.3)	-34.6 (7.4)	15.9 (2.3)	15.0 (0.2)	54.9 (3.8)	-17.6 (6.3)		24.0 (0.3)	51.9 (2.6)	-25.6 (16.6)	0.8 (0.7)
Avg	13.7	61.5	-25.7	16.6	12.2	55.9	-12.1	17.0	23.8	51.6	-17.8	0.6
n	31	31	31	2	31	31	31	22	27	27	31	26
SD	1.1	2.2	6.90	0.80	1.6	5.4	4.20	4.20	0.8	6.2	7.30	0.23
Min	11.2	55.3	-37.6	15.9	9.0	44.8	-19.0	9.0	22.0	45.1	-40.4	0.2
Max	15.4	65.7	-13.6	17.4	15.0	67.1	-5.8	22.2	24.9	67.1	-8.1	1.1

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Table E3. Daily means (SD) of environmental parameters at site IA4B for April, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	13.8 (0.3)	63.1 (3.6)	-26.0 (7.6)	15.9 (1.7)	14.7 (0.2)	51.7 (3.2)	-11.2 (4.9)		23.6 (0.2)	49.1 (3.1)	-27.5 (14.8)	0.6 (0.6)
2	14.1 (1.0)	59.1 (6.6)	-24.3 (11.1)	17.5 (1.7)	14.5 (0.3)	49.0 (5.1)	-13.1 (8.0)		23.6 (0.5)	45.5 (5.3)	-18.1 (14.4)	0.8 (0.7)
3	14.3 (0.5)	65.1 (4.4)	-17.3 (6.7)	16.5 (1.3)	15.0 (0.3)	53.8 (4.1)	-9.8 (4.0)		23.2 (0.3)	50.1 (2.2)	-12.4 (8.8)	0.6 (0.7)
4	14.7 (1.1)	61.9 (6.8)	-18.0 (9.4)	21.4 (5.1)	15.3 (0.3)	50.8 (5.0)	-13.7 (9.6)		23.4 (0.8)	48.0 (5.3)	-28.5 (20.6)	0.9 (0.7)
5	16.2 (1.3)	54.3 (7.9)	-27.0 (13.9)	25.6 (7.0)	16.3 (2.1)	43.8 (5.0)	-28.6 (16.4)		23.7 (1.3)	43.8 (4.9)	-43.5 (29.7)	0.8 (0.6)
6	16.6 (0.7)	59.9 (5.0)	-24.6 (6.7)	24.1 (3.8)	16.2 (0.7)	49.8 (3.3)	-27.5 (10.6)	17.7 (4.9)	22.9 (0.4)	48.9 (2.1)	-39.6 (20.2)	1.0 (0.6)
7	14.9 (0.5)	60.1 (4.5)	-19.3 (4.4)	19.9 (3.0)	15.8 (0.4)	47.8 (4.1)	-12.2 (4.6)		22.2 (0.7)	48.2 (3.5)	-46.7 (22.0)	0.8 (0.6)
8	14.3 (0.4)	66.6 (4.2)	-16.9 (3.6)	19.0 (2.2)	15.4 (0.3)	53.3 (4.3)	-11.0 (4.0)	11.4 (3.8)	22.5 (0.2)	51.3 (2.2)	-17.0 (10.1)	0.7 (0.7)
9	14.4 (0.6)	64.6 (4.5)	-18.2 (4.5)	20.6 (2.4)	15.5 (0.5)	51.4 (4.0)	-13.1 (6.0)	14.3 (4.8)	22.8 (0.5)	50.4 (2.4)	-19.8 (10.9)	0.9 (0.7)
10	15.1 (0.4)	67.9 (3.4)	-32.1 (8.1)		15.9 (0.6)	56.3 (4.1)	-27.9 (8.3)		22.8 (0.2)	55.2 (2.5)	-15.9 (13.8)	0.8 (0.7)
11	14.0 (1.1)	67.4 (2.7)	-23.0 (8.3)	22.1 (5.2)	15.9 (0.8)	57.7 (4.5)	-16.5 (6.0)		22.4 (0.3)	55.7 (2.6)	-46.5 (18.8)	0.7 (0.5)
12	12.7 (0.2)	67.2 (2.4)	-24.9 (4.9)	18.2 (1.7)	14.2 (0.7)	55.3 (2.8)	-14.0 (4.6)		22.7 (0.1)	52.8 (3.3)	-31.6 (13.2)	0.6 (0.6)
13	13.1 (0.5)	61.4 (5.4)	-22.7 (8.7)		13.8 (0.5)	51.4 (4.3)	-14.5 (7.0)	19.6 (4.7)	23.1 (0.6)	49.3 (4.7)	-19.1 (12.1)	0.7 (0.7)
14	14.0 (1.0)	55.5 (10.0)	-20.0 (8.8)		14.4 (0.7)	46.5 (7.3)	-15.6 (9.1)	22.9 (6.8)	23.6 (1.0)	45.7 (7.0)	-24.1 (19.0)	0.9 (0.7)
15	15.7 (1.5)	51.4 (10.0)	-33.6 (17.8)		15.6 (1.3)	43.9 (6.1)	-35.5 (19.8)	16.7 (7.4)	23.9 (1.1)	44.7 (6.7)	-42.5 (31.6)	0.9 (0.6)
16	18.5 (1.8)	50.4 (4.6)	-45.5 (13.7)	32.4 (5.1)	18.1 (1.6)	45.4 (3.3)	-44.4 (11.7)	21.2 (5.6)	25.6 (2.1)	46.5 (2.9)	-69.1 (32.0)	0.7 (0.6)
17	16.2 (1.0)	63.7 (4.6)	-31.5 (4.8)	23.7 (2.8)	16.4 (0.9)	53.5 (3.5)	-19.3 (5.6)	25.5 (2.6)			-19.5 (12.1)	
18	15.7 (0.6)	69.4 (3.4)	-28.2 (7.9)	25.2 (3.9)	15.7 (0.4)	57.8 (3.8)	-19.1 (6.9)	25.2 (4.0)	24.5 (0.5)	61.6 (5.4)	-17.4 (9.1)	0.5 (0.5)
19	15.4 (0.5)	68.0 (2.3)	-24.1 (3.7)	24.5 (2.5)	15.7 (0.3)	57.1 (2.8)	-18.2 (4.4)	25.0 (4.0)	25.4 (0.2)	53.8 (1.5)	-23.0 (9.0)	0.6 (0.6)
20	17.1 (1.2)	65.1 (3.4)	-31.7 (10.9)	27.1 (2.7)	17.0 (1.0)	57.1 (2.3)	-29.7 (12.1)	26.4 (4.5)	26.3 (1.1)	52.1 (2.6)	-35.5 (23.7)	0.9 (0.6)
21	19.1 (1.4)	63.3 (4.9)	-40.1 (8.8)	30.5 (3.9)	18.6 (1.1)	57.6 (4.0)	-40.2 (7.5)	25.0 (3.8)	26.9 (1.3)	54.1 (3.0)	-43.9 (23.2)	1.2 (0.6)
22	17.3 (0.8)	62.7 (3.8)	-23.5 (12.6)	30.0 (6.8)	17.6 (0.6)	56.7 (3.1)	-31.3 (10.1)	27.9 (3.4)	26.5 (1.0)	53.1 (5.1)	-33.2 (22.5)	1.0 (0.6)
23	18.0 (1.5)	52.6 (10.9)	-17.5 (8.5)	38.7 (14.1)	18.3 (1.5)	48.1 (8.6)	-28.5 (14.7)	24.8 (7.5)	27.3 (1.7)	45.6 (8.5)	-37.9 (24.8)	1.4 (0.8)
24	19.0 (0.7)	72.6 (2.9)	-21.8 (4.4)	44.9 (8.6)	19.4 (0.8)	65.4 (2.4)	-45.9 (3.7)	20.4 (2.6)	27.3 (0.7)	58.3 (1.9)	-37.5 (18.1)	1.5 (0.6)
25	16.8 (2.6)	65.5 (8.5)	-12.0 (8.7)		18.4 (1.5)	60.0 (7.1)	-32.9 (13.1)		25.8 (1.5)	55.5 (4.8)	-62.1 (28.0)	0.9 (0.7)
26	13.3 (0.9)	54.1 (5.3)	-3.7 (3.3)		15.1 (0.4)	47.2 (4.6)	-20.1 (10.1)		24.3 (0.4)	46.1 (5.1)	-58.0 (27.5)	0.5 (0.5)
27	14.3 (0.5)	55.4 (4.8)	-8.9 (6.8)	23.0 (2.7)	15.3 (0.5)	47.7 (5.1)	-19.2 (9.3)	25.4 (4.9)	24.2 (0.4)	44.1 (5.5)	-30.4 (18.5)	0.9 (0.7)
28	13.0 (0.4)	59.6 (4.2)	-18.1 (8.9)	20.6 (2.1)	14.6 (0.3)	49.9 (3.0)	-16.8 (8.4)	20.7 (3.9)	23.5 (0.2)	47.0 (2.6)	-26.7 (15.4)	0.7 (0.6)
29	13.3 (0.8)	56.6 (6.1)	-11.7 (5.4)	22.3 (3.5)	14.6 (0.6)	46.7 (4.5)	-14.5 (8.7)	22.6 (5.8)	24.1 (0.8)	43.9 (5.8)	-17.0 (11.7)	0.8 (0.7)
30	15.6 (1.8)	56.8 (5.4)	-25.4 (9.1)	25.8 (7.7)	15.7 (1.5)	49.4 (2.6)	-15.1 (5.3)	25.2 (5.5)	25.0 (1.2)	46.9 (2.8)	-34.2 (26.3)	1.1 (0.6)
Avg	15.3	61.4	-23.1	24.6	16.0	52.1	-22.0	22.0	24.2	49.9	-32.6	0.8
n	30	30	30	24	30	30	30	19	29	29	30	29
SD	1.8	5.7	8.60	6.70	1.4	5.1	10.10	4.30	1.5	4.6	14.20	0.22
Min	12.7	50.4	-45.5	15.9	13.8	43.8	-45.9	11.4	22.2	43.8	-69.1	0.5
Max	19.1	72.6	-3.7	44.9	19.4	65.4	-9.8	27.9	27.3	61.6	-12.4	1.5

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Table E3. Daily means (SD) of environmental parameters at site IA4B for May, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	19.0 (1.6)	60.5 (3.1)	-19.1 (5.9)	48.6 (14.6)	19.3 (2.0)	55.7 (2.5)	-20.1 (11.3)	31.8 (5.8)	26.6 (1.7)	52.9 (2.8)	-65.9 (26.4)	1.1 (0.5)
2	18.5 (1.0)	65.7 (4.7)	-17.8 (8.1)	36.4 (11.2)	19.3 (1.3)	57.2 (5.6)	-47.2 (6.7)	21.0 (2.3)	25.2 (0.7)	56.4 (4.3)	-60.9 (18.8)	1.1 (0.5)
3	15.8 (0.5)	54.5 (5.6)	-18.0 (6.8)		14.3 (0.9)	48.6 (5.9)	-45.5 (8.6)	21.9 (1.9)	24.0 (0.7)	49.0 (5.1)	-52.8 (22.8)	0.7 (0.5)
4	16.5 (1.7)	48.4 (10.5)	-17.1 (7.4)	32.6 (14.7)	15.2 (2.9)	43.2 (8.2)	-40.9 (8.7)	23.2 (1.3)	25.1 (1.6)	43.4 (7.6)	-49.4 (35.6)	0.8 (0.6)
5	19.2 (2.0)	42.2 (10.5)	-19.5 (5.4)	44.3 (17.1)	18.8 (2.5)	38.5 (8.4)	-29.9 (10.6)	30.1 (6.5)	26.4 (2.1)	38.9 (7.9)	-41.3 (23.7)	1.6 (0.8)
6	21.1 (1.8)	52.4 (7.8)	-23.0 (3.4)	48.5 (14.8)	21.1 (2.0)	47.6 (6.7)	-18.7 (5.3)	35.0 (3.2)	26.8 (2.1)	46.7 (5.7)	-31.2 (18.1)	2.1 (0.9)
7	19.3 (0.8)	64.5 (5.8)	-24.6 (7.1)	36.3 (6.9)	19.5 (0.6)	59.0 (5.9)	-16.8 (8.9)	36.0 (4.4)	25.4 (0.4)	56.4 (5.2)	-19.4 (10.5)	1.6 (0.6)
8	18.1 (1.0)	50.5 (8.9)	-19.8 (6.1)	34.9 (12.9)	18.0 (0.9)	44.1 (6.2)	-12.2 (7.6)	31.7 (4.8)	25.1 (1.0)	45.6 (6.3)	-8.5 (7.4)	1.5 (0.8)
9	17.9 (0.7)	53.0 (6.1)	-19.5 (4.6)	33.1 (9.3)	17.8 (0.5)	46.3 (4.0)	-10.5 (7.2)	37.5 (12.5)	25.0 (0.7)	47.3 (3.7)	-11.0 (8.2)	1.5 (0.8)
10	17.4 (0.6)	59.6 (5.0)	-23.0 (7.1)	26.3 (4.9)	17.1 (0.4)	52.9 (3.9)	-10.9 (6.3)	31.9 (8.0)	24.6 (0.6)	53.6 (3.5)	-4.4 (7.5)	
11	16.2 (0.5)	57.1 (4.8)	-25.9 (9.8)		16.1 (0.6)	51.0 (4.5)	-11.1 (6.6)		24.5 (0.7)	52.7 (5.3)	-29.7 (17.9)	0.8 (0.6)
12	17.1 (1.6)	52.9 (5.5)	-20.2 (11.2)	25.8 (8.4)	16.6 (1.3)	45.2 (3.3)	-15.9 (12.7)	33.4 (11.7)	25.5 (1.0)	48.4 (4.6)	-5.1 (7.5)	
13	18.8 (0.5)	59.1 (4.4)	-27.9 (11.8)	27.7 (7.7)	18.0 (0.5)	54.0 (3.4)	-13.9 (5.5)	39.0 (9.5)			-11.5 (9.0)	
14	18.1 (1.0)	51.6 (9.0)	-27.0 (12.0)	26.4 (10.0)	17.5 (0.6)	41.7 (6.0)	-9.5 (9.4)		23.0 (3.7)	56.0 (15.9)	-10.5 (6.7)	0.6 (0.7)
15	18.9 (1.2)	48.9 (6.4)	-26.3 (10.1)	28.5 (11.3)	18.1 (1.4)	40.5 (3.7)	-14.6 (12.0)	34.7 (13.0)	26.7 (1.1)	40.7 (4.4)	-8.6 (8.5)	
16	20.0 (1.8)	46.0 (10.3)	-28.5 (10.8)	36.2 (16.3)	19.3 (2.0)	38.8 (8.5)	-17.0 (10.8)	45.7 (17.4)	27.0 (1.3)	38.8 (6.9)	-31.7 (22.4)	1.4 (0.9)
17	21.5 (1.5)	39.6 (10.1)	-28.8 (12.2)	40.0 (14.7)	21.2 (1.7)	33.8 (8.6)	-16.8 (9.1)	54.6 (15.8)	28.0 (1.9)	34.7 (7.7)	-40.2 (29.2)	1.4 (0.9)
18	19.1 (0.7)	41.8 (7.1)	-13.3 (7.5)	25.9 (5.5)	18.7 (0.6)	34.8 (6.1)	-11.8 (8.7)	41.5 (16.1)	26.4 (0.5)	37.2 (6.3)	-18.3 (14.7)	0.9 (0.7)
19	19.0 (0.9)	48.5 (8.2)	-12.3 (6.8)	29.4 (9.4)	18.5 (0.8)	43.5 (7.6)	-12.1 (8.4)	40.3 (15.1)	26.9 (0.9)	43.2 (5.6)	-9.9 (10.4)	
20	18.3 (0.7)	48.5 (8.2)	-13.4 (7.2)	24.7 (5.9)	17.8 (0.6)	43.5 (8.7)	-10.9 (8.2)	40.8 (18.7)	26.4 (0.5)	42.2 (7.4)	-21.1 (16.6)	0.9 (0.7)
21	18.4 (1.3)	38.8 (8.2)	-11.8 (7.7)	31.7 (13.7)	18.0 (1.3)	33.3 (7.0)	-11.5 (8.4)	45.1 (17.2)	26.5 (1.0)	34.7 (7.1)	-17.0 (12.9)	1.3 (1.0)
22	18.4 (0.3)	52.1 (6.6)	-7.5 (2.6)	26.1 (4.6)	18.1 (0.4)	47.1 (5.6)	-14.4 (12.3)	32.5 (10.1)	26.1 (0.3)	45.7 (3.5)	-5.0 (7.2)	
23	18.2 (0.4)	60.6 (4.9)	-20.7 (9.3)	23.2 (4.7)	17.8 (0.4)	54.1 (2.9)	-16.6 (8.0)	30.6 (6.6)	25.3 (0.7)	52.0 (2.4)	4.0 (9.0)	
24	18.1 (1.1)	61.4 (2.8)	-21.6 (9.5)	25.4 (7.5)	18.0 (1.1)	54.3 (3.2)	-17.8 (8.3)	34.2 (10.1)	25.6 (0.9)	52.7 (2.4)	0.8 (8.0)	
25	22.0 (2.7)	71.2 (5.3)	-20.4 (6.9)	45.8 (13.5)	22.1 (3.0)	65.5 (4.6)	-23.2 (6.4)	52.9 (10.1)	28.0 (2.5)	61.8 (4.7)	-33.6 (21.7)	1.9 (0.9)
26	22.1 (1.1)	61.1 (11.7)	-17.4 (6.2)		22.6 (1.5)	56.0 (11.5)	-19.5 (8.2)		27.2 (1.8)	54.2 (9.2)	-35.2 (12.7)	
27	18.1 (1.2)	63.0 (2.9)	-12.2 (4.4)		18.5 (1.1)	55.9 (2.6)	-10.7 (4.8)		24.6 (0.3)	55.4 (2.0)	-7.4 (9.0)	
28	17.8 (1.2)	54.9 (3.0)	-10.2 (4.5)		18.1 (1.1)	48.8 (2.3)	-14.7 (13.8)		25.0 (0.8)	49.8 (2.2)	-8.1 (8.3)	
29	19.0 (0.6)	60.8 (6.2)	-17.7 (10.2)	30.5 (7.7)	19.1 (0.4)	54.7 (6.4)	-15.4 (8.7)	42.0 (10.7)	25.0 (0.4)	55.3 (4.7)	-8.5 (11.8)	
30	21.6 (1.4)	69.2 (4.7)	-19.0 (10.6)	48.0 (13.3)	21.7 (1.6)	63.9 (5.3)	-16.4 (3.1)	56.0 (5.9)	26.8 (1.8)	63.1 (3.7)	-33.8 (15.3)	
31	22.4 (1.5)	59.1 (6.3)	-15.0 (8.3)	51.3 (15.6)	22.6 (1.8)	53.7 (6.2)	-13.4 (5.5)	55.0 (8.2)	27.2 (2.3)	55.0 (5.7)	-37.9 (14.3)	
Avg	18.9	54.8	-19.3	34.1	18.7	48.6	-18.1	37.6	25.9	48.8	-23.0	1.2
n	31	31	31	26	31	31	31	26	30	30	31	17
SD	1.7	8.2	5.50	8.60	2.0	8.3	9.60	9.50	1.2	7.5	18.30	0.43
Min	15.8	38.8	-28.8	23.2	14.3	33.3	-47.2	21.0	23.0	34.7	-65.9	0.6
Max	22.4	71.2	-7.5	51.3	22.6	65.5	-9.5	56.0	28.0	63.1	4.0	2.1

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Table E3. Daily means (SD) of environmental parameters at site IA4B for June, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	23.0 (1.7)	53.6 (8.7)	-17.7 (7.7)	49.4 (12.5)	23.5 (2.1)	47.6 (8.6)	-15.6 (4.4)	54.8 (6.1)	28.2 (2.9)	48.4 (7.9)	-34.7 (12.0)	
2	22.7 (0.9)	69.0 (4.0)	-17.8 (6.1)	45.6 (9.7)	23.0 (1.2)	60.9 (3.9)	-19.9 (1.3)	54.2 (2.2)			-23.7 (8.7)	
3	21.5 (0.5)	70.0 (2.4)	-19.0 (7.6)	42.7 (9.7)	21.7 (0.7)	62.6 (1.4)	-22.1 (6.1)	49.2 (9.6)			-12.3 (11.2)	
4	21.8 (0.9)	74.3 (3.4)	-17.1 (5.9)	46.0 (8.8)	21.8 (1.0)	67.2 (2.1)	-18.4 (3.8)	52.4 (4.0)	27.8 (0.4)	62.2 (3.3)	-15.7 (7.8)	
5	24.1 (2.1)	73.6 (3.0)	-20.5 (4.3)		24.3 (2.4)	66.5 (3.6)	-21.7 (5.9)		29.4 (1.9)	64.3 (2.6)	-36.5 (16.6)	
6	22.9 (0.6)	69.4 (6.8)	-15.7 (5.0)		23.1 (0.8)	60.9 (5.7)	-20.6 (6.0)		28.2 (0.7)	57.0 (4.8)	-45.7 (24.0)	
7	24.7 (2.2)		-20.1 (7.7)		25.3 (2.9)	66.1 (4.3)	-20.5 (4.8)		30.2 (2.5)	63.6 (3.8)	-45.0 (19.1)	
8												
9												
10												
11												
12												
13												
14	22.6 (2.0)		-14.5 (7.6)		22.8 (2.3)		-13.8 (6.2)		28.0 (2.9)	48.8 (6.3)	-44.0 (20.3)	
15	23.1 (1.0)		-16.0 (5.1)		23.0 (1.3)		-15.8 (3.8)		27.6 (2.2)	54.5 (7.4)	-40.9 (12.3)	
16	20.9 (0.8)		-11.0 (7.7)		20.7 (0.9)		-14.2 (5.8)		25.9 (1.1)	45.0 (6.6)	-32.2 (12.1)	
17	21.1 (1.8)		-11.9 (7.8)		20.9 (1.7)		-15.0 (7.9)		26.7 (2.4)	42.1 (7.6)	-30.6 (15.1)	
18	22.9 (1.7)	47.3 (8.3)	-16.0 (7.5)		22.9 (2.4)		-19.0 (5.3)		28.1 (3.0)	42.6 (8.6)	-33.1 (11.8)	
19	23.3 (1.8)	51.3 (9.4)	-17.0 (6.8)		23.5 (2.2)	43.4 (10.6)	-19.7 (4.8)		28.1 (2.9)	46.4 (8.4)	-32.3 (12.2)	
20	23.4 (1.4)	63.2 (8.1)	-17.2 (6.6)		23.4 (1.8)	57.4 (9.6)	-20.1 (3.6)		28.1 (2.5)	56.1 (7.4)	-35.9 (12.1)	
21	23.3 (1.3)	51.6 (10.0)	-18.6 (5.8)		23.4 (1.7)	44.5 (11.0)	-22.3 (2.3)		28.0 (2.4)	46.2 (9.4)	-41.6 (13.3)	
22	22.6 (1.2)	49.0 (11.1)	-17.0 (7.8)		22.7 (1.7)	41.8 (12.3)	-19.8 (6.2)		27.5 (2.2)	43.4 (10.8)	-35.8 (14.0)	
23	22.9 (1.6)	50.4 (6.6)	-17.9 (7.3)		22.9 (2.1)	42.6 (8.3)	-19.1 (6.1)		27.8 (2.8)	45.4 (6.8)	-31.9 (9.9)	
24	23.2 (0.9)	64.3 (5.6)	-21.4 (5.3)		23.3 (1.3)	56.0 (6.4)	-24.6 (1.4)				-29.2 (11.6)	
25	24.7 (2.1)	70.0 (6.4)	-21.2 (3.7)		24.8 (2.3)	63.2 (6.7)	-22.9 (2.4)				-31.6 (13.5)	
26	22.3 (0.6)	74.5 (1.6)	-16.4 (4.5)		22.1 (0.6)	68.9 (2.2)	-22.4 (2.3)		27.5 (0.2)	63.8 (1.9)	-25.3 (11.1)	
27	23.2 (1.5)	71.4 (6.4)	-18.9 (5.4)		23.0 (1.8)	65.9 (7.6)	-21.9 (2.8)		28.7 (1.9)	62.7 (4.8)	-34.5 (15.2)	
28	21.4 (0.5)	59.1 (6.7)	-13.3 (9.2)		20.7 (0.6)	54.5 (8.5)	-16.2 (4.6)		27.2 (0.4)	53.1 (5.6)	-54.3 (27.6)	
29	21.7 (1.1)	61.3 (6.7)	-15.3 (8.7)		21.3 (1.6)	55.6 (9.5)	-19.9 (7.8)		27.4 (0.9)	53.0 (6.2)	-39.1 (16.2)	
30	22.4 (1.6)	51.6 (9.9)	-17.8 (7.9)		22.3 (2.2)	44.3 (11.7)	-19.0 (6.2)		28.2 (1.8)	45.1 (8.7)	-30.2 (14.7)	
Avg	22.7	61.8	-17.1	45.9	22.8	56.3	-19.4	52.7	27.9	52.2	-34.0	
n	24	19	24	4	24	19	24	4	20	20	24	0
SD	1.0	9.5	2.60	2.40	1.2	9.3	2.90	2.20	0.9	7.7	9.10	
Min	20.9	47.3	-21.4	42.7	20.7	41.8	-24.6	49.2	25.9	42.1	-54.3	
Max	24.7	74.5	-11.0	49.4	25.3	68.9	-13.8	54.8	30.2	64.3	-12.3	

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Table E3. Daily means (SD) of environmental parameters at site IA4B for July, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	23.3 (1.8)	53.6 (7.5)	-19.3 (6.5)		22.9 (1.9)	51.3 (6.6)	-20.8 (3.7)		29.0 (2.5)	49.0 (6.3)	-34.5 (12.1)	
2	23.5 (1.2)	58.7 (7.8)	-22.0 (5.1)		23.8 (1.6)	63.0 (8.5)	-22.9 (2.8)		29.3 (2.3)	56.4 (8.5)	-37.7 (11.5)	
3	21.5 (0.5)	51.0 (5.4)	-17.6 (7.3)		21.6 (0.9)	52.8 (6.9)	-19.9 (4.1)		27.0 (0.8)	52.9 (3.0)	-26.6 (7.2)	
4	21.2 (0.8)	52.1 (5.2)	-16.6 (8.3)		21.3 (1.3)	54.6 (5.8)	-17.9 (6.0)	58.4 (10.2)	26.5 (0.9)	57.3 (3.0)	-27.5 (10.1)	
5	21.6 (0.9)	53.3 (6.3)	-18.6 (8.5)		21.8 (1.3)	56.3 (6.4)	-21.4 (6.0)	58.8 (8.7)	26.3 (1.0)	58.5 (3.5)	-29.4 (9.3)	
6	23.9 (1.6)	62.2 (5.3)	-22.8 (4.2)		24.5 (2.3)	65.7 (5.8)	-22.8 (1.9)	63.8 (1.4)	28.7 (2.3)	65.9 (4.2)	-37.9 (10.4)	
7	25.3 (1.0)	67.1 (4.8)	-25.8 (1.1)		25.9 (1.4)	69.4 (5.0)	-22.4 (1.6)	64.5 (1.4)	29.4 (2.2)	70.0 (4.2)	-45.9 (6.3)	
8	24.0 (0.8)	68.4 (4.8)	-23.7 (1.9)		24.5 (1.1)	67.8 (8.4)	-21.2 (1.8)	65.5 (1.3)	27.6 (1.5)	70.2 (5.5)	-41.6 (7.5)	
9	23.0 (0.9)	67.1 (5.9)	-20.8 (5.1)		23.0 (1.4)	60.9 (6.2)	-20.1 (2.6)	65.8 (1.1)	26.9 (1.6)	64.1 (4.4)	-34.5 (8.7)	
10	24.4 (1.2)		-24.0 (2.4)		25.0 (1.7)	70.8 (4.3)	-21.9 (1.0)	64.9 (0.8)	28.6 (2.4)	70.8 (3.9)	-42.8 (8.1)	
11	25.7 (1.2)		-26.6 (1.9)		26.2 (1.1)	71.7 (5.2)	-24.0 (2.5)	63.4 (1.5)	30.2 (2.2)	68.8 (6.4)	-47.4 (7.3)	2.7 (0.3)
12	22.6 (1.3)	59.6 (5.5)	-14.5 (6.6)	51.3 (10.8)	22.0 (1.4)	61.6 (5.6)	-17.8 (4.4)	63.6 (9.4)	26.4 (1.0)	62.1 (2.8)	-35.8 (12.7)	2.3 (0.6)
13	21.4 (0.9)	52.4 (6.5)	-13.8 (9.2)	49.1 (15.5)	21.4 (1.4)	54.1 (6.0)	-14.2 (6.2)	60.7 (14.3)	26.0 (1.2)	58.4 (3.7)	-36.9 (16.8)	2.1 (0.7)
14	23.0 (1.8)	55.9 (7.6)	-18.0 (8.3)	53.4 (13.6)	23.2 (2.4)	57.2 (7.0)	-17.5 (5.6)	61.9 (7.5)	28.0 (3.0)	59.4 (5.7)	-35.1 (10.2)	2.6 (0.6)
15	24.7 (1.7)	65.9 (4.6)	-21.4 (5.9)	58.5 (9.2)	25.0 (2.1)	66.6 (4.2)	-21.8 (0.9)	65.4 (1.0)	28.5 (3.0)	67.6 (3.1)	-41.5 (6.3)	2.9 (0.3)
16	25.2 (0.5)	71.2 (3.3)	-25.6 (0.8)	62.7 (1.3)	25.5 (0.6)	70.5 (3.3)	-21.8 (0.8)	65.0 (0.6)			-37.3 (7.4)	
17	24.4 (1.1)	70.3 (5.6)	-24.2 (4.1)	59.2 (6.5)	24.6 (1.3)	69.4 (4.9)	-23.0 (2.3)	64.3 (2.1)	28.6 (1.4)	67.9 (3.0)	-29.0 (12.8)	2.0 (0.7)
18	23.1 (0.7)	74.8 (2.2)	-20.7 (6.0)	56.5 (8.2)	23.1 (1.0)	71.1 (1.0)	-21.2 (1.1)	65.8 (1.0)	28.1 (0.2)	68.4 (3.1)	-25.4 (9.5)	2.2 (0.8)
19	23.8 (1.2)	73.9 (2.7)	-22.6 (4.1)	59.4 (5.0)	23.6 (1.2)		-21.2 (1.5)		28.8 (0.9)	68.0 (1.3)	-28.0 (8.8)	2.2 (0.8)
20	24.8 (1.7)	71.0 (4.3)	-21.9 (4.3)	59.6 (5.8)	24.5 (1.9)		-20.4 (0.5)		29.8 (2.0)	67.9 (3.2)	-30.1 (8.4)	2.6 (0.8)
21	23.4 (0.8)	68.1 (4.3)	-20.3 (5.3)	58.1 (7.3)	23.0 (1.2)		-20.8 (2.0)		28.6 (0.7)	64.4 (1.8)	-25.1 (10.7)	2.1 (0.8)
22	23.2 (1.0)	65.5 (5.5)	-18.1 (7.5)	55.1 (10.5)	23.3 (1.8)		-20.2 (2.1)		28.3 (1.1)	63.8 (2.5)	-27.1 (9.8)	2.3 (0.9)
23	22.5 (0.7)	61.4 (6.0)	-16.9 (7.4)	51.7 (10.8)	22.3 (1.0)	59.7 (4.9)	-19.5 (4.0)	61.4 (7.9)	27.0 (0.3)	62.6 (1.8)	-22.0 (8.7)	2.3 (1.0)
24	21.5 (0.4)	72.3 (4.7)	-12.7 (4.0)		21.1 (0.4)	69.1 (4.2)	-18.8 (4.0)		26.2 (0.4)	67.7 (4.4)	-19.0 (8.3)	
25	23.0 (1.1)	76.2 (1.3)	-19.7 (4.6)		22.9 (1.3)	72.2 (0.9)	-20.2 (0.7)		27.0 (1.3)	73.0 (1.8)	-31.1 (7.8)	
26	23.0 (0.6)	63.2 (8.6)	-19.1 (5.6)	58.5 (8.6)	23.0 (1.0)	62.5 (7.1)	-19.8 (0.8)	66.3 (1.4)	26.9 (1.3)	65.0 (6.3)	-31.2 (7.0)	2.8 (0.6)
27	23.1 (1.4)	69.0 (3.4)	-16.6 (7.4)	52.3 (10.6)	22.9 (1.8)	65.8 (2.6)	-19.4 (4.6)	62.1 (7.3)	27.3 (2.2)	66.2 (2.8)	-27.5 (9.5)	2.5 (0.8)
28	24.3 (1.6)	72.7 (3.5)	-18.6 (5.1)	60.6 (7.9)	24.2 (1.8)	69.0 (3.2)	-18.8 (0.7)	67.4 (0.9)	28.4 (2.3)	70.3 (3.1)	-31.3 (6.8)	2.9 (0.5)
29	25.3 (0.8)	74.3 (3.6)	-21.2 (0.9)	62.4 (1.8)	25.3 (0.9)	70.8 (2.1)	-19.1 (1.0)	66.9 (1.7)	28.7 (1.7)	72.8 (3.1)	-39.7 (5.7)	3.0 (0.2)
30	24.9 (1.3)	69.8 (5.2)	-19.7 (2.2)	59.4 (2.5)	25.1 (1.7)	67.6 (3.4)	-19.5 (0.6)	66.2 (0.9)	28.7 (2.4)	70.1 (3.4)	-35.6 (5.3)	3.0 (0.4)
31	25.7 (1.3)	73.0 (5.0)	-20.4 (1.1)	60.9 (1.0)	26.0 (1.5)	68.8 (3.9)	-20.0 (1.1)	65.6 (0.7)	29.1 (2.3)	73.1 (4.1)	-37.1 (3.2)	3.1 (0.1)
Avg	23.6	65.3	-20.1	57.2	23.6	64.5	-20.3	64.0	28.0	65.1	-33.3	2.5
n	31	29	31	18	31	27	31	22	30	30	31	18
SD	1.3	7.7	3.40	4.00	1.4	6.4	1.90	2.40	1.1	6.0	6.80	0.35
Min	21.2	51.0	-26.6	49.1	21.1	51.3	-24.0	58.4	26.0	49.0	-47.4	2.0
Max	25.7	76.2	-12.7	62.7	26.2	72.2	-14.2	67.4	30.2	73.1	-19.0	3.1

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Table E3. Daily means (SD) of environmental parameters at site IA4B for August, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	25.3 (0.8)	68.0 (7.1)	-20.3 (3.0)	58.7 (4.1)	25.3 (1.2)	66.6 (4.3)	-19.8 (0.9)	66.5 (1.1)	28.4 (1.7)	69.4 (5.5)	-35.3 (5.7)	3.0 (0.4)
2	23.5 (1.1)	61.7 (6.4)	-16.5 (7.1)	50.7 (9.5)	23.4 (1.6)	60.1 (5.6)	-18.5 (4.1)	62.1 (7.1)	26.9 (1.1)	65.8 (2.6)	-23.9 (7.5)	2.6 (0.9)
3	26.1 (2.6)	72.6 (4.1)	-21.0 (3.3)	54.9 (4.2)	26.5 (2.8)	67.0 (2.9)	-22.2 (2.3)	64.1 (1.1)	30.1 (3.5)	72.2 (3.3)	-30.8 (8.4)	2.9 (0.5)
4	27.4 (0.7)	72.6 (3.8)	-22.4 (1.0)	60.8 (1.8)	27.8 (0.9)	69.1 (2.7)	-19.4 (0.9)	65.6 (1.1)	31.1 (1.6)	71.8 (2.5)	-36.6 (3.0)	3.1 (0.1)
5	24.9 (0.9)	70.5 (5.8)	-21.7 (5.0)	60.7 (7.0)	25.1 (1.1)	67.9 (3.8)	-19.8 (1.9)	65.5 (3.2)	28.3 (1.4)	69.1 (5.1)	-34.0 (6.4)	3.0 (0.5)
6	22.4 (0.7)	67.5 (3.6)	-14.6 (7.9)	51.7 (13.3)	22.4 (1.0)	64.2 (1.8)	-15.6 (4.2)	60.0 (10.5)	26.5 (0.5)	65.9 (2.6)	-25.6 (10.0)	2.4 (0.9)
7												
8												
9	23.4 (1.2)	66.8 (4.2)	-17.7 (6.4)	55.2 (10.4)	23.1 (1.6)	63.1 (3.2)	-19.5 (1.3)	65.9 (2.5)	28.7 (1.0)	61.7 (2.1)	-24.9 (11.7)	2.0 (1.0)
10	22.5 (0.7)	68.6 (4.4)	-14.1 (6.8)	49.5 (10.8)	21.7 (1.1)	64.8 (4.0)	-17.3 (4.0)	61.4 (6.9)	28.4 (0.7)	61.5 (2.8)	-15.3 (8.7)	1.5 (0.8)
11	21.5 (0.9)	61.3 (5.1)	-13.3 (7.5)	47.1 (12.1)	20.9 (1.3)	57.5 (5.1)	-14.9 (7.1)	57.1 (10.8)	28.2 (0.9)	57.2 (2.1)	-14.6 (8.2)	1.4 (0.7)
12	21.5 (0.4)	69.1 (2.8)	-12.9 (6.2)	48.4 (10.6)	21.2 (0.6)	65.7 (1.9)	-17.4 (3.2)	60.0 (9.0)	27.8 (0.4)	61.1 (1.8)	-15.4 (7.6)	1.4 (0.7)
13	22.0 (1.4)	64.0 (9.0)	-14.6 (7.8)	52.4 (13.1)	22.4 (1.9)	60.8 (6.6)	-16.1 (4.9)	59.6 (12.0)	28.1 (1.3)	60.0 (5.0)	-24.3 (11.5)	2.2 (1.1)
14	22.8 (1.0)	62.2 (7.0)	-16.4 (7.0)	54.9 (10.2)	23.0 (1.5)	58.8 (6.1)	-17.5 (3.8)	63.0 (5.5)	27.8 (0.7)	61.8 (2.1)	-23.8 (10.5)	2.2 (1.0)
15	22.0 (0.7)	61.6 (8.2)	-14.5 (7.1)	51.8 (10.9)	22.2 (1.2)	58.5 (6.7)	-16.6 (4.3)	58.6 (9.0)	27.4 (0.7)	60.7 (2.7)	-16.5 (7.9)	1.6 (0.8)
16	21.5 (1.0)	57.2 (6.9)	-13.5 (7.9)	51.5 (13.4)	22.4 (1.8)	51.7 (8.0)	-16.1 (4.2)	59.6 (13.2)	26.9 (0.5)	58.7 (2.2)	-21.1 (11.3)	1.9 (1.0)
17	22.0 (1.1)	59.5 (6.2)	-14.0 (8.0)	51.8 (13.4)	23.0 (2.0)	53.1 (6.9)	-15.9 (4.1)	63.0 (8.8)	26.9 (1.0)	60.5 (2.8)	-26.2 (12.4)	2.2 (1.0)
18	22.6 (1.4)	62.6 (5.9)	-15.5 (7.6)	54.0 (12.4)	23.6 (2.2)	55.8 (6.0)	-16.7 (3.9)	63.7 (8.0)	27.1 (1.5)	63.4 (3.5)	-28.1 (11.5)	2.4 (0.9)
19	23.2 (1.0)	66.5 (5.1)	-17.4 (6.7)	56.8 (9.6)	23.9 (1.7)	60.1 (5.2)	-18.9 (1.0)	66.7 (1.1)	27.0 (1.2)	66.4 (3.1)	-27.9 (8.0)	2.6 (0.8)
20	23.2 (0.8)	64.8 (7.2)	-18.2 (5.6)	57.3 (8.0)	23.8 (1.7)	59.6 (8.4)	-19.5 (2.1)	65.2 (3.8)	27.1 (1.5)	64.0 (5.5)	-26.4 (7.5)	2.7 (0.8)
21	22.6 (0.3)	74.9 (3.0)	-18.3 (4.9)		22.8 (0.4)	70.1 (2.9)	-20.2 (0.9)		25.8 (0.2)	72.2 (3.3)	-25.1 (8.3)	
22	24.0 (1.1)	76.1 (3.4)	-24.0 (2.5)		24.9 (1.7)	69.5 (5.5)	-21.5 (2.4)		27.6 (2.0)	74.3 (3.8)	-36.5 (2.5)	
23	22.7 (1.1)	63.2 (7.9)	-17.3 (6.6)		23.9 (1.3)	57.6 (8.1)	-18.0 (3.1)		26.6 (0.6)	64.0 (6.6)	-31.2 (9.9)	
24	20.5 (0.8)	58.2 (4.9)	-10.3 (8.1)	50.6 (12.1)	21.8 (1.5)	53.7 (6.5)	-14.3 (5.4)	53.1 (15.2)	26.0 (0.6)	58.2 (2.2)	-20.4 (10.3)	1.9 (1.0)
25	20.5 (1.0)	61.3 (4.0)	-11.2 (8.2)	47.6 (14.2)	21.6 (1.7)	54.3 (6.1)	-13.6 (5.9)	53.9 (14.1)	25.9 (0.6)	60.8 (2.1)	-16.8 (9.0)	1.9 (1.1)
26	20.4 (1.0)	62.5 (3.1)	-11.6 (8.5)	46.1 (13.5)	21.4 (1.6)	55.2 (5.0)	-12.2 (7.4)	54.7 (13.0)	26.0 (0.5)	61.6 (2.2)	-15.3 (8.5)	1.9 (1.2)
27	21.1 (1.1)	70.6 (4.9)	-13.6 (8.7)	48.3 (11.9)	21.6 (1.6)	63.8 (3.2)	-15.4 (7.4)	59.9 (9.8)			-10.2 (6.2)	
28	22.8 (1.0)	72.2 (4.4)	-18.9 (5.7)	59.8 (6.8)	23.8 (1.6)	64.0 (4.6)	-18.8 (2.5)	65.6 (3.3)	26.3 (2.0)	73.0 (5.5)	-17.7 (14.0)	1.5 (1.4)
29	20.8 (0.9)	58.5 (5.9)	-12.1 (8.2)	52.1 (13.0)	22.0 (1.8)	50.4 (7.3)	-14.0 (6.2)	60.9 (12.1)	27.6 (1.5)	54.6 (8.3)	-18.5 (13.2)	1.6 (1.3)
30	21.6 (1.3)	63.0 (5.0)	-15.0 (8.4)	52.5 (13.0)	22.6 (2.3)	54.4 (5.8)	-15.8 (5.1)	64.2 (6.1)	28.5 (1.5)	54.7 (4.1)	-22.0 (11.3)	2.1 (1.1)
31	22.1 (1.1)	65.2 (5.2)	-16.8 (8.0)	52.9 (11.3)	23.0 (2.2)	56.7 (7.0)	-18.5 (5.7)	63.1 (5.9)	28.7 (1.4)	56.8 (4.6)	-21.6 (10.5)	2.1 (1.1)
Avg	22.7	65.6	-16.1	53.0	23.1	60.5	-17.4	61.7	27.6	63.6	-23.7	2.2
n	29	29	29	26	29	29	29	26	28	28	29	25
SD	1.6	5.1	3.40	4.10	1.6	5.6	2.40	3.80	1.2	5.6	6.90	0.52
Min	20.4	57.2	-24.0	46.1	20.9	50.4	-22.2	53.1	25.8	54.6	-36.6	1.4
Max	27.4	76.1	-10.3	60.8	27.8	70.1	-12.2	66.7	31.1	74.3	-10.2	3.1

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Table E3. Daily means (SD) of environmental parameters at site IA4B for September, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	24.2 (1.4)	72.7 (4.6)	-22.6 (3.6)	60.9 (4.1)	25.1 (2.1)	64.2 (6.0)	-21.1 (1.8)	65.7 (1.2)	29.7 (1.8)	66.1 (4.2)	-30.0 (8.1)	2.7 (0.8)
2	24.0 (1.4)	69.9 (6.9)	-18.8 (6.9)	62.6 (5.8)	24.4 (1.9)	63.0 (6.6)	-17.9 (3.1)	66.1 (5.9)	28.8 (1.4)	66.1 (6.5)	-33.2 (12.0)	2.3 (1.0)
3	19.8 (0.4)	57.6 (3.9)	-6.0 (1.9)		19.5 (0.4)	53.8 (2.5)	-8.8 (4.0)	48.3 (8.8)	27.1 (0.4)	52.3 (2.4)	-12.0 (6.6)	0.9 (0.7)
4	18.7 (0.5)	64.9 (2.3)	-4.1 (2.1)		18.6 (0.3)	60.4 (2.1)	-5.1 (2.5)	37.3 (7.9)	26.8 (0.3)	57.2 (1.5)	-8.6 (6.2)	0.7 (0.6)
5	18.3 (1.1)	61.9 (3.2)	-3.8 (3.4)		18.6 (1.3)	57.5 (2.2)	-7.9 (6.7)	40.2 (13.8)	26.8 (0.9)	55.3 (1.7)	-12.1 (8.9)	0.8 (0.7)
6	18.7 (0.8)	61.5 (4.6)	-3.5 (1.6)	34.7 (5.0)	18.9 (0.7)	57.3 (3.7)	-7.8 (5.5)	45.3 (13.3)	27.1 (0.6)	54.6 (3.1)	-11.5 (7.8)	0.9 (0.7)
7	19.1 (0.9)	60.7 (5.5)	-5.0 (3.4)	39.5 (8.5)	19.4 (1.0)	56.1 (4.9)	-9.2 (6.9)	51.4 (16.1)	27.3 (0.7)	54.0 (4.1)	-16.5 (10.7)	1.1 (0.7)
8	17.7 (0.9)	62.1 (2.4)	-2.2 (1.4)		18.0 (0.5)	58.2 (3.5)	-3.9 (1.5)	33.8 (6.8)	26.4 (0.4)	55.4 (1.7)	-8.3 (5.9)	0.7 (0.6)
9	17.1 (1.2)	53.1 (7.0)	-3.7 (3.9)		17.9 (1.4)	47.8 (6.8)	-9.4 (7.4)	41.4 (16.8)	26.5 (1.4)	48.2 (7.0)	-33.4 (29.9)	0.9 (0.6)
10	18.6 (1.3)	57.8 (3.2)	-8.5 (6.1)		19.3 (1.6)	52.7 (3.0)	-15.2 (8.5)	50.5 (15.1)	26.6 (1.7)	52.6 (2.9)	-52.3 (33.8)	0.8 (0.6)
11	21.2 (1.2)	74.2 (3.6)	-16.6 (6.8)	55.7 (11.5)	21.7 (1.6)	69.1 (2.4)	-19.5 (3.2)	62.2 (8.5)	27.4 (1.7)	65.8 (2.8)	-78.5 (18.2)	1.0 (0.4)
12	21.6 (0.3)	77.1 (1.1)	-14.4 (3.9)	53.6 (6.9)	21.8 (0.4)	72.6 (1.1)	-19.5 (0.6)	67.4 (0.7)	26.8 (0.1)	70.2 (1.1)	-67.7 (17.7)	1.4 (0.2)
13	21.9 (0.8)	74.8 (4.1)	-16.9 (6.8)	58.8 (10.2)	22.3 (0.8)	70.3 (4.5)	-17.6 (2.4)	67.9 (4.3)	27.8 (1.2)	67.9 (4.4)	-71.6 (20.3)	1.2 (0.3)
14	19.1 (0.5)	62.2 (3.9)	-1.5 (1.7)		19.4 (0.5)	59.3 (3.7)	-5.0 (3.5)		25.6 (0.4)	59.7 (1.9)	-41.7 (16.2)	1.1 (0.5)
15	18.0 (0.6)	56.1 (4.9)	-2.1 (1.4)		18.5 (0.5)	51.5 (4.0)	-8.5 (4.0)		25.7 (0.8)	53.3 (4.6)	-30.3 (20.1)	1.1 (0.6)
16	18.6 (1.5)	57.5 (4.5)	-6.9 (7.7)		19.8 (2.2)	50.6 (5.4)	-11.7 (7.3)		26.6 (2.1)	53.3 (4.2)	-44.2 (31.5)	1.1 (0.6)
17	20.0 (1.7)	61.7 (5.0)	-10.6 (8.5)	47.3 (15.8)	21.8 (2.5)	53.3 (6.9)	-13.8 (7.1)	60.3 (12.0)	27.3 (2.6)	55.7 (5.9)	-35.9 (26.5)	1.9 (1.2)
18	20.6 (1.0)	64.5 (4.7)	-10.8 (8.3)		22.0 (1.8)	56.5 (6.5)	-15.6 (6.1)				-42.9 (30.1)	
19	20.2 (0.9)	64.9 (3.6)	-10.0 (7.7)		21.7 (1.6)	58.0 (5.7)	-15.5 (4.7)		25.3 (2.9)	58.6 (6.3)	-41.0 (31.4)	
20												
21	20.3 (0.9)	66.0 (3.0)	-9.8 (7.7)		21.7 (1.4)	59.5 (4.9)	-17.1 (5.9)		27.3 (1.3)	58.3 (4.5)	-42.3 (29.3)	
22	20.5 (0.7)	70.0 (2.0)	-12.3 (6.2)		21.3 (1.0)	65.1 (1.9)	-19.0 (4.5)		27.1 (0.7)	63.0 (2.9)	-42.5 (23.3)	
23	21.4 (0.8)	65.2 (6.2)	-14.8 (6.2)		22.9 (1.7)	60.0 (7.5)	-20.4 (2.9)		28.8 (1.9)	57.4 (6.2)	-60.3 (21.5)	
24	20.9 (0.6)	62.0 (9.8)	-11.6 (6.6)	51.6 (12.1)	22.3 (1.3)	56.7 (12.2)	-17.4 (2.4)	66.4 (6.0)	28.7 (1.9)	54.3 (10.6)	-52.7 (23.5)	1.4 (0.4)
25	20.2 (1.0)	61.9 (5.8)	-10.6 (8.1)	46.2 (13.9)	21.7 (1.7)	54.4 (8.8)	-16.6 (6.8)	59.1 (11.3)	28.6 (1.9)	52.1 (7.0)	-46.2 (25.2)	1.4 (0.5)
26	20.8 (0.9)	62.9 (6.1)	-11.5 (8.2)	48.0 (15.0)	22.5 (1.9)	55.4 (9.0)	-17.3 (4.1)	61.7 (9.3)	29.2 (2.3)	52.1 (6.7)	-52.6 (26.0)	1.3 (0.4)
27	20.5 (1.2)	62.6 (3.0)	-10.5 (8.0)	49.0 (14.9)	22.2 (1.8)	55.7 (4.3)	-15.4 (4.0)	57.6 (12.8)	28.7 (2.3)	52.6 (4.0)	-50.7 (27.8)	1.2 (0.5)
28	19.5 (0.6)	65.5 (3.9)	-6.3 (4.9)	38.0 (11.6)	20.6 (0.9)	60.0 (4.7)	-13.3 (3.8)	48.9 (13.0)	27.6 (1.3)	55.6 (4.5)	-34.4 (25.0)	1.1 (0.6)
29	19.0 (0.6)	58.3 (10.6)	-8.8 (5.7)		19.8 (0.6)	54.9 (9.6)	-13.1 (4.8)	50.0 (15.6)	26.9 (0.8)	52.3 (7.7)	-33.8 (23.1)	1.1 (0.6)
30	17.8 (0.7)	51.8 (7.0)	-3.9 (2.5)		18.2 (0.7)	46.1 (5.2)	-7.0 (1.4)		25.5 (0.7)	47.2 (5.0)	-23.2 (15.6)	0.9 (0.6)
Avg	19.9	63.5	-9.2	49.7	20.8	57.9	-13.4	54.1	27.3	56.8	-38.3	1.2
n	29	29	29	13	29	29	29	20	28	28	29	24
SD	1.7	6.1	5.30	8.40	1.9	6.1	5.10	10.50	1.1	5.8	18.40	0.47
Min	17.1	51.8	-22.6	34.7	17.9	46.1	-21.1	33.8	25.3	47.2	-78.5	0.7
Max	24.2	77.1	-1.5	62.6	25.1	72.6	-3.9	67.9	29.7	70.2	-8.3	2.7

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Table E3. Daily means (SD) of environmental parameters at site IA4B for October, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	17.6 (0.4)	54.8 (4.2)	-7.3 (5.1)	20.6 (3.0)	17.8 (0.6)	48.0 (4.4)	-12.6 (6.3)	27.9 (6.1)	24.9 (0.5)	48.3 (3.4)	-17.0 (12.0)	0.9 (0.7)
2	17.2 (1.1)	53.0 (8.5)	-9.0 (7.7)	25.0 (7.4)	17.9 (1.2)	47.9 (5.6)	-18.3 (12.6)	31.7 (12.2)	24.9 (1.2)	48.6 (4.4)	-24.8 (21.6)	1.0 (0.7)
3	17.2 (0.9)	51.8 (6.6)	-6.2 (4.7)	28.2 (7.5)	18.5 (1.0)	47.7 (6.4)	-21.1 (12.9)	33.7 (12.4)	24.9 (1.1)	48.7 (5.3)	-21.8 (19.3)	1.1 (0.7)
4	16.9 (1.4)	54.5 (4.7)	-7.8 (6.5)	29.8 (9.2)	18.4 (1.2)	48.0 (3.8)	-21.5 (13.7)	31.9 (10.7)	24.8 (1.2)	49.2 (3.3)	-23.2 (22.6)	1.1 (0.7)
5	19.4 (1.8)	61.2 (3.5)	-17.1 (8.7)	44.8 (14.3)	20.9 (2.1)	53.3 (3.7)	-36.0 (13.3)	42.1 (8.7)	26.5 (2.1)	54.5 (3.8)	-50.5 (29.5)	1.4 (0.5)
6	20.4 (0.8)	64.1 (5.3)	-16.4 (7.7)	46.5 (10.1)	21.9 (1.2)	56.9 (6.5)	-41.0 (5.8)	46.6 (3.6)	26.7 (1.3)	57.5 (4.9)	-51.8 (23.4)	1.6 (0.3)
7	18.4 (1.1)	67.8 (6.2)	-7.2 (4.7)		19.3 (1.3)	60.3 (5.7)	-26.1 (12.3)	38.3 (11.1)	24.9 (0.7)	62.1 (2.7)	-27.9 (11.5)	1.2 (0.6)
8	16.8 (1.4)	54.0 (7.4)	-4.4 (6.4)		17.8 (1.5)	47.8 (6.4)	-20.9 (13.3)	36.5 (11.5)	24.8 (1.5)	51.4 (7.1)	-30.1 (26.3)	1.1 (0.7)
9	17.2 (1.0)	47.2 (9.2)	-4.9 (5.2)		18.0 (1.2)	41.8 (8.7)	-21.3 (13.3)	37.7 (11.1)	24.8 (1.3)	44.6 (8.4)	-27.6 (26.5)	1.1 (0.7)
10	18.0 (1.5)	51.8 (3.1)	-10.5 (8.8)	36.3 (13.7)	18.9 (1.8)	46.0 (3.6)	-30.5 (14.8)	40.2 (9.1)	25.4 (1.6)	48.4 (3.6)	-32.7 (28.3)	1.2 (0.6)
11	19.7 (1.4)	61.8 (4.9)	-14.2 (9.5)	45.5 (13.7)	20.9 (1.8)	54.4 (4.9)	-38.3 (8.9)	46.6 (6.2)	26.6 (1.9)	56.1 (4.7)	-49.3 (27.4)	1.4 (0.5)
12	20.8 (0.8)	67.9 (3.6)	-20.8 (6.0)	53.1 (9.0)	22.0 (1.1)	59.6 (4.6)	-40.4 (4.6)	53.7 (4.1)	27.0 (1.4)	61.3 (3.9)	-63.8 (20.0)	1.6 (0.2)
13	19.6 (1.3)	68.2 (5.7)	-12.8 (9.4)		20.3 (1.6)	63.6 (3.4)	-30.1 (10.7)	50.2 (10.6)	25.6 (0.8)	63.1 (3.5)	-46.3 (22.7)	1.4 (0.5)
14												
15												
16												
17	15.7 (0.3)	54.8 (2.9)	-6.7 (2.5)	20.2 (3.1)	15.8 (0.1)	51.7 (1.7)	-18.1 (3.2)	29.7 (1.9)	25.7 (0.1)	48.8 (1.9)	-10.5 (7.4)	0.6 (0.6)
18	15.1 (0.8)	56.0 (4.3)	-1.7 (3.0)		15.6 (0.6)	53.5 (4.4)	-20.8 (6.6)	29.8 (3.9)	25.8 (0.6)	47.7 (2.9)	-13.0 (9.6)	0.6 (0.6)
19	15.7 (2.8)	58.0 (6.2)	-4.2 (4.9)		17.2 (1.5)	52.5 (4.2)	-26.7 (17.5)	39.6 (13.5)	26.3 (1.0)	48.7 (3.0)	-28.3 (24.7)	0.8 (0.6)
20	17.7 (0.7)	51.0 (10.2)	-19.7 (9.6)	25.0 (4.7)	16.5 (0.7)	48.9 (9.4)	-5.2 (2.9)		26.2 (0.6)	46.3 (6.6)	-19.2 (12.4)	0.8 (0.7)
21	15.5 (0.5)	51.4 (4.9)	-13.4 (3.9)	19.4 (3.5)	15.1 (0.6)	48.7 (5.4)	-15.0 (7.2)	22.5 (4.1)	25.5 (0.6)	46.9 (2.7)	-6.5 (6.2)	0.4 (0.5)
22	15.7 (0.3)	55.0 (5.7)	-23.6 (4.4)	17.4 (4.2)	15.5 (0.5)	48.7 (6.8)	-31.9 (4.4)	21.5 (4.6)	25.6 (0.2)	47.7 (3.4)	-4.0 (6.1)	
23	15.5 (0.3)	56.6 (6.4)	-13.4 (4.3)	16.6 (3.1)	15.5 (0.3)	51.3 (4.1)	-23.2 (5.4)	23.0 (3.4)	25.0 (0.3)	49.8 (4.0)	-7.0 (6.7)	0.5 (0.6)
24	15.5 (0.2)	58.3 (3.4)	-9.2 (3.3)	17.4 (3.0)	15.7 (0.2)	54.7 (3.3)	-20.3 (3.8)	24.1 (3.9)	24.6 (0.3)	52.3 (2.1)	-14.3 (9.1)	0.6 (0.6)
25	15.8 (1.0)	53.2 (6.5)	-10.9 (5.5)	19.6 (4.3)	16.2 (1.1)	51.6 (6.8)	-28.9 (12.2)	26.4 (5.1)	24.5 (0.7)	49.5 (4.4)	-29.2 (19.0)	0.7 (0.6)
26	15.1 (0.8)	52.3 (3.7)	-12.6 (6.0)		15.9 (0.6)	46.6 (7.1)	-29.3 (9.0)		23.9 (0.4)	46.9 (3.8)	-48.5 (21.2)	0.5 (0.5)
27	13.6 (0.5)	52.8 (4.5)	-8.0 (5.7)		14.3 (0.5)	50.8 (3.7)	-18.3 (6.9)	16.9 (3.6)	23.7 (0.2)	47.4 (2.2)	-26.4 (14.9)	0.5 (0.5)
28	13.1 (0.7)	52.6 (6.8)	-5.0 (2.4)	15.1 (1.2)	13.8 (0.9)	53.0 (9.6)	-14.1 (4.9)	17.5 (4.0)	23.8 (0.5)	47.4 (4.7)	-14.7 (11.7)	0.4 (0.5)
29	14.4 (1.6)	45.3 (9.7)	-10.8 (5.9)	19.6 (5.8)	15.3 (1.4)	45.9 (12.1)	-22.5 (11.2)	24.5 (8.9)	24.5 (1.1)	43.4 (7.0)	-14.8 (11.7)	0.7 (0.7)
30	16.9 (2.0)	47.9 (7.7)	-21.9 (14.1)	27.4 (13.3)	17.2 (2.0)	47.5 (7.0)	-34.2 (14.1)	28.6 (7.0)	25.0 (1.1)	45.7 (4.6)	-28.9 (27.5)	0.9 (0.7)
31	18.8 (1.6)	53.3 (5.6)	-24.3 (12.0)	30.7 (10.8)	18.6 (1.9)	54.0 (5.7)	-32.0 (11.1)	34.2 (8.2)	25.7 (1.5)	50.8 (3.3)	-35.6 (28.0)	1.1 (0.7)
Avg	16.9	55.6	-11.6	27.9	17.5	51.2	-25.0	32.9	25.3	50.5	-27.4	0.9
n	28	28	28	20	28	28	28	26	28	28	28	27
SD	2.0	5.9	6.20	11.20	2.2	4.8	8.60	9.70	0.9	5.1	15.20	0.35
Min	13.1	45.3	-24.3	15.1	13.8	41.8	-41.0	16.9	23.7	43.4	-63.8	0.4
Max	20.8	68.2	-1.7	53.1	22.0	63.6	-5.2	53.7	27.0	63.1	-4.0	1.6

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Table E3. Daily means (SD) of environmental parameters at site IA4B for November, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	18.0 (1.0)	55.7 (3.8)	-16.6 (6.3)	24.9 (7.3)	16.1 (1.6)	59.1 (3.2)	-18.9 (7.1)	32.5 (8.0)	25.2 (0.8)	53.2 (1.9)	-20.5 (15.5)	1.0 (0.7)
2	18.5 (1.1)	57.1 (4.6)	-19.6 (8.5)	29.4 (10.9)	17.1 (1.8)	58.7 (6.1)	-21.5 (7.9)	34.3 (8.9)	25.5 (0.7)	54.0 (3.3)	-30.8 (25.1)	1.0 (0.7)
3	19.8 (1.5)	58.1 (6.2)	-25.8 (10.1)	36.4 (13.1)	19.1 (1.7)	56.5 (5.7)	-27.5 (9.1)	39.0 (7.3)	26.1 (1.3)	55.4 (3.8)	-41.7 (28.0)	1.2 (0.6)
4	19.8 (0.9)	51.9 (8.4)	-25.0 (8.5)	34.6 (10.8)	19.1 (1.1)	50.3 (8.6)	-29.2 (10.5)	38.3 (7.2)	25.8 (0.7)	50.6 (5.8)	-42.2 (26.6)	1.1 (0.6)
5	19.6 (0.8)	56.5 (4.3)	-25.8 (9.2)	35.0 (9.4)	18.8 (1.1)	53.6 (3.2)	-34.7 (9.0)	38.7 (5.9)			-32.2 (16.7)	
6	17.1 (1.3)	56.4 (4.5)	-9.7 (4.7)		17.1 (0.8)	54.0 (4.9)	-18.0 (4.5)				-28.2 (16.6)	
7	13.4 (0.6)	55.3 (5.5)	-3.1 (3.9)		13.9 (0.9)	51.7 (3.2)	-11.5 (3.9)		24.2 (0.4)	54.5 (3.0)	-45.6 (17.6)	0.2 (0.3)
8	13.2 (0.5)	58.8 (3.4)	-9.0 (4.3)		12.7 (0.3)	53.8 (2.2)	-11.7 (2.8)		24.7 (0.1)	49.3 (1.8)	-36.2 (10.3)	0.4 (0.4)
9	12.3 (0.5)	58.5 (3.6)	-6.8 (3.0)		12.6 (0.4)	55.2 (2.6)	-9.1 (3.3)		24.7 (0.1)	50.5 (2.9)	-17.8 (8.3)	0.3 (0.3)
10	12.3 (0.4)	59.9 (3.0)	-6.8 (2.9)	12.6 (3.0)	11.9 (0.3)	57.0 (3.1)	-7.9 (2.8)	15.3 (3.1)	25.0 (0.2)	52.4 (4.7)	-5.5 (4.3)	0.3 (0.4)
11	13.2 (0.3)	60.6 (4.3)	-14.4 (3.6)	14.2 (3.5)	13.0 (0.3)	56.4 (2.8)	-15.1 (3.6)	18.5 (3.4)	25.2 (0.2)	49.8 (1.6)	-5.3 (6.4)	0.4 (0.5)
12	14.2 (0.2)	61.8 (4.1)	-11.4 (3.1)	14.8 (2.9)	13.7 (0.1)	58.4 (2.2)	-12.4 (2.7)	20.2 (3.9)	25.3 (0.1)	51.1 (1.4)	-14.2 (7.9)	0.5 (0.6)
13	15.0 (0.8)	63.2 (3.0)	-18.7 (6.3)	17.0 (4.5)	14.2 (0.7)	57.7 (2.8)	-18.8 (6.0)	23.0 (5.0)	25.1 (0.2)	52.5 (1.5)	-22.5 (11.7)	0.6 (0.6)
14	15.2 (0.4)	62.8 (3.2)	-22.3 (5.7)	14.8 (3.2)	14.2 (0.3)	58.9 (2.3)	-16.9 (5.8)	20.6 (4.5)	24.7 (0.2)	53.7 (1.5)	-18.1 (11.3)	0.5 (0.5)
15	13.8 (0.2)	60.1 (4.0)	-21.4 (8.8)	11.3 (2.2)	13.1 (0.4)	58.1 (2.9)	-19.5 (6.3)	14.5 (2.6)	24.3 (0.1)	51.8 (1.4)	-24.2 (11.6)	0.3 (0.4)
16	13.9 (0.3)	59.6 (3.3)	-18.8 (10.3)	11.5 (2.9)	13.0 (0.7)	59.8 (2.7)	-17.2 (7.9)	14.5 (3.4)	24.4 (0.1)	52.3 (1.4)	-21.8 (17.2)	0.4 (0.4)
17	13.6 (0.3)	58.6 (3.4)	-20.9 (9.2)	11.5 (3.0)	13.0 (0.3)	58.1 (2.7)	-17.2 (6.8)	14.0 (3.4)	24.0 (0.3)	51.9 (1.9)	-22.5 (13.5)	0.4 (0.4)
18	13.3 (0.3)	58.9 (3.9)	-11.9 (5.7)	11.0 (2.8)	12.2 (0.7)	59.6 (3.3)	-12.6 (6.2)	13.2 (3.0)	23.7 (0.3)	52.0 (2.2)	-7.7 (5.7)	0.3 (0.4)
19	13.9 (0.6)	57.6 (4.2)	-25.4 (13.2)	12.1 (3.7)	13.3 (0.8)	57.1 (4.1)	-19.7 (7.6)	14.3 (5.0)	23.6 (0.4)	51.2 (1.5)	-22.4 (15.5)	0.4 (0.5)
20	12.9 (0.4)	58.5 (4.5)	-22.9 (9.4)		13.2 (0.3)	56.6 (5.2)	-18.0 (5.6)	11.4 (3.1)	23.0 (0.2)	52.2 (1.9)	-30.2 (13.3)	0.4 (0.4)
21	12.4 (0.2)	62.5 (3.7)	-9.3 (6.2)		11.7 (0.6)	61.3 (3.6)	-9.0 (3.4)	11.0 (1.8)	22.8 (0.3)	53.5 (2.5)	-8.7 (5.8)	0.3 (0.4)
22	13.0 (0.4)	60.6 (4.1)	-12.5 (5.1)		13.0 (0.7)	61.9 (3.7)	-13.6 (4.3)	12.4 (2.7)	23.1 (0.2)	51.4 (2.1)	-11.0 (7.6)	0.5 (0.6)
23	14.1 (0.9)	56.4 (5.0)	-15.7 (6.8)	13.8 (3.6)	14.0 (1.1)	56.9 (5.3)	-14.5 (5.6)	15.8 (4.3)	23.6 (0.5)	51.1 (2.6)	-14.1 (9.5)	0.6 (0.6)
24	14.3 (0.4)	55.8 (5.5)	-21.5 (8.2)	12.5 (3.2)	14.6 (0.4)	55.8 (4.8)	-16.0 (5.6)	12.9 (3.0)	23.4 (0.3)	50.2 (3.5)	-34.8 (21.6)	0.6 (0.5)
25	13.4 (0.5)	58.2 (4.9)	-12.1 (5.0)	11.7 (2.9)	13.4 (0.4)	57.9 (5.5)	-9.7 (3.6)	13.1 (3.1)	23.2 (0.4)	51.2 (3.0)	-11.7 (8.1)	0.5 (0.6)
26	12.8 (1.2)	57.9 (5.4)	-14.6 (3.9)	14.6 (1.9)	13.9 (0.8)	57.8 (5.4)	-11.4 (4.7)	13.9 (3.8)	23.3 (0.5)	52.1 (2.8)	-13.1 (9.8)	0.5 (0.6)
27	12.9 (1.1)	58.1 (4.2)	-15.6 (6.8)	12.0 (2.3)	14.0 (0.8)	58.9 (3.9)	-12.3 (6.0)	13.1 (2.8)	23.4 (0.5)	48.6 (6.4)	-26.3 (22.1)	0.8 (0.7)
28	13.8 (0.5)	54.8 (5.4)	-12.9 (6.9)	12.1 (4.1)	13.9 (0.6)	53.9 (7.1)	-11.9 (5.4)	15.5 (4.9)	22.3 (0.6)	47.7 (8.6)	-13.2 (7.8)	0.3 (0.3)
29	13.4 (0.2)	58.8 (4.2)	-11.9 (5.5)	11.2 (2.8)	13.6 (0.4)	57.8 (4.9)	-11.6 (3.7)	14.9 (2.8)			-13.9 (14.3)	
30	13.2 (0.4)	61.1 (3.2)	-22.9 (9.3)	10.8 (2.4)	13.6 (0.4)	60.5 (3.6)	-17.1 (4.9)	13.9 (3.7)	20.8 (2.4)	59.6 (8.5)	-19.2 (10.0)	0.2 (0.0)
Avg	14.5	58.5	-16.2	16.9	14.2	57.1	-16.1	19.2	24.1	52.0	-21.8	0.5
n	30	30	30	23	30	30	30	26	27	27	30	27
SD	2.3	2.5	6.30	8.40	2.0	2.6	6.00	9.00	1.2	2.3	10.90	0.27
Min	12.3	51.9	-25.8	10.8	11.7	50.3	-34.7	11.0	20.8	47.7	-45.6	0.2
Max	19.8	63.2	-3.1	36.4	19.1	61.9	-7.9	39.0	26.1	59.6	-5.3	1.2

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Table E3. Daily means (SD) of environmental parameters at site IA4B for December, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	12.4 (0.4)	60.3 (3.9)	-19.8 (11.0)	8.8 (2.3)	12.3 (0.7)	60.2 (4.2)	-16.7 (6.9)		23.9 (0.7)	43.6 (8.8)	-32.5 (16.2)	0.5 (0.6)
2	12.6 (0.6)	61.2 (3.7)	-12.2 (6.4)	10.0 (3.0)	11.8 (1.4)	63.3 (4.5)	-14.8 (5.7)	12.9 (3.3)	24.7 (0.2)	39.6 (8.7)	-18.4 (12.8)	1.0 (0.8)
3	12.5 (0.4)	62.1 (3.5)	-20.5 (10.5)	9.4 (2.5)	12.8 (0.6)	61.1 (3.2)	-16.2 (6.1)	10.9 (3.0)	24.6 (0.3)	51.6 (4.8)	-24.5 (13.5)	0.3 (0.4)
4	11.8 (0.3)	65.3 (4.9)	-11.7 (9.4)	8.2 (2.1)	10.7 (0.8)	64.1 (3.2)	-11.2 (5.6)	10.1 (1.0)	24.2 (0.1)	47.3 (1.9)	-21.3 (15.0)	0.3 (0.4)
5	11.6 (0.4)	66.6 (3.0)	-12.4 (7.3)	7.9 (2.3)	10.4 (1.0)	64.3 (3.5)	-16.5 (8.8)	10.5 (2.0)	24.4 (0.2)	42.1 (6.4)	-24.8 (18.6)	0.7 (0.7)
6	11.9 (0.6)	63.9 (4.0)	-20.9 (11.5)		11.9 (0.9)	60.5 (3.4)	-18.9 (9.4)		24.8 (0.3)	33.9 (2.5)	-48.6 (25.8)	1.0 (0.6)
7	11.0 (0.4)	66.4 (3.5)	-8.1 (4.9)		9.6 (0.7)	66.7 (4.2)	-10.3 (4.4)	10.5 (1.3)	24.7 (0.2)	34.8 (1.7)	-12.2 (9.4)	0.8 (0.7)
8	12.0 (0.5)	65.5 (3.2)	-16.4 (7.2)	10.4 (3.0)	11.0 (1.4)	66.1 (4.4)	-14.5 (5.0)	13.4 (3.5)	24.7 (0.1)	36.4 (2.7)	-17.8 (11.0)	1.3 (0.8)
9	11.8 (0.5)	64.6 (3.5)	-26.7 (10.2)	8.7 (2.3)	11.3 (0.7)	62.2 (4.6)	-20.9 (7.9)	8.7 (2.3)	23.8 (0.4)	38.8 (2.7)	-30.5 (11.0)	1.1 (0.7)
10	11.3 (0.6)	67.4 (4.0)	-7.7 (5.3)	8.7 (2.0)	9.8 (0.8)	65.8 (3.2)	-8.7 (2.7)	10.5 (1.2)	23.3 (0.2)	35.1 (2.0)	-19.7 (13.5)	1.2 (0.9)
11	12.2 (0.3)	65.0 (3.3)	-11.2 (7.1)	10.2 (2.8)	11.4 (0.9)	63.7 (4.0)	-10.5 (4.3)	12.9 (3.2)	23.2 (0.3)	41.5 (8.1)	-19.7 (15.0)	1.1 (0.9)
12	11.6 (0.3)	65.2 (4.5)	-11.8 (6.9)	10.2 (2.9)	11.5 (0.4)	63.8 (3.6)	-10.3 (3.9)	11.4 (2.6)	23.0 (0.3)	54.4 (2.5)	-11.0 (8.3)	0.4 (0.4)
13	13.1 (0.7)	63.3 (3.2)	-18.2 (4.4)	13.6 (2.5)	13.3 (0.8)	57.2 (2.9)	-21.4 (4.6)	17.0 (3.7)	23.6 (0.3)	54.2 (1.6)	-14.3 (7.3)	0.5 (0.6)
14	13.1 (1.7)	64.4 (3.3)	-23.1 (4.4)	13.5 (5.5)	13.0 (1.9)	56.6 (2.7)	-22.8 (4.8)		22.9 (0.9)	57.2 (3.1)	-47.2 (28.6)	0.5 (0.5)
15	8.4 (0.8)	69.7 (4.8)	-15.3 (6.6)	7.2 (0.9)	7.7 (0.7)	63.3 (4.2)	-13.7 (6.9)		22.0 (0.5)	51.3 (6.2)	-38.2 (24.0)	0.5 (0.6)
16	9.4 (0.6)	72.2 (2.6)	-10.1 (4.6)	8.2 (1.4)	7.5 (1.0)	70.8 (4.9)	-8.5 (2.6)	10.6 (0.7)	22.7 (0.3)	58.1 (3.0)	-4.5 (5.1)	0.3 (0.4)
17	10.3 (0.3)	69.9 (3.0)	-9.9 (6.1)	8.9 (2.1)	8.6 (1.0)	68.1 (4.2)	-7.4 (1.5)	10.4 (0.1)	22.8 (0.4)	58.2 (3.2)	-7.3 (5.7)	0.2 (0.5)
18	11.0 (1.0)	67.9 (3.5)	-10.1 (5.8)	8.4 (1.7)	9.5 (1.0)	66.4 (4.8)	-8.8 (4.4)	10.5 (0.7)	23.1 (0.4)	56.2 (2.7)	-5.6 (5.9)	0.2 (0.5)
19	12.3 (0.6)	63.7 (2.9)	-13.0 (7.3)	7.5 (0.8)	10.6 (0.8)	66.1 (4.3)	-11.8 (4.5)	10.3 (1.2)	23.5 (0.3)	57.5 (3.0)	-9.8 (7.6)	0.3 (0.5)
20	11.6 (1.6)	63.1 (3.2)	-15.2 (8.9)	7.3 (1.1)	10.9 (1.1)	64.8 (4.0)	-15.6 (7.8)		23.0 (0.7)	55.2 (2.5)	-30.4 (26.7)	0.5 (0.5)
21	7.3 (0.4)	68.1 (3.4)	-20.6 (5.7)	6.3 (0.5)	6.3 (0.9)	64.4 (3.1)	-19.8 (6.6)		22.2 (0.7)	49.3 (6.4)	-60.8 (18.8)	0.7 (0.7)
22	8.5 (0.9)	69.9 (3.5)	-8.4 (2.3)	7.8 (0.4)	6.7 (1.0)	71.6 (3.9)	-9.7 (3.4)	10.3 (0.3)	22.8 (0.4)	41.3 (7.6)	-14.6 (11.9)	1.2 (1.0)
23	11.1 (1.5)	65.4 (3.1)	-12.3 (3.6)		10.0 (2.3)	66.4 (4.7)	-14.1 (4.8)	9.8 (1.0)			-11.3 (7.0)	
24	11.2 (1.0)	64.5 (4.7)	-14.4 (5.9)	7.3 (0.8)	10.6 (1.4)	62.5 (3.5)	-12.5 (4.9)	9.3 (0.5)	22.5 (1.0)	63.8 (3.7)	-29.1 (17.8)	0.2 (0.2)
25	9.3 (0.6)	67.0 (3.0)	-12.5 (5.1)	7.5 (0.3)	8.5 (1.5)	67.3 (4.0)	-15.0 (6.2)	8.8 (0.8)	24.4 (0.4)	60.1 (5.4)	-6.6 (5.8)	0.3 (0.4)
26	13.3 (1.5)	65.8 (3.2)	-15.2 (4.5)	10.0 (3.0)	13.9 (1.2)	63.5 (2.4)	-19.4 (4.1)	13.4 (4.0)	25.0 (0.1)	56.9 (3.1)	-16.0 (8.4)	0.5 (0.6)
27	13.7 (0.6)	63.4 (2.7)	-12.0 (5.3)		14.1 (0.8)	60.3 (3.0)	-15.2 (3.8)	11.7 (3.7)	24.4 (0.4)	53.4 (1.7)	-31.4 (13.0)	0.4 (0.4)
28	13.3 (0.6)	63.2 (3.5)	-10.0 (4.7)		12.3 (0.9)	62.7 (4.8)	-9.2 (3.0)	9.5 (1.7)	24.3 (0.5)	53.5 (2.9)	-16.6 (14.0)	0.4 (0.4)
29	12.7 (1.1)	63.4 (3.0)	-16.4 (5.0)		13.4 (0.8)	62.0 (3.8)	-11.7 (6.5)	11.1 (3.0)	24.5 (0.3)	52.0 (1.2)	-21.2 (16.7)	0.4 (0.4)
30	11.5 (1.4)	64.9 (4.6)	-14.6 (5.9)		12.5 (0.9)	62.3 (4.3)	-19.4 (11.8)		24.4 (0.7)	50.0 (5.6)	-33.4 (32.1)	0.3 (0.3)
31	11.3 (1.0)	65.8 (5.4)	-9.7 (6.9)		10.4 (0.6)	64.8 (5.4)	-10.6 (5.0)	9.0 (0.4)	23.4 (0.5)	55.1 (2.5)	-12.6 (9.9)	0.3 (0.3)
Avg	11.5	65.5	-14.2	9.0	10.8	64.0	-14.1	11.0	23.7	49.4	-22.3	0.6
n	31	31	31	23	31	31	31	24	30	30	31	30
SD	1.5	2.6	4.60	1.80	2.0	3.3	4.30	1.80	0.8	8.4	13.30	0.33
Min	7.3	60.3	-26.7	6.3	6.3	56.6	-22.8	8.7	22.0	33.9	-60.8	0.2
Max	13.7	72.2	-7.7	13.6	14.1	71.6	-7.4	17.0	25.0	63.8	-4.5	1.3

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Table E3. Daily means (SD) of environmental parameters at site IA4B for January, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	12.5 (1.1)	62.5 (3.9)	-13.7 (7.0)		11.3 (1.3)	67.2 (3.6)	-11.3 (4.2)	9.3 (1.9)	23.6 (0.2)	54.0 (1.8)	-14.5 (7.4)	0.3 (0.4)
2	13.2 (0.4)	62.8 (3.9)	-10.5 (5.2)		12.4 (0.5)	67.0 (4.0)	-8.4 (3.0)	9.8 (2.2)	23.7 (0.4)	54.6 (1.9)	-10.1 (8.2)	0.4 (0.4)
3	12.6 (0.7)	63.9 (4.1)	-19.3 (6.4)	9.2 (2.1)	12.5 (0.8)	66.9 (2.2)	-15.2 (4.0)	11.5 (3.2)	23.8 (0.2)	54.4 (1.5)	-9.2 (11.6)	0.4 (0.5)
4	11.6 (0.6)	64.1 (4.0)	-16.3 (8.7)	7.4 (0.8)	11.9 (0.7)	64.5 (3.3)	-15.2 (8.1)		22.7 (0.2)	54.9 (2.7)	-29.8 (17.7)	0.4 (0.4)
5	12.5 (0.8)	65.5 (3.8)	-8.7 (4.4)	8.4 (1.9)	11.2 (1.0)	63.6 (4.7)	-8.9 (3.3)	9.7 (2.0)	23.0 (0.4)	48.7 (10.7)	-15.4 (11.6)	0.8 (0.8)
6	13.3 (0.5)	65.6 (4.2)	-8.9 (5.2)	8.9 (2.3)	11.9 (0.9)	61.9 (3.7)	-6.9 (2.7)	10.1 (2.2)	23.2 (0.4)	42.1 (8.8)	-16.0 (11.9)	1.1 (0.9)
7	12.3 (0.6)	66.5 (3.9)	-14.7 (5.0)	7.4 (1.2)	12.2 (0.5)	64.6 (3.1)	-12.6 (3.4)		22.4 (0.2)	54.2 (5.6)	-34.6 (12.6)	0.6 (0.6)
8	12.1 (1.2)	66.5 (4.1)	-7.9 (4.3)	8.3 (1.7)	11.2 (0.7)	65.8 (3.0)	-7.2 (2.8)	9.4 (1.5)	22.6 (0.4)	48.3 (10.5)	-18.2 (13.0)	0.9 (0.8)
9	12.8 (0.4)	65.2 (4.4)	-16.6 (5.4)	8.7 (2.5)	12.0 (0.5)	66.0 (3.1)	-14.1 (4.2)	12.2 (3.9)	23.3 (0.3)	57.3 (2.2)	-9.0 (8.5)	0.6 (0.6)
10	12.3 (0.4)	66.2 (4.7)	-12.1 (6.1)	7.9 (1.3)	11.3 (0.6)	66.4 (4.5)	-9.6 (3.7)	9.1 (1.1)	22.7 (0.3)	59.0 (2.8)	-12.9 (8.4)	0.6 (0.6)
11	12.1 (0.6)	67.3 (3.4)	-11.1 (6.4)	8.1 (1.5)	11.5 (1.2)	68.4 (3.0)	-9.8 (3.3)	9.3 (1.5)	22.6 (0.2)	58.4 (2.7)	-17.3 (12.4)	0.6 (0.6)
12	12.6 (1.0)	65.6 (4.4)	-15.8 (11.7)		12.1 (0.9)	65.4 (3.3)	-15.4 (7.9)		22.8 (0.3)	58.2 (3.0)	-27.9 (22.5)	0.6 (0.6)
13	9.6 (0.9)	70.2 (5.2)	-12.7 (5.7)	7.5 (0.3)	8.8 (0.9)	67.1 (5.4)	-11.2 (4.2)	9.1 (0.2)	22.3 (0.4)	60.7 (4.5)	-15.0 (13.6)	0.6 (0.6)
14	9.0 (0.5)	70.8 (3.6)	-17.9 (5.9)	7.2 (0.3)	7.5 (0.6)	71.5 (3.9)	-16.7 (5.9)	8.4 (0.8)	22.5 (0.4)	58.1 (5.4)	-21.8 (14.3)	0.7 (0.6)
15	8.3 (0.8)	76.2 (2.7)	-9.0 (3.0)	7.8 (0.2)	6.3 (0.8)	76.1 (2.2)	-10.9 (2.0)	9.1 (0.2)	22.3 (0.3)	62.8 (4.0)	-13.7 (8.8)	0.6 (0.6)
16	8.4 (1.2)	76.4 (3.5)	-7.6 (1.6)		6.5 (1.6)	76.4 (2.2)	-14.0 (4.1)	8.8 (0.3)			-7.7 (7.0)	
17	11.2 (1.4)		-16.6 (7.3)		11.0 (1.8)	71.8 (2.7)	-16.1 (5.9)		22.7 (1.5)	58.8 (4.4)	-32.1 (21.2)	0.2 (0.3)
18	14.1 (0.9)		-13.6 (4.1)		12.9 (0.4)	67.7 (1.9)	-10.7 (3.7)		24.3 (0.2)	56.6 (4.4)	-23.1 (12.6)	0.3 (0.3)
19	12.6 (0.7)	68.7 (5.3)	-10.8 (4.0)		10.7 (0.6)	70.2 (2.3)	-9.4 (4.0)		25.2 (1.0)	58.1 (2.8)	-12.5 (5.8)	0.4 (0.6)
20	11.8 (1.0)		-5.0 (1.9)		10.0 (0.8)	70.3 (2.6)	-7.9 (1.9)	9.2 (0.6)	25.8 (0.9)	53.6 (3.5)	-9.2 (5.3)	0.5 (0.6)
21	11.8 (1.0)	69.0 (3.4)	-6.1 (3.8)	8.2 (1.3)	10.6 (1.1)	67.4 (3.4)	-7.9 (2.3)	9.3 (1.2)	24.3 (0.2)	51.4 (1.8)	-12.6 (8.8)	0.3 (0.3)
22	13.1 (0.9)	67.5 (3.8)	-6.0 (3.9)	8.7 (2.0)	12.0 (0.9)	62.8 (2.3)	-7.7 (3.1)	9.9 (2.0)	24.2 (0.5)	53.0 (2.1)	-10.5 (7.6)	0.3 (0.4)
23	11.4 (1.4)	65.7 (4.6)	-22.0 (7.7)		11.2 (1.2)	64.4 (4.0)	-20.6 (6.9)		22.6 (0.4)	58.5 (2.4)	-42.9 (15.4)	0.3 (0.3)
24	9.2 (0.9)	71.0 (4.5)	-6.5 (2.8)	7.8 (0.2)	7.9 (0.7)	70.5 (3.1)	-8.1 (1.9)	9.2 (0.2)	22.6 (0.5)	61.5 (2.2)	-12.7 (7.0)	0.3 (0.3)
25	10.4 (0.7)	69.7 (3.3)	-4.8 (0.9)	8.0 (0.1)	9.1 (0.8)	69.3 (3.0)	-6.6 (1.7)	9.4 (0.7)	23.1 (0.4)	59.0 (2.3)	-9.0 (6.2)	0.3 (0.3)
26	10.7 (0.8)	68.0 (3.9)	-4.7 (1.0)	8.1 (0.1)	9.5 (0.7)	68.7 (2.9)	-6.6 (2.8)	9.6 (1.3)	23.4 (0.3)	58.8 (2.7)	-6.5 (6.3)	0.3 (0.3)
27	10.6 (0.8)	68.5 (3.4)	-4.9 (2.1)	8.1 (0.6)	9.2 (0.7)	69.5 (2.3)	-6.2 (0.9)	9.3 (0.3)	23.5 (0.3)	61.9 (2.4)	-6.6 (6.7)	0.3 (0.3)
28	10.9 (1.2)	69.4 (4.6)	-9.5 (4.2)	7.7 (0.9)	8.9 (1.7)	68.3 (3.6)	-13.4 (5.1)	9.0 (1.3)	23.1 (0.3)	61.3 (5.6)	-14.8 (11.1)	0.5 (0.6)
29	12.2 (0.5)	66.2 (4.1)	-13.6 (6.3)	7.7 (1.3)	11.9 (0.6)	67.1 (2.7)	-13.1 (6.6)	9.5 (2.1)	22.3 (0.4)	59.0 (3.8)	-30.3 (11.8)	0.6 (0.6)
30	11.9 (0.6)	67.1 (4.6)	-7.1 (3.9)	8.4 (1.7)	10.7 (0.6)	67.6 (3.1)	-6.1 (1.3)	9.2 (0.5)	22.2 (0.5)	61.6 (2.6)	-9.5 (6.9)	0.5 (0.6)
31	13.5 (0.7)	64.0 (4.0)	-13.3 (6.3)	10.0 (2.7)	12.6 (1.6)	64.5 (2.5)	-11.9 (4.4)	11.3 (2.9)	22.4 (0.3)	58.8 (2.3)	-21.9 (11.6)	0.6 (0.6)
Avg	11.6	67.5	-11.2	8.2	10.6	67.7	-11.0	9.6	23.2	56.6	-17.0	0.5
n	31	28	31	22	31	31	31	24	30	30	31	30
SD	1.5	3.3	4.60	0.60	1.8	3.3	3.60	0.90	0.9	4.5	9.10	0.20
Min	8.3	62.5	-22.0	7.2	6.3	61.9	-20.6	8.4	22.2	42.1	-42.9	0.2
Max	14.1	76.4	-4.7	10.0	12.9	76.4	-6.1	12.2	25.8	62.8	-6.5	1.1

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Table E3. Daily means (SD) of environmental parameters at site IA4B for February, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	13.8 (0.4)	63.4 (4.6)	-13.4 (5.9)	9.8 (3.0)	13.5 (0.5)	62.8 (2.7)	-8.9 (4.1)	10.5 (2.6)	21.9 (0.3)	58.5 (2.4)	-22.9 (11.7)	0.6 (0.6)
2	12.5 (1.2)	64.5 (4.0)	-16.6 (7.6)	8.6 (2.3)	12.5 (1.0)	65.9 (3.1)	-11.4 (5.7)	9.4 (2.0)	21.4 (0.5)	61.7 (2.4)	-26.4 (13.0)	0.5 (0.6)
3	9.5 (0.6)	70.7 (4.6)	-13.0 (3.2)	7.2 (0.3)	9.6 (0.6)	69.3 (2.9)	-10.2 (2.8)		20.7 (0.4)	66.0 (2.4)	-20.5 (8.8)	0.4 (0.5)
4	10.3 (1.0)	72.4 (4.3)	-7.2 (2.5)	8.0 (1.0)	8.4 (1.2)	70.7 (3.1)	-6.7 (1.1)	9.4 (0.1)	21.4 (0.6)	65.0 (3.3)	-7.6 (6.7)	0.5 (0.6)
5	11.8 (1.4)	66.6 (4.9)	-10.8 (4.5)		11.2 (2.0)	63.5 (4.0)	-10.3 (3.5)	10.9 (2.8)	22.2 (0.7)	59.9 (3.5)	-11.9 (8.8)	0.6 (0.6)
6	13.9 (0.8)	64.5 (4.2)	-14.7 (4.6)	13.1 (4.5)	14.2 (1.1)	60.4 (3.3)	-14.3 (6.0)	13.5 (3.5)	22.8 (0.5)	58.3 (2.6)	-18.0 (12.9)	0.8 (0.7)
7	14.8 (0.5)	62.2 (4.0)	-20.3 (4.2)	15.2 (5.0)	15.5 (0.3)	57.6 (2.6)	-16.6 (4.3)	13.5 (3.2)	22.9 (0.4)	54.5 (2.0)	-34.6 (11.5)	1.0 (0.7)
8	13.8 (0.2)	63.7 (4.3)	-14.0 (5.0)	10.3 (2.8)	14.1 (0.4)	59.1 (3.8)	-10.2 (4.6)	11.8 (3.1)	22.8 (0.4)	56.9 (4.6)	-13.0 (9.4)	0.8 (0.7)
9	15.0 (1.0)	65.8 (5.0)	-21.8 (3.5)	15.6 (4.9)	15.5 (1.1)	60.4 (2.9)	-26.6 (11.2)	14.7 (3.9)			-25.0 (20.2)	
10	16.2 (0.7)	59.6 (5.5)	-21.8 (5.3)	19.7 (5.1)	16.8 (0.7)	52.8 (3.6)	-27.0 (8.8)	18.9 (5.4)	20.3 (4.1)	70.5 (8.1)	-31.6 (15.8)	0.2 (0.2)
11	13.7 (0.5)		-22.3 (9.1)		15.4 (0.4)	58.4 (3.9)	-17.3 (6.2)	13.6 (2.8)	24.6 (0.2)	58.0 (4.1)	-26.0 (17.1)	0.3 (0.4)
12	14.2 (0.2)	60.8 (5.2)	-15.4 (7.1)	11.6 (4.1)	14.8 (0.4)	56.4 (4.1)	-12.7 (5.4)	12.8 (3.0)	24.6 (0.3)	53.2 (5.7)	-22.0 (13.9)	0.4 (0.5)
13	13.5 (0.3)	64.8 (5.0)	-12.6 (5.0)	9.4 (2.6)	13.6 (0.3)	61.2 (4.5)	-9.7 (4.1)	11.8 (2.9)	24.5 (0.1)	53.8 (2.2)	-8.4 (4.6)	0.3 (0.3)
14	12.7 (0.4)	66.2 (4.8)	-11.4 (5.8)	8.3 (1.9)	12.6 (0.5)	61.3 (3.5)	-8.0 (3.7)	10.0 (2.0)	24.5 (0.6)	55.0 (2.3)	-8.2 (3.4)	0.2 (0.1)
15	12.2 (0.5)	65.2 (3.9)	-8.6 (4.6)	8.2 (1.6)	11.6 (0.8)	61.1 (3.1)	-6.7 (3.3)	9.8 (1.6)	24.0 (0.9)	54.6 (2.2)	-5.4 (2.4)	0.2 (0.1)
16	12.4 (0.7)	64.5 (4.9)	-8.5 (4.3)		11.6 (1.4)	60.1 (3.8)	-9.8 (4.9)	10.3 (2.3)	23.8 (0.9)	53.8 (3.1)	-8.7 (6.2)	0.3 (0.3)
17	13.2 (0.5)		-12.9 (4.8)		13.7 (1.1)	59.8 (3.7)	-13.9 (4.2)	11.2 (3.0)	23.8 (0.1)	53.4 (1.2)	-14.0 (7.4)	0.4 (0.4)
18	11.8 (1.1)		-27.2 (7.7)		14.6 (1.1)	59.5 (2.3)	-20.8 (7.2)		23.0 (0.5)	55.2 (1.7)	-42.0 (18.2)	0.3 (0.4)
19	11.1 (1.2)		-12.9 (6.0)		12.0 (0.8)	61.4 (3.3)	-9.4 (3.6)	9.3 (1.6)	22.2 (0.3)	55.0 (2.1)	-18.4 (9.6)	0.3 (0.4)
20	12.4 (0.6)	65.5 (5.0)	-10.8 (5.8)		12.3 (1.1)	61.3 (2.9)	-9.7 (5.1)	10.5 (2.3)	22.2 (0.4)	54.6 (2.0)	-9.4 (6.8)	0.4 (0.5)
21	11.0 (0.6)	65.4 (4.9)	-23.1 (7.7)	6.6 (0.9)	11.4 (0.9)	59.0 (3.6)	-19.3 (7.8)		21.1 (0.3)	58.3 (2.0)	-50.8 (21.9)	0.3 (0.3)
22	11.2 (1.0)	67.4 (4.2)	-12.7 (5.8)	8.0 (1.5)	11.0 (1.3)	61.0 (2.7)	-8.5 (3.6)	9.5 (1.5)	21.5 (0.4)	57.6 (2.1)	-15.9 (8.9)	0.3 (0.4)
23	12.2 (0.8)	67.2 (5.0)	-10.0 (4.5)		11.7 (1.3)	60.7 (3.2)	-9.0 (4.6)	10.3 (2.2)	21.8 (0.4)	55.4 (2.9)	-7.9 (6.3)	0.4 (0.4)
24	12.8 (0.6)		-14.5 (4.8)		14.2 (1.0)	55.8 (3.8)	-17.2 (6.0)	13.1 (3.9)	22.3 (0.7)	51.4 (3.7)	-19.9 (13.7)	0.6 (0.6)
25	14.0 (0.7)		-20.4 (7.3)		15.6 (0.7)	54.8 (4.4)	-19.7 (8.7)	16.2 (5.4)	22.5 (0.6)	53.5 (3.1)	-28.7 (15.7)	0.7 (0.6)
26	13.5 (0.3)		-21.3 (5.9)		14.9 (0.3)	59.3 (3.7)	-17.8 (4.8)	13.4 (3.0)	22.1 (0.3)	57.9 (2.2)	-25.2 (19.3)	0.5 (0.5)
27	12.8 (0.3)	62.9 (4.8)	-21.0 (7.3)	8.1 (2.2)	12.7 (0.6)	58.0 (4.3)	-14.2 (5.0)		21.7 (0.5)	58.5 (1.8)	-20.8 (13.3)	0.4 (0.5)
28	12.7 (0.3)	62.4 (4.4)	-17.0 (5.9)	8.5 (2.1)	12.8 (0.5)	58.9 (3.1)	-10.0 (3.3)		21.9 (0.4)	56.7 (2.5)	-15.6 (8.3)	0.4 (0.5)
Avg	12.8	65.0	-15.6	10.4	13.1	60.4	-13.4	11.9	22.5	57.3	-20.0	0.4
n	28	21	28	17	28	28	28	23	27	27	28	27
SD	1.4	2.9	5.10	3.50	1.9	3.7	5.50	2.40	1.2	4.3	10.70	0.19
Min	9.5	59.6	-27.2	6.6	8.4	52.8	-27.0	9.3	20.3	51.4	-50.8	0.2
Max	16.2	72.4	-7.2	19.7	16.8	70.7	-6.7	18.9	24.6	70.5	-5.4	1.0

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Table E3. Daily means (SD) of environmental parameters at site IA4B for March, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	12.0 (0.6)	65.0 (5.1)	-14.4 (6.1)	7.9 (1.6)	10.6 (1.0)	58.8 (2.0)	-8.9 (3.6)	9.1 (0.4)	21.7 (0.6)	58.6 (3.4)	-14.3 (9.1)	0.4 (0.5)
2	12.6 (0.3)	63.4 (5.2)	-12.1 (5.5)	9.4 (2.5)	11.6 (1.2)	57.8 (3.3)	-9.4 (3.6)	10.8 (2.4)	22.2 (0.5)	54.5 (3.8)	-9.0 (7.4)	0.5 (0.6)
3	12.4 (0.4)	62.7 (5.3)	-10.6 (3.8)		12.6 (0.6)	58.9 (3.3)	-13.7 (5.4)	10.2 (2.3)	22.2 (0.3)	53.5 (5.5)	-11.8 (9.8)	0.7 (0.7)
4	13.9 (1.0)	59.0 (7.0)	-11.8 (5.4)		14.1 (1.0)	54.0 (4.7)	-17.2 (6.5)	13.6 (4.3)			-16.7 (15.4)	
5	16.9 (1.7)	56.8 (7.8)	-25.6 (18.1)	24.2 (10.5)	17.1 (1.9)	52.2 (4.2)	-32.7 (15.3)	22.6 (9.0)	24.7 (1.7)	56.5 (7.7)	-41.3 (32.6)	0.4 (0.4)
6	16.4 (0.7)	57.2 (8.3)	-21.1 (6.9)	15.8 (5.0)	16.8 (0.6)	52.2 (5.4)	-23.7 (9.2)	19.1 (6.3)	25.2 (0.4)	50.2 (5.6)	-26.5 (14.8)	0.6 (0.6)
7	15.2 (0.5)	65.0 (5.3)	-21.2 (5.3)	11.7 (2.5)	15.6 (0.4)	59.0 (4.4)	-18.0 (3.5)	15.0 (3.0)	24.9 (0.1)	53.4 (2.3)	-17.3 (7.8)	0.4 (0.5)
8	14.2 (0.3)	65.9 (4.6)	-17.0 (8.0)	10.8 (2.8)	14.6 (0.2)	60.8 (2.5)	-14.4 (5.3)	11.9 (2.9)	24.8 (0.1)	55.3 (2.4)	-21.3 (10.9)	0.4 (0.4)
9	14.2 (0.2)	69.1 (5.0)	-13.8 (6.1)	10.7 (2.4)	14.4 (0.3)	61.7 (3.5)	-15.8 (5.8)	12.7 (2.9)	24.9 (0.1)	55.4 (2.8)	-13.3 (7.3)	0.4 (0.5)
10	14.0 (1.4)	68.9 (4.9)	-15.4 (6.9)		14.4 (1.5)	60.0 (3.1)	-19.1 (7.1)		24.6 (0.5)	55.0 (1.8)	-46.0 (33.4)	0.4 (0.5)
11	9.9 (0.8)	66.7 (5.3)	-11.7 (6.4)		10.7 (1.4)	60.0 (4.1)	-15.2 (6.1)		23.7 (0.3)	55.9 (1.9)	-41.1 (22.4)	0.3 (0.3)
12	11.4 (1.3)	66.6 (5.3)	-3.0 (4.1)		11.7 (1.2)	60.3 (3.5)	-7.8 (3.3)	10.6 (2.4)	23.9 (0.6)	58.0 (4.5)	-8.3 (4.9)	0.3 (0.3)
13	13.5 (0.6)	61.3 (5.6)	-6.7 (5.9)		13.9 (0.7)	57.1 (3.7)	-11.6 (4.5)	13.0 (3.4)	24.0 (0.3)	54.6 (4.4)	-15.0 (9.8)	0.4 (0.5)
14	14.5 (0.7)	57.1 (7.9)	-9.6 (7.1)		14.9 (0.9)	53.1 (6.1)	-15.5 (7.4)	16.3 (5.2)	23.9 (0.6)	51.7 (6.8)	-20.1 (14.2)	0.6 (0.6)
15	15.8 (1.0)	53.5 (9.0)	-14.8 (9.1)	18.2 (5.2)	16.3 (1.2)	50.1 (6.5)	-24.2 (13.8)	20.4 (6.9)	24.0 (0.8)	49.2 (6.3)	-28.4 (19.2)	0.8 (0.6)
16	17.3 (1.5)	57.0 (7.9)	-26.9 (18.2)	24.0 (10.6)	18.0 (1.7)	52.2 (4.6)	-32.9 (16.7)	24.2 (8.0)	24.4 (1.5)	51.6 (4.7)	-46.2 (33.1)	0.6 (0.6)
17	18.2 (1.2)	55.4 (7.7)	-32.6 (16.7)	22.9 (8.9)	18.8 (1.2)	51.1 (4.8)	-35.2 (15.7)	25.7 (7.9)	24.6 (1.6)	52.1 (4.7)	-51.0 (31.5)	0.7 (0.5)
18	16.4 (0.5)	54.8 (9.4)	-20.7 (7.2)	15.8 (4.1)	17.0 (0.6)	49.9 (7.2)	-21.4 (9.1)	19.3 (6.1)	23.0 (0.7)	49.5 (6.5)	-26.8 (18.1)	0.8 (0.7)
19	15.4 (0.7)	55.2 (10.0)	-15.6 (6.6)	14.1 (4.5)	16.0 (0.7)	50.8 (7.1)	-17.7 (7.8)	17.6 (5.7)	22.6 (0.9)	50.0 (7.5)	-22.4 (16.7)	0.7 (0.7)
20	15.5 (0.6)	57.0 (5.9)	-17.3 (5.4)	14.0 (3.0)	16.0 (0.6)	50.8 (4.3)	-21.8 (7.1)	17.6 (4.2)	22.5 (0.4)	51.7 (4.0)	-22.7 (12.5)	0.7 (0.7)
21	17.3 (1.5)	51.9 (10.4)	-28.3 (15.2)	21.8 (9.1)	17.8 (1.5)	47.2 (6.3)	-31.9 (14.8)	23.8 (7.7)	23.9 (1.8)	48.4 (6.5)	-43.8 (28.3)	0.9 (0.6)
22	18.0 (0.7)	60.3 (4.5)	-32.0 (11.0)	17.4 (4.3)	18.1 (0.6)	54.1 (3.4)	-36.9 (10.7)	20.3 (4.2)	23.6 (0.8)	55.3 (2.1)	-36.8 (17.3)	1.1 (0.6)
23	18.1 (0.8)	62.7 (7.8)	-37.2 (10.4)	19.8 (5.5)	18.3 (1.1)	55.9 (3.2)	-43.3 (11.8)	21.7 (6.2)	23.8 (0.9)	57.7 (3.2)	-45.3 (23.7)	1.0 (0.6)
24	17.2 (0.9)	66.1 (6.3)	-25.1 (9.6)	18.4 (5.6)	17.7 (0.9)	58.3 (3.1)	-33.1 (7.9)	20.5 (4.7)	23.2 (0.5)	59.6 (3.3)	-49.9 (15.9)	0.9 (0.6)
25	14.9 (0.4)	62.7 (5.7)	-13.8 (5.0)	12.1 (2.5)	15.5 (0.3)	54.9 (3.3)	-17.3 (4.3)	14.5 (3.3)	22.6 (0.5)	55.8 (3.9)	-36.7 (16.1)	0.6 (0.5)
26	15.3 (0.5)	61.9 (6.3)	-18.5 (6.4)	13.5 (3.4)	15.9 (0.5)	54.7 (4.1)	-19.4 (6.4)	17.0 (3.5)	23.0 (0.5)	54.5 (3.6)	-28.1 (13.6)	0.6 (0.6)
27	13.8 (0.3)	62.6 (5.2)	-14.5 (6.5)	10.3 (2.6)	14.5 (0.3)	55.7 (3.7)	-14.2 (4.3)	14.1 (3.3)	22.5 (0.5)	57.7 (3.2)	-16.1 (8.2)	0.3 (0.4)
28	13.4 (0.2)	65.0 (4.2)	-17.2 (5.8)	8.8 (2.5)	14.0 (0.1)	58.9 (3.8)	-15.4 (4.3)	13.3 (3.3)	21.9 (0.2)	63.2 (2.0)	-12.3 (4.1)	0.2 (0.1)
29	13.9 (0.7)	61.4 (6.8)	-16.4 (6.9)	10.9 (2.6)	14.6 (0.5)	55.3 (3.7)	-13.5 (5.0)	12.5 (3.2)	16.0 (3.8)	56.2 (10.5)	-53.2 (21.3)	1.7 (1.0)
30	15.7 (1.0)	59.2 (6.0)	-28.8 (12.0)	10.8 (4.6)	15.6 (1.0)	52.0 (3.7)	-30.5 (15.1)	13.2 (5.6)			-26.8 (22.0)	
31	15.8 (0.9)	60.1 (3.5)	-21.7 (7.1)		15.5 (1.0)	52.6 (3.2)	-28.7 (6.0)	17.2 (5.5)	24.9 (0.3)	51.0 (2.0)	-50.9 (22.3)	0.4 (0.4)
Avg	14.9	61.0	-18.6	14.9	15.2	55.2	-21.3	16.5	23.4	54.3	-29.0	0.6
n	31	31	31	23	31	31	31	29	29	29	31	29
SD	2.0	4.5	7.80	4.90	2.2	3.8	9.10	4.50	1.7	3.4	14.20	0.31
Min	9.9	51.9	-37.2	7.9	10.6	47.2	-43.3	9.1	16.0	48.4	-53.2	0.2
Max	18.2	69.1	-3.0	24.2	18.8	61.7	-7.8	25.7	25.2	63.2	-8.3	1.7

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Table E3. Daily means (SD) of environmental parameters at site IA4B for April, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	15.1 (0.5)	54.8 (9.0)	-17.4 (5.5)	14.1 (2.9)	15.0 (0.7)	48.8 (5.8)	-19.5 (5.1)	17.2 (6.4)	24.8 (0.3)	46.8 (5.3)	-46.1 (21.7)	0.5 (0.5)
2	14.5 (0.3)	58.6 (7.3)	-19.9 (6.5)	12.0 (2.3)	14.9 (0.6)	52.9 (4.8)	-16.4 (4.8)	19.0 (4.6)	25.0 (0.4)	45.8 (4.5)	-18.4 (9.7)	0.5 (0.6)
3	15.0 (1.1)	54.0 (10.7)	-17.6 (7.4)	15.6 (5.0)	15.0 (1.2)	48.6 (8.7)	-16.8 (7.6)	21.4 (6.8)	25.0 (0.5)	45.2 (6.4)	-22.3 (14.9)	0.6 (0.6)
4	16.2 (0.8)	54.7 (7.5)	-26.1 (8.8)	13.1 (3.9)	16.5 (1.1)	48.4 (4.6)	-29.1 (12.4)	17.1 (6.3)	24.7 (0.3)	46.6 (4.9)	-18.3 (11.2)	0.6 (0.6)
5	14.3 (0.8)	64.3 (4.7)	-29.5 (8.4)	8.5 (2.6)	14.9 (0.8)	58.8 (5.0)	-25.4 (7.1)		24.1 (0.1)	52.7 (4.3)	-25.3 (15.4)	0.5 (0.6)
6	13.5 (0.3)	62.5 (5.7)	-22.8 (8.2)	9.9 (2.5)	14.1 (0.4)	58.5 (3.0)	-20.9 (5.7)	14.3 (3.5)	23.8 (0.3)	54.0 (3.1)	-41.3 (14.4)	0.4 (0.4)
7	14.3 (0.7)	59.2 (7.6)	-15.7 (6.1)	12.3 (3.3)	14.5 (0.6)	54.2 (4.9)	-14.4 (5.0)	17.2 (4.4)	23.5 (0.4)	49.7 (5.7)	-27.2 (13.5)	0.6 (0.6)
8	15.1 (0.8)	68.0 (9.2)	-19.4 (10.4)	13.3 (3.3)	15.1 (0.9)	52.5 (5.7)	-17.7 (10.4)	17.9 (4.9)	23.2 (0.5)	50.5 (4.5)	-32.7 (22.6)	0.6 (0.5)
9	16.0 (1.0)	65.2 (9.0)	-15.6 (5.3)	13.8 (3.6)	15.8 (0.9)	50.1 (6.6)	-15.8 (6.8)	20.0 (5.9)	23.5 (0.6)	48.9 (4.7)	-22.2 (12.9)	0.8 (0.7)
10	16.0 (0.5)	54.3 (7.1)	-25.3 (9.4)	15.7 (3.7)	16.7 (0.8)	45.7 (5.4)	-22.0 (8.5)	21.9 (5.8)	23.3 (0.6)	45.8 (5.6)	-29.0 (16.0)	0.8 (0.7)
11	16.2 (0.9)	50.5 (11.5)	-16.2 (11.0)	17.7 (8.6)	17.2 (1.1)	44.3 (8.1)	-23.3 (12.3)	22.2 (8.6)	23.6 (1.4)	45.0 (9.0)	-32.5 (24.5)	0.9 (0.7)
12	13.6 (1.0)	48.7 (6.2)	-5.8 (2.3)		16.6 (0.5)	45.0 (4.9)	-23.7 (8.7)	19.7 (4.3)	23.2 (0.7)	46.5 (5.2)	-20.4 (10.3)	0.8 (0.7)
13	13.8 (0.8)	62.8 (5.2)	-14.4 (6.4)	9.1 (2.3)	16.0 (0.5)	57.1 (6.9)	-19.6 (4.1)	17.4 (3.6)	22.7 (0.2)	55.4 (4.1)	-18.1 (9.0)	0.7 (0.7)
14	16.0 (1.4)	54.2 (11.0)	-25.0 (9.9)	18.7 (6.9)	16.8 (1.3)	52.0 (6.8)	-24.1 (11.8)	22.2 (7.9)	23.6 (1.3)	49.6 (6.9)	-33.5 (18.9)	1.0 (0.7)
15	17.6 (1.4)	46.5 (14.1)	-29.4 (15.1)	22.2 (9.7)	18.2 (1.6)	44.6 (9.2)	-29.1 (14.0)	23.0 (6.7)	24.5 (2.0)	43.8 (9.4)	-40.7 (28.5)	1.0 (0.6)
16	17.9 (1.1)	51.3 (9.6)	-29.1 (13.2)	20.1 (6.8)	18.7 (1.4)	46.4 (5.5)	-30.8 (12.2)	24.7 (5.8)	24.4 (1.7)	47.3 (5.8)	-43.3 (28.2)	1.0 (0.6)
17	18.8 (1.6)	49.7 (9.8)	-33.9 (15.8)	24.2 (9.2)	19.7 (1.8)	45.1 (5.4)	-34.2 (12.8)	25.8 (5.4)	25.7 (2.3)	44.4 (5.5)	-56.3 (25.7)	1.4 (0.7)
18	19.0 (0.4)	61.7 (5.6)	-28.6 (8.2)	22.9 (4.4)	19.3 (0.4)	57.6 (5.8)	-29.6 (6.8)	27.5 (4.4)	24.4 (0.8)	57.0 (3.8)	-44.2 (17.3)	1.3 (0.5)
19	17.8 (0.6)	62.3 (6.3)	-32.6 (12.7)	17.5 (3.3)	18.2 (0.6)	60.3 (6.1)	-27.9 (9.9)	22.9 (5.1)	23.8 (0.6)	57.4 (4.6)	-44.0 (19.6)	0.9 (0.6)
20	15.5 (0.3)	61.1 (5.6)	-29.4 (10.7)	12.9 (3.2)	16.5 (0.2)	56.0 (2.4)	-25.5 (9.2)	14.4 (3.4)	23.0 (0.6)	54.9 (3.2)	-50.7 (22.7)	0.7 (0.5)
21	15.8 (1.1)	50.4 (11.7)	-34.7 (15.6)	14.5 (3.9)	16.7 (0.8)	45.9 (8.2)	-33.6 (16.0)	18.1 (7.1)			-56.2 (28.0)	
22	18.2 (2.0)	44.7 (11.2)	-35.2 (16.3)	25.6 (10.8)	18.9 (2.1)	41.1 (6.9)	-32.1 (13.1)	26.9 (7.3)	26.2 (1.7)	42.8 (8.2)	-49.8 (32.1)	0.6 (0.5)
23	20.2 (1.7)	50.2 (7.0)	-40.9 (12.1)	29.2 (8.2)	20.3 (1.6)	44.5 (5.9)	-24.6 (10.5)	33.9 (8.6)	27.1 (1.9)	46.2 (4.5)	-57.4 (30.7)	0.7 (0.5)
24	22.6 (2.3)	58.0 (9.3)	-30.3 (13.1)	42.5 (20.4)	22.7 (2.6)	51.5 (5.6)	-15.8 (7.0)		28.7 (2.5)	52.8 (5.7)	-56.6 (20.3)	1.4 (0.7)
25	17.9 (1.7)	64.5 (4.7)	-11.4 (4.0)	12.9 (7.6)	18.3 (1.5)	54.6 (3.2)	-7.5 (3.4)		26.0 (0.4)	55.7 (2.2)	-9.6 (7.0)	0.6 (0.6)
26	18.9 (1.5)	69.5 (4.6)	-20.3 (6.7)	28.8 (12.4)	19.1 (1.5)	62.8 (4.9)	-11.8 (6.8)	32.9 (14.3)	26.2 (0.5)	62.4 (3.2)	-33.1 (22.3)	1.1 (0.7)
27	17.5 (1.2)	63.4 (2.9)	-12.2 (6.0)		17.4 (1.2)	56.5 (3.8)	-3.1 (3.1)		24.9 (0.6)	57.8 (4.3)	-24.7 (10.4)	0.7 (0.6)
28	16.3 (0.8)	59.7 (3.3)	-10.1 (4.8)	16.5 (4.7)	16.5 (0.6)	52.8 (2.3)	-4.7 (3.2)	19.8 (4.8)	24.5 (0.6)	53.5 (5.0)	-16.5 (11.7)	1.1 (1.1)
29	17.4 (0.5)	66.6 (4.5)	-14.1 (4.3)	20.0 (3.8)	17.3 (0.4)	57.9 (4.1)	-6.7 (2.9)	18.5 (3.6)	25.1 (0.4)	58.5 (3.7)	-12.7 (8.3)	0.9 (0.8)
30	18.9 (0.5)	66.6 (5.6)	-16.4 (2.0)	24.3 (6.1)	19.0 (0.6)	59.3 (4.7)	-3.9 (2.2)		25.6 (0.5)	60.9 (3.8)	-36.9 (20.0)	1.3 (0.7)
Avg	16.7	57.9	-22.6	18.1	17.2	51.8	-20.3	21.4	24.6	51.0	-34.0	0.8
n	30	30	30	28	30	30	30	25	29	29	30	29
SD	2.1	6.8	8.60	7.30	2.0	5.8	8.90	4.90	1.3	5.5	14.00	0.28
Min	13.5	44.7	-40.9	8.5	14.1	41.1	-34.2	14.3	22.7	42.8	-57.4	0.4
Max	22.6	69.5	-5.8	42.5	22.7	62.8	-3.1	33.9	28.7	62.4	-9.6	1.4

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Table E3. Daily means (SD) of environmental parameters at site IA4B for May, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	17.0 (0.4)	56.8 (5.4)	-10.5 (3.3)		17.4 (0.6)	47.7 (3.4)	-1.2 (1.7)		24.7 (0.4)	52.5 (3.7)	-27.4 (11.3)	0.9 (0.7)
2	17.5 (0.8)	46.6 (6.9)	-12.5 (2.1)		18.3 (0.5)	40.8 (5.0)	-0.8 (1.3)		24.9 (1.1)	45.2 (8.3)	-38.7 (25.2)	1.1 (0.7)
3	18.5 (1.1)	41.2 (6.6)	-13.6 (6.1)	26.6 (10.1)	19.0 (1.2)	36.1 (5.8)	-6.5 (4.9)	32.4 (13.1)	25.8 (2.0)	40.5 (8.2)	-41.1 (26.9)	1.3 (0.7)
4	19.1 (0.7)	46.6 (5.9)	-16.6 (6.8)	29.6 (10.2)	19.3 (0.8)	41.5 (4.4)	-7.3 (4.8)	31.9 (9.5)	25.3 (1.1)	45.6 (5.0)	-36.5 (21.0)	1.3 (0.7)
5	19.9 (1.0)	52.7 (5.2)	-23.0 (8.2)	37.1 (15.3)	19.9 (1.1)	48.4 (4.3)	-10.9 (6.3)	34.7 (8.7)	26.1 (1.6)	50.8 (5.1)	-46.7 (25.8)	1.5 (0.7)
6	20.2 (0.3)	60.1 (5.4)	-19.8 (4.8)	35.0 (12.7)	20.3 (0.6)	54.4 (3.8)	-8.2 (5.0)	34.1 (7.7)	25.4 (1.0)	57.5 (3.9)	-50.3 (22.2)	1.6 (0.5)
7	19.5 (0.5)	60.7 (4.0)	-16.9 (2.9)	27.9 (7.1)	19.6 (0.4)	54.4 (2.8)	-6.1 (4.0)	33.4 (8.7)	25.0 (0.6)	57.9 (2.5)	-38.8 (20.5)	1.5 (0.6)
8	19.8 (1.0)	60.9 (7.1)	-17.0 (8.6)		19.5 (1.3)	55.4 (5.3)	-5.3 (7.0)		25.7 (1.7)	58.3 (5.7)	-44.6 (22.8)	1.4 (0.7)
9	17.4 (0.5)	55.1 (4.1)	-11.2 (2.4)		16.2 (1.1)	55.9 (7.9)	1.1 (3.4)		24.4 (0.6)	52.8 (4.5)	-35.3 (15.2)	1.0 (0.6)
10	17.2 (0.5)	53.2 (5.2)	-10.2 (4.0)	17.7 (5.5)	17.1 (0.6)	48.2 (5.2)	-3.1 (1.6)		24.6 (0.8)	49.8 (5.9)	-23.3 (15.3)	1.1 (0.7)
11	17.7 (1.1)	46.3 (7.7)	-12.6 (6.1)	23.0 (8.0)	17.7 (1.2)	41.1 (6.3)	-3.6 (1.8)	22.9 (5.3)	25.2 (1.6)	45.9 (9.4)	-29.7 (24.6)	1.3 (0.8)
12	19.1 (1.1)	53.6 (6.5)	-25.1 (12.8)	28.5 (11.6)	19.2 (1.3)	48.0 (6.0)	-13.2 (8.5)	23.7 (3.9)	25.3 (1.1)	52.4 (5.4)	-34.3 (23.6)	1.4 (0.7)
13	20.1 (1.0)	65.3 (9.0)	-24.1 (7.8)	32.8 (13.5)	20.7 (1.3)	58.3 (5.9)	-16.6 (5.9)	25.2 (2.8)			-41.6 (21.4)	
14	18.4 (0.9)	53.6 (3.3)	-15.1 (5.1)		19.4 (1.2)	48.5 (2.9)	-16.1 (4.2)	22.9 (3.8)	26.5 (1.1)	50.7 (4.6)	-35.7 (15.7)	1.0 (0.7)
15	18.9 (0.4)	64.9 (5.1)	-20.1 (4.4)	23.4 (3.4)	20.1 (0.3)	59.3 (4.2)	-19.8 (3.0)	25.0 (1.8)	26.5 (0.2)	58.8 (2.9)	-24.5 (12.6)	1.0 (0.7)
16	15.9 (0.9)	50.7 (5.9)	-9.6 (4.7)		17.7 (0.6)	47.8 (4.3)	-17.8 (6.0)		25.8 (0.6)	47.2 (5.9)	-36.9 (18.5)	0.6 (0.5)
17	16.6 (0.6)	51.9 (3.5)	-10.0 (4.2)	17.1 (3.4)	17.3 (0.6)	49.0 (3.9)	-12.0 (4.6)	19.7 (3.5)	25.8 (0.3)	47.6 (2.8)	-13.6 (9.9)	0.7 (0.6)
18	18.9 (2.0)	50.2 (5.9)	-25.4 (10.0)	33.8 (20.1)	19.7 (2.3)	47.3 (3.7)	-21.4 (5.7)	23.4 (2.8)	26.9 (1.4)	45.9 (4.4)	-37.4 (29.1)	1.0 (0.7)
19	22.2 (2.5)	50.5 (5.4)	-29.7 (10.2)	48.5 (18.8)	23.1 (2.5)	49.4 (3.3)	-22.8 (4.3)	24.6 (1.5)	28.8 (2.9)	47.9 (4.3)	-57.1 (28.9)	1.2 (0.6)
20	23.2 (1.6)	47.2 (7.3)	-34.1 (9.2)	47.2 (13.2)	23.7 (1.3)	44.3 (6.1)	-22.3 (5.8)		28.1 (2.4)	45.9 (6.3)	-48.1 (22.5)	1.3 (0.6)
21	22.6 (1.2)	48.4 (5.3)	-29.3 (8.6)	42.6 (12.0)	22.6 (1.5)	45.1 (4.0)	-14.4 (9.7)	49.2 (11.1)	27.7 (2.0)	46.5 (5.1)	-26.8 (15.2)	1.2 (0.7)
22	22.5 (1.9)	52.7 (5.1)	-28.7 (8.9)	45.3 (12.0)	22.4 (1.9)	48.8 (4.0)	-11.6 (4.6)	47.2 (7.8)	27.4 (2.1)	51.5 (4.1)	-18.6 (13.4)	1.3 (0.7)
23	23.0 (1.3)	59.9 (5.0)	-31.8 (7.2)	46.7 (9.6)	22.8 (1.4)	55.1 (4.1)	-12.8 (5.2)	45.9 (7.0)	27.2 (1.7)	57.7 (3.8)	-22.6 (13.2)	1.4 (0.7)
24	22.9 (1.6)	53.3 (11.3)	-31.2 (5.6)	46.3 (9.7)	22.7 (1.6)	50.3 (9.4)	-12.5 (3.7)	46.5 (6.2)	27.1 (1.8)	52.5 (9.0)	-19.8 (12.1)	1.3 (0.7)
25	21.1 (0.7)	57.5 (6.1)	-26.4 (7.3)	35.4 (8.7)	20.7 (0.8)	53.5 (6.3)	-12.3 (6.3)	45.7 (9.5)	25.8 (0.3)	55.5 (5.5)	-4.6 (9.8)	
26	20.3 (0.7)	67.7 (3.9)	-24.9 (8.0)	37.5 (10.9)	20.1 (0.8)	62.8 (3.5)	-10.9 (5.0)	44.2 (7.5)	25.7 (0.3)	63.9 (2.4)	-10.3 (9.9)	0.8 (0.7)
27	19.0 (0.4)	65.9 (3.2)	-18.7 (3.2)	27.2 (3.8)	19.3 (0.4)	61.4 (2.6)	-5.6 (2.0)		25.3 (0.2)	61.7 (2.0)	-12.6 (7.6)	0.5 (0.5)
28	18.7 (1.1)	61.5 (2.8)	-18.0 (6.7)	29.4 (9.2)	19.1 (0.9)	56.0 (2.5)	-7.9 (9.8)		25.0 (0.5)	58.1 (1.6)	-14.5 (11.0)	0.7 (0.7)
29	20.4 (1.3)	48.1 (11.7)	-26.1 (11.9)	40.0 (14.4)	20.9 (1.4)	46.2 (9.9)	-15.8 (10.2)	41.9 (12.1)	25.9 (1.5)	47.0 (11.1)	-20.0 (14.5)	1.1 (0.7)
30	21.2 (1.5)	43.5 (11.4)	-25.3 (11.1)	40.8 (13.3)	21.5 (1.5)	40.7 (8.8)	-9.6 (6.3)	47.0 (13.6)	26.4 (1.8)	42.6 (10.0)	-25.1 (19.5)	1.1 (0.7)
31	21.3 (1.9)	42.8 (8.0)	-28.0 (13.6)	43.4 (14.4)	21.2 (1.7)	40.1 (6.9)	-11.2 (7.4)	50.4 (12.0)	26.2 (1.9)	43.0 (7.2)	-25.4 (15.7)	1.3 (0.7)
Avg	19.7	53.9	-20.8	34.5	19.9	49.5	-10.9	35.1	26.0	51.1	-30.4	1.1
n	31	31	31	25	31	31	31	22	30	30	31	29
SD	2.0	7.1	7.30	9.10	1.9	6.6	6.20	10.30	1.1	6.0	12.70	0.27
Min	15.9	41.2	-34.1	17.1	16.2	36.1	-22.8	19.7	24.4	40.5	-57.1	0.5
Max	23.2	67.7	-9.6	48.5	23.7	62.8	1.1	50.4	28.8	63.9	-4.6	1.6

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Table E3. Daily means (SD) of environmental parameters at site IA4B for June, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	22.4 (0.4)	66.8 (3.7)	-35.0 (3.4)	53.0 (4.8)	22.4 (0.5)	60.7 (2.8)	-13.5 (2.5)	55.8 (4.0)	25.6 (0.7)	63.5 (2.8)	-30.4 (11.3)	1.6 (0.5)
2	19.6 (0.9)	65.4 (3.2)	-17.7 (5.2)	29.8 (4.5)	19.5 (0.8)	60.3 (1.8)	-4.8 (3.7)		25.1 (0.2)	61.1 (1.6)	-4.9 (8.2)	
3	19.3 (1.0)	50.6 (8.7)	-22.8 (10.6)	36.1 (12.9)	19.6 (1.2)	48.6 (7.0)	-10.8 (10.3)		25.1 (0.6)	50.0 (7.5)	-12.5 (11.4)	0.9 (0.8)
4	20.2 (1.1)	49.1 (8.6)	-23.4 (10.7)	40.0 (13.8)	20.5 (1.1)	45.0 (7.2)	-9.1 (6.7)	44.0 (13.2)	25.5 (1.3)	48.4 (8.1)	-19.7 (15.0)	1.3 (0.9)
5	21.4 (1.9)	49.8 (7.4)	-26.9 (13.3)	40.2 (15.7)	21.6 (1.9)	45.1 (5.9)	-10.2 (5.2)	47.6 (13.0)	27.0 (3.0)	49.6 (7.0)	-24.5 (12.7)	1.5 (0.6)
6	21.5 (1.1)	62.8 (8.5)	-28.7 (9.7)	41.9 (11.2)	21.5 (1.3)	57.6 (6.6)	-12.3 (8.1)	47.3 (9.0)	26.0 (1.4)	60.4 (5.9)	-18.1 (12.0)	1.6 (0.5)
7	22.7 (1.0)	69.6 (4.9)	-33.1 (2.9)	50.6 (4.6)	22.7 (1.1)	63.5 (4.9)	-15.3 (1.8)	54.4 (2.6)	27.2 (2.1)	65.7 (4.6)	-24.9 (6.2)	1.9 (0.1)
8	21.0 (0.9)	68.2 (5.2)	-21.4 (7.4)	38.5 (9.6)	21.0 (0.8)	62.9 (4.1)	-4.3 (5.2)		25.2 (0.6)	64.6 (4.5)	-27.5 (14.0)	1.4 (0.6)
9	19.5 (0.6)	61.9 (3.2)	-20.6 (12.7)	33.8 (10.5)	19.5 (0.5)	56.4 (1.9)	-5.8 (4.3)	35.1 (9.3)	24.7 (0.5)	59.6 (2.6)	-9.8 (8.1)	1.0 (0.8)
10	20.9 (1.3)	63.0 (2.8)	-23.3 (11.0)	40.3 (13.7)	20.9 (1.1)	58.1 (2.6)	-10.0 (5.0)	43.8 (12.4)			-9.7 (5.2)	
11	21.4 (1.1)	58.9 (5.9)	-25.4 (7.7)	45.5 (11.8)	21.6 (1.1)	55.1 (5.3)	-11.9 (4.7)	47.2 (9.9)			-16.7 (12.7)	
12												
13												
14												
15												
16												
17	23.7 (2.5)	72.1 (4.3)	-17.9 (7.5)	53.0 (6.2)	23.8 (2.5)	65.5 (4.0)	-13.0 (5.0)	49.7 (8.4)	29.4 (2.3)	64.4 (3.7)	-28.2 (15.4)	2.2 (1.1)
18	25.1 (1.9)	75.7 (2.5)	-23.6 (2.2)	54.3 (3.7)	25.2 (1.8)	68.4 (2.2)	-16.5 (3.6)	52.5 (2.8)	29.3 (2.0)	69.4 (2.7)	-29.2 (12.2)	2.5 (0.8)
19	25.0 (1.1)	73.0 (4.4)	-21.0 (1.9)	57.9 (1.7)	25.3 (1.2)	65.6 (3.9)	-10.5 (3.0)	52.4 (2.3)	29.0 (1.1)	66.3 (4.1)	-31.2 (10.3)	2.8 (0.6)
20	24.7 (1.6)	65.0 (10.4)	-18.5 (3.4)	54.5 (6.1)	24.8 (1.8)	59.2 (9.2)	-8.6 (1.8)	51.2 (3.8)	29.8 (2.1)	59.0 (8.5)	-28.4 (10.0)	2.8 (0.8)
21	26.2 (1.5)	75.8 (2.3)	-22.7 (1.8)	54.7 (2.0)	26.4 (1.5)	67.6 (2.2)	-12.2 (3.0)	50.6 (1.5)	29.9 (2.3)	70.7 (2.3)	-30.0 (7.0)	3.1 (0.5)
22	27.6 (1.6)	68.9 (9.6)	-10.1 (7.7)	64.6 (5.7)	27.9 (1.7)	62.3 (7.5)	-6.4 (2.6)	56.0 (3.8)	31.8 (3.2)	63.9 (10.1)	-33.8 (1.7)	3.3 (0.1)
23	27.0 (2.3)	76.5 (4.1)	-6.4 (2.8)	68.1 (2.9)	27.4 (2.1)	67.3 (2.7)	-5.8 (2.4)		31.0 (3.0)	67.7 (4.7)	-29.3 (10.0)	2.9 (0.6)
24	25.0 (1.8)	76.8 (3.3)	-7.8 (3.1)	65.0 (4.0)	25.4 (1.8)	67.4 (2.0)	-3.9 (0.6)	61.8 (0.9)	29.8 (2.0)	67.1 (3.7)	-26.9 (11.7)	2.7 (0.9)
25	27.0 (1.1)	76.9 (5.4)	-14.2 (3.9)	62.5 (3.7)	27.5 (1.3)	65.5 (4.4)	-6.1 (2.8)	60.2 (2.5)	29.6 (2.0)	73.4 (2.6)	-34.8 (3.1)	3.3 (0.1)
26	25.6 (0.7)	71.7 (4.9)	-19.5 (1.4)	62.0 (1.2)	25.7 (0.8)	63.8 (7.0)	-12.1 (1.6)	63.5 (4.0)	28.1 (1.2)	70.6 (4.2)	-26.1 (8.2)	3.0 (0.6)
27	25.3 (1.2)	72.4 (2.9)	-20.6 (3.0)	63.0 (4.5)	24.9 (1.1)	68.4 (1.8)	-11.9 (4.7)	67.5 (8.0)	28.2 (1.6)	71.6 (2.8)	-37.2 (19.3)	2.3 (0.5)
28	22.2 (0.8)	58.8 (7.6)	-13.2 (7.0)	53.7 (13.8)	22.5 (0.6)	52.6 (6.2)	-3.3 (4.4)		27.4 (1.5)	56.0 (8.0)	-41.1 (24.1)	1.6 (0.7)
29	21.9 (1.2)	57.8 (6.5)	-13.9 (7.9)	56.4 (12.1)	22.3 (1.0)	51.9 (4.4)	-6.1 (5.4)		26.7 (0.7)	59.6 (1.6)	-31.9 (19.0)	1.4 (0.6)
30	21.0 (0.5)	63.9 (2.5)	-10.1 (5.6)	45.6 (11.2)	21.4 (0.3)	56.7 (2.2)	-4.4 (5.1)		25.9 (0.5)	63.4 (1.3)	-21.7 (9.6)	1.3 (0.6)
Avg	23.1	66.1	-19.9	50.6	23.2	59.8	-9.2	52.3	27.7	62.9	-25.1	2.1
n	25	25	25	25	25	25	25	18	23	23	25	22
SD	2.5	8.3	7.10	10.60	2.6	6.9	3.70	7.70	2.1	6.8	8.90	0.75
Min	19.3	49.1	-35.0	29.8	19.5	45.0	-16.5	35.1	24.7	48.4	-41.1	0.9
Max	27.6	76.9	-6.4	68.1	27.9	68.4	-3.3	67.5	31.8	73.4	-4.9	3.3

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Table E3. Daily means (SD) of environmental parameters at site IA4B for July, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	21.4 (0.6)	67.9 (2.0)	-12.4 (5.6)	47.8 (11.7)	21.6 (0.9)	60.3 (2.6)	-6.7 (4.0)	52.3 (15.0)	25.9 (0.5)	65.9 (0.8)	-20.3 (8.4)	1.6 (0.6)
2	22.0 (1.4)	65.3 (4.0)	-14.9 (6.3)	52.5 (13.8)	22.6 (1.5)	56.5 (4.3)	-8.3 (4.5)	58.1 (16.4)	25.7 (0.7)	66.6 (1.7)	-23.6 (10.6)	2.2 (1.0)
3	22.9 (1.1)	70.8 (4.6)	-16.0 (5.4)	54.0 (12.6)	23.4 (1.1)	61.2 (5.1)	-8.4 (3.0)	59.9 (13.1)	26.0 (0.9)	70.3 (3.6)	-28.2 (10.3)	2.6 (0.9)
4	21.4 (0.3)	76.4 (1.9)	-11.7 (3.8)	41.8 (7.0)	21.4 (0.5)	68.2 (1.4)	-7.8 (3.8)	47.2 (9.1)	25.5 (0.2)	71.0 (1.3)	-13.7 (6.5)	1.8 (0.5)
5	22.0 (1.4)	68.1 (5.4)	-14.4 (6.5)	53.2 (14.3)	22.4 (1.5)	58.9 (6.0)	-8.1 (4.5)	65.3 (10.0)	25.8 (0.7)	68.1 (3.4)	-25.2 (10.3)	2.4 (1.0)
6	23.1 (1.4)	66.5 (6.5)	-15.1 (5.3)	56.4 (12.0)	23.0 (1.1)	60.8 (4.2)	-8.0 (3.5)	60.8 (13.5)	26.3 (1.3)	67.6 (4.6)	-28.3 (10.6)	2.6 (0.9)
7	23.0 (1.0)	72.2 (4.2)	-14.6 (4.8)	54.1 (10.4)	23.0 (0.8)	65.2 (3.5)	-8.2 (3.7)	57.7 (11.8)	26.1 (1.4)	70.5 (3.2)	-26.0 (8.8)	2.5 (0.7)
8	22.0 (0.6)	73.3 (2.4)	-14.0 (5.0)	49.8 (10.9)	22.3 (0.7)	65.0 (3.0)	-8.6 (4.0)	55.3 (12.7)	25.5 (0.4)	71.5 (2.2)	-20.8 (9.5)	2.5 (0.8)
9	21.4 (1.0)	75.2 (3.8)	-14.0 (5.3)	47.9 (11.7)	21.6 (1.0)	66.5 (3.3)	-8.4 (4.3)	52.5 (15.6)	25.1 (0.4)	72.8 (4.9)	-19.6 (11.9)	2.5 (1.1)
10	24.1 (1.5)	78.3 (2.7)	-18.8 (2.8)		24.3 (1.8)	68.5 (4.0)	-13.0 (4.9)	66.0 (8.9)	26.6 (2.0)	78.2 (2.2)	-25.7 (8.2)	3.3 (0.5)
11	23.9 (0.9)	65.7 (7.8)	-20.1 (2.5)		24.4 (1.2)	58.3 (8.1)	-10.8 (1.9)	66.8 (6.1)	26.5 (1.0)	69.0 (5.3)	-26.4 (6.1)	3.1 (0.7)
12	22.7 (0.7)	71.0 (3.6)	-15.3 (5.1)		22.6 (0.7)	64.9 (2.1)	-8.6 (3.4)	60.5 (12.1)	25.5 (0.4)	71.9 (2.7)	-20.9 (5.9)	2.6 (0.8)
13	23.2 (1.5)	68.6 (5.4)	-15.2 (5.6)		23.0 (1.5)	63.5 (4.1)	-8.3 (3.5)	57.6 (11.7)	26.3 (1.5)	70.6 (3.6)	-23.5 (7.2)	2.8 (0.9)
14	23.7 (0.9)	77.1 (1.6)	-17.9 (1.6)		23.6 (1.1)	70.5 (1.6)	-13.9 (4.8)	58.7 (5.6)	26.1 (0.8)	76.3 (2.7)	-25.1 (6.5)	3.1 (0.6)
15												
16												
17	19.6 (0.4)	63.8 (2.8)	-7.7 (11.5)		20.0 (0.2)	54.2 (2.4)	2.0 (2.0)		24.5 (0.3)	62.0 (1.9)	-22.6 (13.0)	1.2 (0.6)
18	19.7 (0.6)	64.9 (3.9)	-5.1 (5.8)		19.9 (0.4)	57.0 (2.5)	-2.9 (3.3)		25.1 (0.6)	63.6 (1.9)	-15.5 (7.8)	1.3 (0.7)
19	20.2 (0.9)	60.4 (4.1)	-8.4 (6.4)		20.2 (1.1)	53.8 (3.7)	-4.8 (4.3)		25.7 (1.0)	62.3 (2.1)	-13.6 (7.1)	1.6 (0.7)
20	21.3 (1.2)	63.8 (2.9)	-11.0 (6.1)		21.2 (1.4)	55.9 (4.1)	-8.2 (4.7)	50.9 (13.4)	25.2 (0.3)	66.4 (2.7)	-16.3 (8.1)	2.3 (1.1)
21	20.7 (0.5)	72.2 (2.7)	-10.6 (7.1)		20.7 (0.6)	65.1 (2.3)	-7.0 (6.5)	49.6 (9.8)			-9.0 (7.7)	
22	21.1 (1.3)	68.0 (6.1)	-12.4 (6.8)		21.4 (1.4)	59.7 (5.6)	-6.8 (4.2)	58.0 (9.2)	23.6 (2.9)	73.6 (8.3)	-4.1 (2.0)	0.2 (0.0)
23	22.7 (1.1)	68.7 (4.9)	-14.2 (5.4)		22.7 (1.4)	60.0 (5.4)	-8.4 (2.8)	57.2 (8.5)	24.8 (2.3)	71.5 (4.9)	-4.1 (3.1)	0.2 (0.2)
24	24.0 (2.0)	71.3 (4.0)	-14.4 (5.6)		23.9 (2.1)	62.8 (4.2)	-9.0 (3.6)	57.1 (9.1)	25.6 (2.4)	76.0 (2.7)	-17.8 (16.8)	1.3 (1.4)
25	22.3 (0.8)	64.8 (5.0)	-13.7 (7.0)		22.3 (1.0)	56.9 (4.7)	-5.5 (3.4)	59.1 (11.9)	24.8 (1.6)	68.8 (4.3)	-11.0 (7.6)	0.2 (0.0)
26	22.2 (1.3)	66.2 (5.3)	-14.0 (6.6)		22.1 (1.1)	59.4 (4.6)	-6.0 (4.1)	59.3 (9.9)	24.6 (2.3)	69.6 (5.2)	-7.4 (4.2)	0.2 (0.0)
27	23.4 (1.7)	71.0 (4.3)	-15.6 (6.1)		22.9 (1.6)	64.3 (3.7)	-7.2 (3.3)	57.3 (11.7)	25.9 (2.6)	73.0 (2.9)	-23.2 (18.3)	1.4 (1.2)
28	22.7 (0.8)	65.7 (9.1)	-18.3 (6.5)		22.2 (0.6)	59.5 (6.1)	-7.6 (3.6)	56.8 (9.7)	27.6 (0.7)	60.3 (5.4)	-17.1 (8.6)	1.4 (0.7)
29	21.2 (1.1)	61.1 (5.4)	-11.5 (6.6)		20.9 (0.7)	57.4 (2.6)	-6.7 (4.6)	55.0 (8.9)	27.6 (1.3)	56.9 (3.7)	-14.7 (8.2)	1.3 (0.7)
30	21.3 (0.4)	66.8 (5.5)	-10.6 (5.8)		21.1 (0.2)	62.6 (2.6)	-4.1 (2.5)	49.4 (7.6)	27.6 (0.6)	60.1 (3.2)	-17.1 (9.4)	1.2 (0.7)
31	20.9 (1.2)	62.3 (6.3)	-10.2 (6.8)		21.1 (0.8)	57.6 (2.9)	-5.5 (4.4)		27.6 (1.1)	57.5 (4.3)	-17.9 (9.5)	1.5 (0.9)
Avg	22.1	68.5	-13.5	50.8	22.1	61.2	-7.4	57.1	25.8	68.3	-18.6	1.8
n	29	29	29	9	29	29	29	25	28	28	29	28
SD	1.2	4.6	3.30	4.20	1.2	4.3	2.80	4.90	1.0	5.5	6.70	0.91
Min	19.6	60.4	-20.1	41.8	19.9	53.8	-13.9	47.2	23.6	56.9	-28.3	0.2
Max	24.1	78.3	-5.1	56.4	24.4	70.5	2.0	66.8	27.6	78.2	-4.1	3.3

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Table E3. Daily means (SD) of environmental parameters at site IA4B for August, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	21.1 (0.5)	63.4 (4.8)	-11.0 (6.0)		21.4 (0.5)	56.3 (3.7)	-7.0 (5.1)	59.7 (13.1)	27.6 (0.6)	58.7 (3.6)	-21.1 (9.3)	1.3 (0.6)
2	21.5 (2.0)	62.4 (4.4)	-10.0 (7.3)		22.0 (2.0)	55.4 (3.2)	-10.1 (7.2)	58.7 (14.4)	27.8 (1.2)	60.2 (1.9)	-23.9 (13.4)	1.8 (1.0)
3	23.7 (1.4)	70.0 (3.3)	-16.7 (4.0)		23.5 (1.1)	64.7 (3.3)	-11.5 (2.6)	67.5 (3.4)	28.8 (1.2)	66.4 (2.4)	-32.2 (9.4)	2.3 (0.8)
4	23.2 (1.2)	70.6 (5.5)	-16.3 (4.8)	57.4 (9.3)	22.8 (0.9)	67.3 (3.1)	-10.8 (5.2)	61.0 (7.9)	28.3 (0.8)	65.4 (3.9)	-22.2 (10.3)	2.0 (1.0)
5	21.0 (0.9)	64.4 (4.6)	-11.9 (6.2)	50.0 (14.1)	21.0 (0.9)	58.3 (4.0)	-7.4 (5.6)		28.0 (1.1)	57.7 (4.0)	-15.2 (7.9)	1.5 (0.8)
6	21.7 (1.2)	66.4 (4.9)	-15.0 (6.7)	53.5 (12.7)	21.5 (1.1)	61.5 (3.4)	-9.9 (5.8)	60.4 (12.0)	27.5 (0.4)	62.8 (2.9)	-19.0 (9.0)	2.1 (1.1)
7	23.3 (1.5)	79.1 (3.5)	-19.5 (4.1)	56.4 (6.6)	22.9 (1.4)	72.4 (3.7)	-13.8 (4.0)	64.5 (9.0)	27.9 (1.0)	73.9 (5.0)	-24.6 (9.7)	2.7 (0.9)
8	26.3 (1.2)	79.0 (3.0)	-18.2 (2.6)		26.0 (1.3)	73.3 (2.3)	-15.3 (1.7)	71.0 (1.2)	29.9 (1.9)	77.3 (2.5)	-33.9 (3.2)	3.3 (0.1)
9	24.8 (1.2)	77.0 (1.9)	-17.4 (3.9)		24.5 (1.2)	72.0 (1.5)	-12.4 (3.3)	68.6 (8.7)	28.2 (0.7)	74.7 (2.4)	-32.3 (11.0)	2.9 (0.7)
10	23.1 (1.2)	76.8 (2.6)	-13.9 (4.0)		22.9 (1.3)	69.4 (3.5)	-9.8 (2.9)	67.9 (9.9)	27.7 (1.0)	72.7 (2.4)	-27.9 (8.2)	2.6 (0.8)
11	22.8 (1.1)	71.4 (5.2)	-13.9 (4.6)		23.2 (1.5)	62.7 (5.5)	-10.6 (3.3)	70.2 (7.5)	27.4 (1.1)	69.4 (3.0)	-26.3 (7.1)	2.7 (0.9)
12	23.7 (1.5)	75.6 (1.9)	-14.3 (4.4)		23.8 (1.5)	66.4 (2.1)	-13.8 (2.3)	72.0 (3.1)	27.8 (1.4)	72.4 (2.7)	-28.4 (7.0)	2.9 (0.8)
13	24.6 (1.1)	76.0 (4.6)	-16.2 (1.7)		24.4 (1.2)	68.9 (3.2)	-13.7 (0.7)	73.3 (0.6)	28.1 (2.0)	73.9 (4.3)	-31.3 (5.7)	3.2 (0.4)
14	24.8 (1.2)	76.9 (3.8)	-16.9 (1.0)	63.6 (1.7)	24.6 (1.0)	70.8 (3.1)	-14.3 (1.1)	73.0 (0.8)	28.0 (2.2)	74.9 (4.1)	-32.9 (2.4)	3.4 (0.1)
15	24.0 (1.0)	76.0 (1.9)	-16.0 (3.5)	59.9 (5.4)	23.7 (1.0)	69.2 (2.3)	-15.1 (3.2)	70.5 (3.7)	27.1 (1.5)	74.3 (2.1)	-30.1 (5.2)	3.2 (0.5)
16	23.8 (0.6)	77.5 (3.3)	-15.7 (2.3)		23.6 (0.7)	70.7 (4.4)	-12.7 (3.5)	73.4 (5.4)	26.9 (1.3)	75.6 (3.2)	-36.0 (7.9)	3.1 (0.4)
17	22.6 (0.7)	77.0 (2.7)	-12.6 (3.3)		22.5 (0.6)	70.7 (2.0)	-10.6 (2.9)	68.7 (8.1)	25.9 (0.8)	74.9 (2.8)	-28.3 (6.2)	3.0 (0.7)
18	21.6 (1.1)	68.2 (6.3)	-8.5 (4.7)	51.5 (14.1)	22.0 (1.2)	59.8 (6.1)	-8.0 (4.7)	67.6 (11.5)	26.4 (1.3)	65.1 (4.0)	-25.2 (9.2)	2.5 (1.0)
19	21.8 (0.7)	78.7 (3.0)	-9.4 (4.7)	52.7 (11.9)	21.8 (0.5)	69.8 (2.9)	-10.4 (5.7)	64.3 (11.8)	25.7 (0.4)	73.9 (3.7)	-26.0 (8.1)	2.8 (0.7)
20	20.6 (0.4)	71.6 (3.2)	-3.6 (3.4)		20.8 (0.3)	62.6 (2.8)	-1.7 (4.5)		26.0 (0.5)	68.3 (1.7)	-34.1 (13.6)	1.8 (0.4)
21	20.0 (0.3)	69.7 (3.4)	-3.9 (3.6)		20.3 (0.2)	61.5 (2.1)	0.0 (3.7)		25.8 (0.5)	66.2 (3.2)	-26.2 (9.1)	1.5 (0.5)
22	19.9 (1.3)	63.3 (5.1)	-5.3 (5.3)	47.4 (15.9)	20.2 (0.8)	56.9 (3.7)	-5.3 (6.0)		26.2 (0.8)	61.5 (2.8)	-17.1 (7.8)	1.7 (0.8)
23	20.8 (1.5)	63.6 (4.6)	-7.2 (4.8)	48.2 (13.7)	20.6 (1.2)	57.6 (3.4)	-6.4 (5.9)		26.3 (0.8)	61.8 (2.4)	-19.5 (9.1)	2.1 (1.1)
24	21.6 (1.7)	68.3 (4.5)	-10.7 (5.5)	51.4 (12.0)	21.6 (1.4)	61.5 (3.8)	-9.9 (7.2)	58.9 (16.3)	26.8 (1.3)	64.6 (3.3)	-22.7 (9.3)	2.5 (1.1)
25	23.1 (1.7)	75.9 (1.7)	-10.2 (2.5)	57.0 (9.5)	22.6 (1.3)	69.0 (2.2)	-9.7 (4.2)	66.0 (12.6)	27.2 (1.3)	72.8 (3.6)	-26.7 (6.1)	3.0 (0.7)
26	22.9 (0.9)	80.2 (1.2)	-12.5 (0.9)	62.6 (2.3)	22.6 (0.6)	73.6 (1.4)	-12.1 (2.8)	67.8 (9.0)	25.9 (0.6)	78.3 (2.2)	-24.1 (5.5)	3.4 (0.5)
27	20.0 (0.2)	78.7 (2.1)	-9.4 (3.5)	52.1 (8.4)	20.5 (0.2)	69.7 (1.4)	-5.8 (2.5)		25.8 (0.2)	70.8 (1.5)	-15.5 (5.3)	1.9 (0.4)
28	20.5 (0.9)	75.4 (2.3)	-9.3 (3.4)	57.3 (9.0)	20.7 (0.6)	65.6 (2.9)	-6.5 (4.0)				-11.7 (7.8)	
29	18.8 (0.6)	65.8 (3.6)	-3.3 (4.6)		19.7 (0.4)	56.4 (4.6)	-1.4 (3.0)		21.8 (1.1)	69.3 (7.2)	-7.3 (5.2)	0.2 (0.0)
30	17.8 (0.6)	64.8 (2.2)	-0.3 (4.2)		18.6 (0.6)	55.4 (4.1)	-1.5 (3.5)		20.5 (1.4)	66.5 (4.1)	-2.8 (0.9)	0.2 (0.0)
31	17.9 (1.1)	62.6 (2.5)	-1.8 (5.6)		18.8 (0.8)	52.2 (3.8)	-3.0 (4.8)		23.6 (3.9)	63.2 (10.0)	-3.9 (5.0)	0.4 (0.5)
Avg	22.0	71.8	-11.3	54.7	22.1	64.6	-9.0	66.9	26.7	68.9	-23.5	2.3
n	31	31	31	15	31	31	31	21	30	30	31	30
SD	2.0	5.9	5.10	4.80	1.7	6.2	4.20	4.70	1.9	5.8	8.50	0.89
Min	17.8	62.4	-19.5	47.4	18.6	52.2	-15.3	58.7	20.5	57.7	-36.0	0.2
Max	26.3	80.2	-0.3	63.6	26.0	73.6	0.0	73.4	29.9	78.3	-2.8	3.4

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Table E3. Daily means (SD) of environmental parameters at site IA4B for September, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,	Temp., °C	RH, %	ΔP, Pa	Airflow,
1	18.5 (1.0)	63.6 (1.9)	-4.8 (5.6)		19.2 (0.7)	53.1 (2.9)	-3.9 (6.7)		26.6 (0.9)	55.9 (3.9)	-7.4 (7.7)	0.9 (0.8)
2	19.1 (1.2)	65.6 (2.3)	-6.8 (5.4)		19.6 (0.8)	54.7 (2.7)	-5.6 (6.3)		26.9 (1.1)	56.0 (3.8)	-9.6 (8.2)	1.3 (0.8)
3	19.5 (1.2)	66.3 (2.4)	-6.8 (5.1)		19.9 (0.8)	54.7 (3.6)	-5.1 (6.7)		27.1 (1.0)	55.4 (3.8)	-9.3 (7.5)	1.4 (0.9)
4	20.2 (1.4)	68.2 (2.7)	-7.7 (5.5)	50.0 (13.1)	20.8 (1.2)	56.0 (3.5)	-7.6 (6.2)		27.2 (0.9)	57.5 (2.3)	-12.2 (8.6)	1.6 (1.2)
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
Avg	19.3	66.0	-6.5		19.9	54.6	-5.6		27.0	56.2	-9.6	1.3
n	4	4	4	1	4	4	4	0	4	4	4	4
SD	0.6	1.6	1.10		0.6	1.1	1.40		0.2	0.8	1.70	0.29
Min	18.5	63.6	-7.7		19.2	53.1	-7.6		26.6	55.4	-12.2	0.9
Max	20.2	68.2	-4.8		20.8	56.0	-3.9		27.2	57.5	-7.4	1.6

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Table E4. PM concentrations.

Table E4. Daily means (SD) of PM concentration at site IA4B for July, 2007.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20			114.0 (47.3)									
21		109.0 (67.2)	107.0 (43.8)	122.0 (89.2)								
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
Avg			110.0									
n	0	1	2	1	0	0	0	0	0	0	0	0
SD			3.20									
Min			107.0									
Max			114.0									

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Table E4. Daily means (SD) of PM concentration at site IA4B for August, 2007.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1												
2												
3												
4												
5												
6												
7												
8												
9												
10		84.5 (56.3)										
11	45.2 (10.2)											
12	30.2 (10.3)	78.2 (61.9)										
13	22.0 (6.2)	58.7 (53.3)										
14	33.5 (15.5)											
15	41.4 (13.7)	65.6 (43.6)										
16	23.7 (13.7)	105.0 (90.2)										
17	25.5 (21.9)	108.0 (66.9)										
18	30.8 (14.9)	64.7 (24.9)	92.3 (68.0)	98.4 (36.1)								
19	19.4 (10.6)	49.3 (26.0)	21.3 (18.3)									
20	32.4 (25.5)	47.7 (17.7)	52.8 (43.1)									
21	25.8 (14.2)											
22	21.2 (19.8)	49.1 (22.1)	60.5 (36.7)	61.6 (23.6)								
23	16.5 (19.4)	37.7 (33.7)	71.0 (32.9)	37.3 (14.8)								
24	19.5 (18.1)	45.4 (36.7)	73.2 (25.1)	47.6 (32.9)								
25	21.0 (7.6)	68.0 (33.9)	101.0 (43.2)	124.0 (65.9)								
26	20.8 (4.6)	52.0 (26.9)	95.1 (34.0)	100.0 (67.7)								
27	30.1 (6.8)											
28	30.2 (9.7)											
29	15.5 (7.5)	72.3 (37.1)	74.5 (31.4)	65.7 (53.7)								
30	18.1 (15.2)	83.6 (44.4)	94.7 (45.0)	130.0 (88.3)								
31												
Avg	26.1	66.9	73.6	83.1								
n	20	16	10	8	0	0	0	0	0	0	0	0
SD	7.8	20.2	23.10	32.70								
Min	15.5	37.7	21.3	37.3								
Max	45.2	108.0	101.0	130.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for September, 2007.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	36.1 (10.1)	97.1 (46.0)	91.4 (39.9)	118.0 (68.8)								
2	34.6 (7.7)	96.8 (46.5)	86.2 (36.1)	101.0 (70.1)								
3	37.5 (12.1)	91.5 (47.4)	87.8 (37.4)	82.7 (47.2)								
4	54.2 (13.4)	91.5 (48.3)	97.2 (30.1)									
5	39.3 (15.4)	46.3 (32.2)	84.5 (33.8)									
6	21.2 (8.7)	51.4 (33.2)	89.9 (39.9)									
7												
8		66.6 (43.7)	112.0 (47.1)	63.4 (40.8)								
9		69.5 (44.9)	103.0 (45.7)	123.0 (70.8)								
10		73.5 (50.4)	77.2 (30.8)	190.0 (111.0)								
11		184.0 (118.0)	110.0 (71.6)	300.0 (194.0)								
12		258.0 (143.0)	210.0 (152.0)	311.0 (139.0)								
13		236.0 (177.0)	244.0 (156.0)	225.0 (105.0)								
14		327.0 (175.0)	283.0 (152.0)	206.0 (73.8)								
15		256.0 (142.0)	237.0 (170.0)	231.0 (109.0)								
16		209.0 (128.0)	222.0 (169.0)	163.0 (83.7)								
17		127.0 (104.0)										
18		53.9 (76.3)	82.1 (80.0)	59.6 (51.7)								
19	26.7 (15.4)	89.1 (95.5)	99.5 (65.8)	116.0 (57.9)								
20	42.2 (17.3)	88.9 (91.4)	113.0 (52.7)	125.0 (92.9)								
21	43.5 (17.3)	114.0 (114.0)	126.0 (87.0)									
22	24.9 (8.7)	147.0 (76.0)	158.0 (49.8)	217.0 (123.0)								
23	36.1 (13.6)	87.1 (49.5)	141.0 (49.9)	216.0 (151.0)								
24	38.8 (12.1)	77.2 (42.7)	124.0 (35.0)									
25	19.5 (12.4)	171.0 (145.0)	136.0 (65.9)	178.0 (93.6)								
26	17.5 (9.9)	313.0 (136.0)	224.0 (96.5)	269.0 (156.0)								
27	44.1 (37.4)	370.0 (172.0)	256.0 (116.0)									
28	35.2 (16.1)	372.0 (181.0)	283.0 (138.0)									
29	40.7 (16.9)	225.0 (158.0)	234.0 (107.0)	110.0 (96.2)								
30	32.8 (14.9)	137.0 (107.0)	166.0 (89.1)	157.0 (232.0)								
Avg	34.7	156.0	153.0	170.0								
n	18	29	28	21	0	0	0	0	0	0	0	0
SD	9.3	97.5	67.30	72.00								
Min	17.5	46.3	77.2	59.6								
Max	54.2	372.0	283.0	311.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for October, 2007.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	22.4 (6.7)	160.0 (105.0)	145.0 (58.2)	156.0 (174.0)								
2	21.2 (7.4)	138.0 (170.0)	128.0 (73.8)	288.0 (204.0)								
3	20.5 (12.3)	172.0 (131.0)	175.0 (97.3)	340.0 (192.0)								
4	24.7 (9.6)	153.0 (117.0)	159.0 (82.2)	243.0 (182.0)								
5	34.2 (19.6)	114.0 (92.1)	164.0 (76.6)									
6	32.4 (14.8)	80.0 (46.0)										
7	23.1 (7.8)	64.2 (48.3)	105.0 (28.0)	64.5 (17.0)								
8	32.1 (40.0)	258.0 (233.0)	175.0 (105.0)	232.0 (146.0)								
9	32.1 (14.7)	353.0 (148.0)	234.0 (116.0)	314.0 (135.0)								
10	22.3 (13.5)	360.0 (152.0)	304.0 (147.0)	545.0 (169.0)								
11	28.4 (24.4)	423.0 (214.0)	470.0 (181.0)	553.0 (166.0)								
12	33.1 (11.5)	456.0 (228.0)	439.0 (213.0)	441.0 (150.0)								
13	18.6 (10.7)	314.0 (241.0)	283.0 (130.0)	358.0 (142.0)								
14	22.3 (8.3)	157.0 (82.3)	253.0 (87.9)	336.0 (187.0)								
15	21.6 (6.0)	174.0 (146.0)	232.0 (120.0)	267.0 (290.0)								
16	7.3 (5.0)	182.0 (114.0)	197.0 (109.0)	282.0 (142.0)								
17	8.8 (5.8)	167.0 (109.0)	211.0 (115.0)	453.0 (332.0)								
18	7.6 (5.6)	158.0 (108.0)										
19	15.5 (6.4)	264.0 (136.0)	240.0 (123.0)									
20	24.2 (12.0)	228.0 (170.0)	240.0 (127.0)									
21	28.6 (7.0)	240.0 (146.0)	221.0 (130.0)									
22	20.7 (12.0)	234.0 (138.0)	220.0 (118.0)									
23	26.9 (13.0)	275.0 (227.0)	355.0 (212.0)									
24	31.2 (20.9)	300.0 (228.0)	466.0 (263.0)									
25	33.2 (21.2)	337.0 (218.0)	461.0 (200.0)									
26	40.4 (19.2)	372.0 (131.0)	474.0 (142.0)	463.0 (155.0)								
27												
28												
29	41.5 (17.9)	401.0 (149.0)	404.0 (187.0)	389.0 (200.0)								
30	37.4 (10.2)	368.0 (172.0)	341.0 (143.0)	336.0 (267.0)								
31	50.6 (25.6)	447.0 (215.0)	370.0 (169.0)	461.0 (186.0)								
Avg	26.3	253.0	277.0	343.0								
n	29	29	27	19	0	0	0	0	0	0	0	0
SD	9.8	110.0	114.00	123.00								
Min	7.3	64.2	105.0	64.5								
Max	50.6	456.0	474.0	553.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for November, 2007.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	49.0 (17.0)	384.0 (215.0)	404.0 (178.0)	514.0 (240.0)								
2	57.7 (29.4)	397.0 (194.0)	498.0 (222.0)	497.0 (215.0)								
3	47.8 (11.9)	415.0 (185.0)	525.0 (249.0)	560.0 (335.0)								
4	37.0 (19.7)	396.0 (246.0)	530.0 (391.0)	502.0 (276.0)								
5	44.6 (19.2)	493.0 (220.0)	516.0 (208.0)	630.0 (228.0)								
6	35.7 (23.3)	579.0 (323.0)	431.0 (124.0)	574.0 (187.0)								
7	51.4 (10.6)	522.0 (191.0)	417.0 (128.0)	675.0 (278.0)								
8	65.5 (32.3)	542.0 (290.0)	502.0 (134.0)	734.0 (353.0)								
9	63.4 (23.6)	435.0 (197.0)	528.0 (266.0)	519.0 (294.0)								
10	49.8 (7.9)	412.0 (258.0)	368.0 (271.0)	349.0 (186.0)								
11	41.3 (12.3)	349.0 (221.0)	307.0 (230.0)	273.0 (219.0)								
12	61.9 (36.6)	389.0 (222.0)	256.0 (193.0)									
13	49.9 (8.5)	395.0 (221.0)	411.0 (247.0)	272.0 (198.0)								
14	50.1 (30.8)	396.0 (239.0)	374.0 (235.0)	374.0 (269.0)								
15	45.3 (38.0)	370.0 (227.0)	463.0 (411.0)	694.0 (317.0)								
16	57.4 (29.2)	406.0 (151.0)	556.0 (347.0)	851.0 (400.0)								
17	67.5 (26.8)	464.0 (162.0)	382.0 (228.0)	565.0 (299.0)								
18	17.6 (8.0)	451.0 (190.0)	468.0 (206.0)	380.0 (189.0)								
19	28.3 (14.0)	339.0 (179.0)	452.0 (197.0)	478.0 (661.0)								
20	11.4 (6.6)	401.0 (213.0)	505.0 (267.0)	411.0 (159.0)								
21	15.6 (11.6)	509.0 (274.0)	439.0 (199.0)	548.0 (259.0)								
22												
23	14.1 (10.7)	453.0 (219.0)	448.0 (277.0)	652.0 (281.0)								
24	11.7 (3.9)	456.0 (222.0)	473.0 (276.0)	692.0 (339.0)								
25	19.0 (6.7)	426.0 (213.0)	468.0 (279.0)	567.0 (261.0)								
26	20.8 (7.8)	440.0 (261.0)	470.0 (317.0)	574.0 (287.0)								
27	18.8 (6.7)	424.0 (262.0)	457.0 (340.0)	525.0 (309.0)								
28	29.1 (12.7)	407.0 (288.0)	421.0 (335.0)	514.0 (267.0)								
29		663.0 (421.0)										
30		742.0 (391.0)							41.9 (32.6)	754.0 (398.0)	883.0 (361.0)	1160.0 (462.0)
Avg	39.3	450.0	447.0	535.0								
n	27	29	27	26	0	0	0	0	1	1	1	1
SD	17.8	88.2	68.00	136.00								
Min	11.4	339.0	256.0	272.0								
Max	67.5	742.0	556.0	851.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for December, 2007.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1		706.0 (465.0)							27.4 (40.6)	718.0 (473.0)	810.0 (503.0)	1300.0 (573.0)
2		656.0 (286.0)							24.1 (84.6)	667.0 (291.0)	866.0 (490.0)	1320.0 (690.0)
3		594.0 (267.0)							12.6 (7.0)	604.0 (272.0)	803.0 (524.0)	1700.0 (917.0)
4		760.0 (351.0)							14.2 (9.6)	772.0 (357.0)	1010.0 (590.0)	
5		995.0 (699.0)							20.3 (31.3)	1010.0 (711.0)	934.0 (461.0)	
6		594.0 (624.0)										
7		45.2 (15.8)			12.8 (4.8)	45.9 (16.0)	59.0 (20.1)	65.9 (14.9)				
8												
9												
10		59.0 (29.9)			25.7 (9.5)	60.0 (30.4)		110.0 (56.4)				
11		69.5 (119.0)			12.9 (9.0)	70.7 (121.0)		105.0 (43.8)				
12		70.6 (27.4)			20.3 (8.9)	71.8 (27.9)		88.1 (25.7)				
13		55.0 (24.9)			6.6 (10.2)	55.9 (25.3)		60.0 (24.4)				
14		61.0 (40.2)			8.1 (4.7)	62.1 (40.9)		81.5 (48.3)				
15		74.1 (24.1)			15.8 (5.3)	75.3 (24.5)		66.0 (27.5)				
16		68.0 (34.4)			18.5 (6.5)	69.2 (35.0)		71.5 (28.8)				
17		70.7 (41.1)			25.7 (8.5)	71.9 (41.8)		85.6 (60.4)				
18		54.7 (42.1)			13.7 (8.5)	55.7 (42.8)	76.7 (17.2)	64.8 (31.4)				
19		70.3 (32.7)			22.8 (6.5)	71.5 (33.3)	101.0 (33.2)	77.0 (34.6)				
20		59.0 (38.9)			13.0 (7.7)	60.0 (39.6)	75.2 (27.8)	58.1 (32.8)				
21		44.1 (33.9)			6.0 (4.2)	44.9 (34.5)	56.7 (24.7)	47.4 (28.7)				
22		41.5 (34.5)			5.5 (3.6)	42.2 (35.1)	51.2 (20.5)	48.6 (37.8)				
23		55.7 (43.4)			4.9 (4.0)	56.7 (44.1)	61.5 (33.0)	74.9 (68.9)				
24		56.9 (36.7)			12.9 (5.6)	57.9 (37.3)	71.5 (25.9)	62.2 (39.9)				
25		45.9 (38.7)			9.6 (4.6)	46.7 (39.3)	64.2 (39.6)	49.8 (36.8)				
26		78.0 (72.2)			20.8 (9.7)	79.4 (73.4)	74.5 (27.4)	77.7 (84.7)				
27												
28												
29	18.9 (6.4)	696.0 (206.0)	578.0 (498.0)	200.0 (83.5)								
30	16.6 (6.3)	666.0 (218.0)	721.0 (427.0)	292.0 (155.0)								
31	27.5 (9.6)	629.0 (240.0)	661.0 (315.0)	404.0 (237.0)								
Avg	21.0	273.0	653.0	299.0	14.2	61.0	69.1	71.9	19.7	755.0	885.0	1440.0
n	3	27	3	3	18	18	10	18	5	5	5	3
SD	4.7	309.0	58.60	83.40	6.6	11.0	13.40	17.20	5.6	140.0	78.10	184.00
Min	16.6	41.5	578.0	200.0	4.9	42.2	51.2	47.4	12.6	604.0	803.0	1300.0
Max	27.5	995.0	721.0	404.0	25.7	79.4	101.0	110.0	27.4	1010.0	1010.0	1700.0

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Table E4. Daily means (SD) of PM concentration at site IA4B for January, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	17.0 (7.0)	643.0 (235.0)	711.0 (367.0)	545.0 (794.0)								
2	12.5 (5.7)	697.0 (346.0)	527.0 (340.0)	332.0 (425.0)								
3	12.8 (4.8)	561.0 (321.0)	618.0 (413.0)	236.0 (153.0)								
4												
5	18.0 (4.3)	587.0 (179.0)	618.0 (225.0)									
6	14.8 (6.9)	526.0 (177.0)	557.0 (157.0)									
7	13.7 (5.7)	533.0 (166.0)	577.0 (186.0)									
8	15.0 (8.8)	567.0 (211.0)	629.0 (201.0)	454.0 (187.0)								
9	8.6 (5.0)	534.0 (164.0)	597.0 (247.0)	474.0 (266.0)								
10	17.2 (11.3)	523.0 (221.0)	639.0 (214.0)	472.0 (242.0)								
11	16.1 (5.5)	629.0 (187.0)	707.0 (223.0)	496.0 (248.0)								
12	18.9 (8.9)	582.0 (163.0)	667.0 (227.0)	533.0 (245.0)								
13	9.0 (4.0)	582.0 (197.0)	663.0 (216.0)	574.0 (345.0)								
14	12.5 (4.5)	649.0 (213.0)	655.0 (224.0)	533.0 (382.0)								
15	12.5 (4.2)	894.0 (732.0)	614.0 (332.0)	527.0 (658.0)								
16	19.5 (8.5)	768.0 (307.0)	565.0 (262.0)	388.0 (420.0)								
17	11.8 (5.6)	764.0 (350.0)	714.0 (242.0)	383.0 (829.0)								
18	16.4 (8.4)	895.0 (495.0)	658.0 (237.0)									
19	11.6 (4.5)	619.0 (203.0)	660.0 (215.0)	97.0 (60.1)								
20	13.2 (5.3)	615.0 (253.0)	561.0 (259.0)	220.0 (98.6)								
21	14.1 (5.7)	651.0 (236.0)		466.0 (253.0)								
22	11.4 (5.1)	738.0 (502.0)		601.0 (274.0)								
23	12.7 (5.1)	732.0 (268.0)		969.0 (645.0)								
24	15.0 (6.6)	695.0 (332.0)		1070.0 (526.0)								
25	15.1 (4.8)	724.0 (204.0)		652.0 (344.0)								
26	17.2 (5.1)	713.0 (237.0)		458.0 (232.0)								
27	19.5 (7.2)	657.0 (313.0)		496.0 (364.0)								
28	16.0 (6.1)	676.0 (302.0)										
29	26.6 (19.3)	802.0 (389.0)		481.0 (287.0)								
30	13.4 (5.6)	729.0 (459.0)		571.0 (1130.0)								
31	18.6 (6.4)	618.0 (230.0)										
Avg	15.0	663.0	628.0	501.0								
n	30	30	19	24	0	0	0	0	0	0	0	0
SD	3.6	98.3	53.30	200.00								
Min	8.6	523.0	527.0	97.0								
Max	26.6	895.0	714.0	1070.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for February, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	17.6 (5.3)	679.0 (227.0)										
2	22.4 (10.8)	673.0 (216.0)										
3	21.0 (8.7)	693.0 (235.0)										
4	11.0 (5.1)	621.0 (245.0)										
5	12.5 (5.3)	555.0 (240.0)										
6	10.6 (6.1)	621.0 (289.0)										
7	15.7 (8.7)	777.0 (274.0)										
8	25.0 (7.1)	814.0 (249.0)										
9	19.8 (7.6)	815.0 (337.0)										
10	14.8 (7.9)	820.0 (351.0)										
11	11.1 (12.0)	671.0 (257.0)										
12	12.8 (4.0)	576.0 (312.0)										
13	22.4 (5.8)	512.0 (247.0)										
14												
15	12.4 (5.4)	767.0 (275.0)										
16	20.7 (4.8)	636.0 (235.0)										
17	9.1 (9.7)	607.0 (221.0)										
18	9.3 (4.7)	715.0 (289.0)										
19	9.8 (7.8)	548.0 (216.0)										
20	14.9 (9.5)	679.0 (318.0)										
21	13.7 (5.8)	619.0 (246.0)										
22	25.3 (14.7)	725.0 (223.0)		1040.0 (467.0)								
23	37.1 (9.2)	685.0 (226.0)		960.0 (308.0)								
24												
25												
26												
27												
28												
29	6.1 (5.6)	887.0 (349.0)	580.0 (164.0)									
Avg	16.3	682.0		1000.0								
n	23	23	1	2	0	0	0	0	0	0	0	0
SD	6.9	95.4		42.20								
Min	6.1	512.0		960.0								
Max	37.1	887.0		1040.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for March, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	4.5 (3.8)	755.0 (313.0)	377.0 (222.0)									
2	15.0 (10.3)	601.0 (260.0)	353.0 (120.0)									
3	7.8 (3.8)	812.0 (354.0)	578.0 (217.0)									
4	8.4 (4.4)	765.0 (449.0)	505.0 (240.0)									
5		723.0 (383.0)	524.0 (207.0)	641.0 (254.0)								
6		809.0 (366.0)	654.0 (273.0)									
7	17.3 (5.9)	840.0 (273.0)	606.0 (178.0)									
8	12.6 (4.5)	648.0 (207.0)	550.0 (219.0)									
9	14.9 (4.4)	657.0 (215.0)	593.0 (197.0)									
10	28.3 (5.9)	680.0 (258.0)	576.0 (227.0)									
11	23.3 (8.7)	670.0 (307.0)	442.0 (195.0)									
12	15.4 (11.0)	612.0 (328.0)	380.0 (185.0)									
13												
14									17.0 (6.6)	1350.0 (612.0)	1020.0 (421.0)	1560.0 (478.0)
15									13.4 (4.6)	1290.0 (527.0)	1240.0 (490.0)	1620.0 (576.0)
16									11.9 (5.5)		1080.0 (514.0)	1800.0 (668.0)
17									9.3 (4.8)		949.0 (407.0)	1750.0 (741.0)
18									21.6 (29.8)	1130.0 (563.0)	1070.0 (472.0)	1730.0 (716.0)
19									13.8 (6.4)	1170.0 (618.0)	1110.0 (725.0)	1820.0 (978.0)
20												
21	14.1 (8.7)	705.0 (491.0)	638.0 (254.0)									
22	11.5 (5.5)	649.0 (271.0)	619.0 (253.0)	234.0 (127.0)								
23	6.1 (3.3)	582.0 (220.0)	608.0 (224.0)	245.0 (126.0)								
24			563.0 (253.0)	232.0 (147.0)								
25	23.2 (12.4)		596.0 (290.0)	252.0 (120.0)								
26	16.0 (10.5)		523.0 (281.0)	354.0 (194.0)								
27			506.0 (227.0)	693.0 (425.0)								
28			542.0 (291.0)	753.0 (455.0)								
29			605.0 (212.0)	811.0 (440.0)								
30	21.1 (10.1)	705.0 (485.0)	526.0 (203.0)	584.0 (157.0)								
31	8.3 (8.6)	531.0 (311.0)	542.0 (186.0)	547.0 (176.0)								
Avg	14.6	691.0	539.0	486.0					14.5	1240.0	1080.0	1710.0
n	17	17	23	11	0	0	0	0	6	4	6	6
SD	6.4	83.6	81.10	216.00					3.9	89.7	87.60	93.20
Min	4.5	531.0	353.0	232.0					9.3	1130.0	949.0	1560.0
Max	28.3	840.0	654.0	811.0					21.6	1350.0	1240.0	1820.0

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Table E4. Daily means (SD) of PM concentration at site IA4B for April, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	7.3 (4.5)		642.0 (203.0)	601.0 (188.0)								
2	11.5 (6.2)		557.0 (253.0)	648.0 (204.0)								
3	7.3 (5.2)		572.0 (193.0)	680.0 (220.0)								
4	17.0 (6.3)		477.0 (308.0)	614.0 (262.0)								
5	18.7 (9.9)		421.0 (217.0)	526.0 (257.0)								
6	13.7 (9.8)		379.0 (149.0)	576.0 (168.0)								
7	14.3 (11.3)		498.0 (148.0)	800.0 (266.0)								
8	9.5 (5.5)		484.0 (136.0)	604.0 (163.0)								
9	10.3 (5.8)	415.0 (154.0)	429.0 (151.0)	649.0 (196.0)								
10	6.7 (5.7)	436.0 (229.0)	380.0 (196.0)	578.0 (217.0)								
11	3.7 (4.5)	382.0 (141.0)	373.0 (162.0)	615.0 (291.0)								
12	4.0 (4.2)	378.0 (136.0)	525.0 (169.0)	832.0 (331.0)								
13	8.3 (4.9)	390.0 (155.0)	554.0 (206.0)	810.0 (382.0)								
14	12.2 (7.7)	400.0 (179.0)	468.0 (269.0)	724.0 (344.0)								
15	22.2 (9.2)	364.0 (247.0)	362.0 (244.0)	627.0 (353.0)								
16	39.4 (11.9)	298.0 (173.0)	268.0 (150.0)	618.0 (358.0)								
17	9.2 (6.7)	330.0 (178.0)	386.0 (205.0)									
18	7.0 (7.7)	269.0 (175.0)	318.0 (171.0)	136.0 (223.0)								
19	6.4 (5.1)		349.0 (142.0)	171.0 (162.0)								
20	11.3 (4.6)		279.0 (114.0)	166.0 (73.3)								
21	22.5 (9.0)		208.0 (86.5)	202.0 (79.5)								
22	13.5 (6.0)		227.0 (104.0)	416.0 (197.0)								
23	27.1 (17.5)		284.0 (156.0)	574.0 (228.0)								
24	13.5 (10.3)		139.0 (61.2)	560.0 (342.0)								
25	6.4 (5.8)		220.0 (125.0)	390.0 (194.0)								
26	11.9 (4.2)		407.0 (160.0)	380.0 (176.0)								
27	14.3 (5.0)		374.0 (174.0)	365.0 (171.0)								
28	12.8 (6.2)		413.0 (149.0)	434.0 (188.0)								
29	30.2 (52.7)		433.0 (167.0)	437.0 (230.0)								
30	27.8 (14.0)		224.0 (177.0)	423.0 (201.0)								
Avg	14.0	366.0	388.0	523.0								
n	30	10	30	29	0	0	0	0	0	0	0	0
SD	8.3	49.7	120.00	187.00								
Min	3.7	269.0	139.0	136.0								
Max	39.4	436.0	642.0	832.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for May, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	41.0 (13.4)		103.0 (76.2)	348.0 (185.0)								
2	13.8 (11.5)		88.2 (94.3)	432.0 (249.0)								
3	11.1 (9.0)			597.0 (250.0)								
4	18.7 (6.9)	197.0 (271.0)		501.0 (197.0)								
5	42.5 (20.0)	164.0 (231.0)		463.0 (247.0)								
6	35.0 (13.6)	164.0 (201.0)		377.0 (225.0)								
7	13.7 (5.2)	134.0 (126.0)		561.0 (198.0)								
8	15.0 (10.0)	206.0 (204.0)		633.0 (245.0)								
9	29.2 (10.9)	291.0 (226.0)		656.0 (290.0)								
10	20.6 (7.3)	375.0 (234.0)		622.0 (333.0)								
11	7.0 (4.8)	406.0 (254.0)		621.0 (259.0)								
12	11.5 (9.2)	397.0 (395.0)		571.0 (282.0)								
13	21.5 (12.1)	362.0 (340.0)										
14	22.5 (13.9)	377.0 (443.0)		105.0 (357.0)								
15	34.6 (16.5)	381.0 (331.0)		203.0 (202.0)								
16	47.9 (23.3)	354.0 (350.0)		199.0 (166.0)								
17	84.2 (82.2)	360.0 (182.0)		244.0 (99.3)								
18	35.0 (11.3)	482.0 (208.0)		296.0 (124.0)								
19	22.5 (9.3)	399.0 (244.0)		732.0 (570.0)								
20	17.1 (7.7)	399.0 (152.0)		391.0 (112.0)								
21	28.4 (9.5)	424.0 (304.0)		493.0 (261.0)								
22	30.5 (8.2)	380.0 (281.0)		450.0 (177.0)								
23												
24									9.1 (5.0)	510.0 (308.0)		884.0 (369.0)
25									26.9 (13.1)	199.0 (125.0)		472.0 (372.0)
26												
27												
28												
29									17.1 (8.3)	649.0 (685.0)		1060.0 (520.0)
30												
31	17.2 (7.0)	236.0 (173.0)		322.0 (186.0)								
Avg	27.0	324.0	95.6	446.0					17.7	453.0		806.0
n	23	20	2	22	0	0	0	0	3	3	0	3
SD	16.3	99.8	7.40	167.00					7.3	188.0		246.00
Min	7.0	134.0	88.2	105.0					9.1	199.0		472.0
Max	84.2	482.0	103.0	732.0					26.9	649.0		1060.0

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Table E4. Daily means (SD) of PM concentration at site IA4B for June, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	21.9 (5.5)	228.0 (136.0)		296.0 (207.0)								
2	18.6 (14.2)	199.0 (123.0)										
3	14.6 (6.7)	219.0 (197.0)										
4	24.2 (8.3)	139.0 (90.2)		213.0 (132.0)								
5												
6												
7												
8												
9												
10												
11												
12												
13												
14	20.6 (8.0)			242.0 (150.0)								
15	16.1 (8.2)											
16	21.8 (11.1)											
17	35.3 (15.0)											
18	53.9 (30.8)											
19	33.0 (6.3)		133.0 (70.9)	389.0 (269.0)								
20	23.8 (11.4)		88.9 (34.0)	329.0 (213.0)								
21	21.5 (9.6)	170.0 (73.5)	107.0 (41.0)	372.0 (227.0)								
22	22.2 (10.5)	182.0 (87.2)	118.0 (42.6)	449.0 (313.0)								
23	23.0 (7.3)	177.0 (129.0)	132.0 (55.0)	424.0 (314.0)								
24	26.4 (6.9)	116.0 (63.9)	82.0 (34.1)									
25	21.8 (13.6)	89.8 (142.0)	54.8 (33.6)									
26	10.9 (6.9)	118.0 (159.0)	60.2 (30.7)	269.0 (221.0)								
27	16.9 (7.3)	123.0 (113.0)	69.4 (36.1)	308.0 (200.0)								
28	17.7 (8.5)	202.0 (82.0)	103.0 (50.1)	280.0 (120.0)								
29	10.8 (5.8)	166.0 (96.3)	103.0 (46.6)	150.0 (96.4)								
30	19.0 (6.4)	187.0 (108.0)	142.0 (73.0)	156.0 (132.0)								
Avg	22.6	165.0	99.4	298.0								
n	21	14	12	13	0	0	0	0	0	0	0	0
SD	9.1	40.6	27.70	90.60								
Min	10.8	89.8	54.8	150.0								
Max	53.9	228.0	142.0	449.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for July, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	26.5 (8.5)		119.0 (63.4)	191.0 (112.0)								
2	43.4 (21.3)		98.7 (63.4)	257.0 (171.0)								
3	28.3 (10.9)		139.0 (69.0)	363.0 (200.0)								
4	25.3 (7.6)		122.0 (70.0)	378.0 (214.0)								
5	26.2 (6.0)		98.4 (60.9)	355.0 (216.0)								
6	28.7 (7.0)		74.6 (57.4)	270.0 (184.0)								
7	22.8 (12.6)		43.4 (45.9)	207.0 (151.0)								
8	14.3 (9.1)		53.4 (50.7)	231.0 (156.0)								
9	15.4 (5.3)	137.0 (134.0)	80.6 (65.2)	342.0 (281.0)								
10	17.5 (5.3)		55.9 (43.4)	239.0 (201.0)								
11	22.9 (8.3)		56.7 (45.8)	263.0 (329.0)								
12	21.6 (7.1)	244.0 (147.0)	92.9 (70.1)	512.0 (343.0)								
13	24.3 (11.6)	296.0 (183.0)	132.0 (88.8)	529.0 (369.0)								
14	29.8 (12.6)	238.0 (176.0)	103.0 (71.8)	439.0 (382.0)								
15	35.0 (13.5)	153.0 (103.0)	75.4 (46.1)	402.0 (220.0)								
16	36.3 (8.4)	120.0 (90.3)	58.5 (37.8)									
17	27.3 (16.4)	134.0 (129.0)	59.5 (54.5)	106.0 (139.0)								
18	11.8 (6.1)	140.0 (101.0)	58.6 (45.7)	143.0 (137.0)								
19	17.6 (7.4)	134.0 (92.0)		169.0 (142.0)								
20	11.0 (4.7)	139.0 (130.0)		126.0 (200.0)								
21	11.2 (6.0)	175.0 (136.0)		268.0 (224.0)								
22	14.5 (4.8)	214.0 (200.0)		280.0 (170.0)								
23		216.0 (83.1)	89.7 (47.4)	273.0 (120.0)								
24												
25												
26			85.6 (27.5)	240.0 (142.0)								
27			79.5 (48.8)	273.0 (185.0)								
28			51.0 (28.2)	173.0 (86.9)								
29			52.9 (19.0)	136.0 (55.5)								
30			54.6 (20.6)	147.0 (82.8)								
31												
Avg	23.3	180.0	80.6	271.0								
n	22	13	24	27	0	0	0	0	0	0	0	0
SD	8.4	53.5	27.20	111.00								
Min	11.0	120.0	43.4	106.0								
Max	43.4	296.0	139.0	529.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for August, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1									32.8 (12.8)		130.0 (58.4)	387.0 (209.0)
2									24.1 (12.1)		188.0 (81.0)	539.0 (357.0)
3									27.0 (11.8)		114.0 (54.6)	372.0 (191.0)
4									38.4 (11.7)		108.0 (47.8)	305.0 (165.0)
5									33.3 (9.3)	251.0 (127.0)	144.0 (79.8)	410.0 (224.0)
6									44.1 (9.8)	288.0 (160.0)	214.0 (127.0)	712.0 (426.0)
7												
8												
9	27.6 (14.2)	182.0 (97.3)	98.3 (48.3)	165.0 (74.4)								
10	13.0 (8.3)	178.0 (80.4)	103.0 (49.7)	243.0 (71.8)								
11	15.6 (6.1)	206.0 (103.0)	131.0 (68.4)	573.0 (490.0)								
12	25.0 (10.8)	185.0 (73.8)	97.6 (42.9)	315.0 (101.0)								
13	15.5 (5.7)	167.0 (99.1)	102.0 (62.8)	190.0 (123.0)								
14	16.3 (9.8)	175.0 (91.1)	102.0 (57.7)	188.0 (124.0)								
15												
16					5.9 (3.8)	32.2 (10.7)	10.7 (6.9)	61.3 (26.5)				
17					8.9 (4.3)	25.1 (9.0)	12.9 (4.8)	57.6 (31.2)				
18					13.7 (5.8)	25.1 (5.4)	16.4 (4.3)	64.2 (27.5)				
19					16.4 (5.0)	25.9 (8.0)	18.9 (5.9)	55.6 (22.7)				
20					17.8 (4.7)	30.2 (10.8)	22.1 (7.8)	59.1 (26.1)				
21					15.7 (8.4)	22.1 (11.1)	17.0 (8.0)	44.5 (21.8)				
22					13.8 (14.9)	14.4 (7.6)	11.7 (4.0)	29.7 (7.7)				
23					6.3 (5.7)	14.5 (14.2)	8.7 (6.5)	66.1 (48.0)				
24					4.6 (4.0)	15.7 (7.6)	10.7 (6.2)	97.4 (55.4)				
25					5.5 (4.1)	14.7 (7.2)	11.9 (21.7)	88.2 (57.1)				
26					6.8 (4.3)	16.4 (7.4)	13.4 (14.6)	71.8 (41.3)				
27					17.2 (9.9)	23.4 (8.2)	20.3 (6.6)					
28					16.2 (8.8)	16.9 (10.1)	15.1 (8.9)	27.2 (17.5)				
29												
30	25.8 (10.5)	180.0 (95.6)	127.0 (62.9)	156.0 (60.5)								
31	30.4 (16.4)	153.0 (74.2)	124.0 (42.4)	176.0 (68.5)								
Avg	21.1	178.0	111.0	251.0	11.4	21.3	14.6	60.2	33.3	269.0	150.0	454.0
n	8	8	8	8	13	13	13	12	6	2	6	6
SD	6.3	14.2	13.20	131.00	4.9	6.0	4.00	19.70	6.7	18.8	38.80	135.00
Min	13.0	153.0	97.6	156.0	4.6	14.4	8.7	27.2	24.1	251.0	108.0	305.0
Max	30.4	206.0	131.0	573.0	17.8	32.2	22.1	97.4	44.1	288.0	214.0	712.0

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Table E4. Daily means (SD) of PM concentration at site IA4B for September, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	44.1 (9.3)	115.0 (45.6)	97.3 (24.9)	221.0 (113.0)								
2	32.4 (11.4)	123.0 (71.9)	104.0 (50.1)	374.0 (247.0)								
3	24.4 (15.3)		205.0 (79.2)	678.0 (459.0)								
4	6.4 (6.1)		189.0 (84.1)	410.0 (109.0)								
5	7.4 (10.7)		217.0 (112.0)	498.0 (275.0)								
6	9.2 (5.4)		188.0 (93.8)	392.0 (123.0)								
7	11.2 (6.0)		183.0 (105.0)	361.0 (129.0)								
8	6.2 (5.5)		222.0 (117.0)	443.0 (145.0)								
9	4.5 (4.4)		241.0 (149.0)	447.0 (156.0)								
10	12.0 (7.6)		161.0 (121.0)	431.0 (142.0)								
11	19.0 (9.6)		61.4 (40.7)	261.0 (137.0)								
12	11.9 (8.9)		46.2 (33.1)	229.0 (126.0)								
13			61.4 (47.1)	302.0 (104.0)								
14			197.0 (102.0)	495.0 (135.0)								
15			241.0 (120.0)	518.0 (151.0)								
16			183.0 (132.0)	417.0 (144.0)								
17	22.4 (9.5)		132.0 (84.4)	355.0 (189.0)								
18												
19												
20												
21												
22												
23												
24	25.5 (17.6)	36.5 (111.0)	110.0 (79.6)	243.0 (152.0)								
25	23.0 (9.4)	36.5 (32.7)	134.0 (106.0)	525.0 (244.0)								
26	44.2 (15.4)	42.1 (29.7)	124.0 (74.1)									
27	45.9 (10.3)	44.9 (35.4)	156.0 (109.0)									
28	24.3 (12.3)	35.4 (51.9)	158.0 (98.2)									
29	15.9 (6.9)	42.8 (52.0)	176.0 (153.0)									
30	17.3 (18.6)	65.1 (54.0)	306.0 (189.0)									
Avg	20.4	60.2	162.0	400.0								
n	20	9	24	19	0	0	0	0	0	0	0	0
SD	12.6	32.7	62.10	115.00								
Min	4.5	35.4	46.2	221.0								
Max	45.9	123.0	306.0	678.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for October, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	17.6 (11.6)	72.5 (56.1)	320.0 (190.0)									
2	30.6 (19.3)	110.0 (243.0)	290.0 (208.0)									
3	37.0 (14.7)	103.0 (227.0)	325.0 (227.0)									
4	23.9 (12.1)	51.8 (27.1)	293.0 (171.0)	371.0 (147.0)								
5	30.1 (21.2)	34.0 (38.2)	181.0 (132.0)	274.0 (180.0)								
6	37.8 (13.1)	31.3 (29.5)	124.0 (50.4)	287.0 (106.0)								
7	17.3 (14.7)	33.1 (18.3)	199.0 (126.0)	372.0 (123.0)								
8	12.8 (12.4)	47.2 (29.4)	258.0 (175.0)	438.0 (219.0)								
9	14.4 (11.2)	56.2 (33.7)	270.0 (190.0)	363.0 (215.0)								
10	23.0 (14.2)	70.1 (43.4)	247.0 (147.0)	400.0 (237.0)								
11	24.2 (9.2)	47.4 (26.9)	172.0 (106.0)	276.0 (170.0)								
12	17.2 (4.5)	29.1 (20.3)	96.9 (57.8)	177.0 (117.0)								
13	9.4 (6.5)	38.4 (25.8)	105.0 (95.3)	201.0 (123.0)								
14												
15												
16												
17												
18									8.4 (6.4)	178.0 (99.2)	547.0 (314.0)	1310.0 (577.0)
19									14.3 (9.7)	59.3 (44.1)	397.0 (278.0)	1340.0 (927.0)
20									23.9 (11.1)	178.0 (308.0)	349.0 (284.0)	763.0 (320.0)
21									18.7 (12.0)	209.0 (148.0)	666.0 (270.0)	903.0 (631.0)
22									11.2 (10.1)	209.0 (88.4)	692.0 (311.0)	806.0 (592.0)
23									12.0 (4.6)	178.0 (104.0)	678.0 (359.0)	973.0 (460.0)
24												
25	7.0 (5.0)	148.0 (67.8)	288.0 (119.0)	428.0 (171.0)								
26	19.3 (14.2)	225.0 (78.4)	354.0 (122.0)	563.0 (241.0)								
27	10.3 (6.2)	287.0 (393.0)	337.0 (126.0)	647.0 (228.0)								
28	23.1 (12.1)	186.0 (97.3)	308.0 (148.0)	558.0 (250.0)								
29	31.3 (15.6)	147.0 (101.0)	258.0 (175.0)	398.0 (198.0)								
30	35.4 (10.2)	142.0 (179.0)	232.0 (148.0)	318.0 (198.0)								
31	37.2 (15.6)	138.0 (108.0)	155.0 (106.0)	346.0 (270.0)								
Avg	22.9	99.8	241.0	378.0					14.8	169.0	555.0	1020.0
n	20	20	20	17	0	0	0	0	6	6	6	6
SD	9.6	70.5	77.20	122.00					5.2	50.9	138.00	228.00
Min	7.0	29.1	96.9	177.0					8.4	59.3	349.0	763.0
Max	37.8	287.0	354.0	647.0					23.9	209.0	692.0	1340.0

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Table E4. Daily means (SD) of PM concentration at site IA4B for November, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	28.8 (10.9)	128.0 (94.4)	138.0 (70.6)	320.0 (184.0)								
2	21.4 (8.1)	90.1 (109.0)	159.0 (119.0)	273.0 (183.0)								
3	24.8 (10.0)	60.5 (113.0)	205.0 (120.0)	283.0 (249.0)								
4	29.2 (10.8)	62.5 (84.2)	208.0 (127.0)	257.0 (172.0)								
5	20.4 (6.4)	90.4 (173.0)	190.0 (118.0)									
6	1.1 (4.9)	89.4 (191.0)	287.0 (191.0)									
7	-0.5 (4.5)	140.0 (195.0)	391.0 (184.0)	188.0 (149.0)								
8	0.0 (3.4)	176.0 (200.0)	395.0 (123.0)	178.0 (77.1)								
9	1.6 (3.5)	216.0 (247.0)	443.0 (121.0)									
10	5.5 (5.1)	296.0 (573.0)	408.0 (123.0)									
11	5.5 (6.2)	143.0 (79.5)	410.0 (123.0)									
12	4.2 (4.4)	162.0 (104.0)	285.0 (86.3)									
13	6.2 (4.7)	89.3 (121.0)	259.0 (107.0)									
14	2.4 (5.0)	154.0 (314.0)	268.0 (145.0)									
15	1.0 (3.9)	177.0 (209.0)	275.0 (169.0)	387.0 (365.0)								
16	5.3 (4.8)	139.0 (110.0)	226.0 (243.0)	418.0 (167.0)								
17	4.8 (3.4)	182.0 (254.0)	250.0 (194.0)	454.0 (190.0)								
18	10.2 (5.8)	207.0 (159.0)	237.0 (277.0)	416.0 (166.0)								
19	12.1 (8.9)	215.0 (141.0)	242.0 (244.0)	393.0 (153.0)								
20	9.9 (7.3)	246.0 (205.0)	320.0 (278.0)	477.0 (210.0)								
21	13.0 (10.7)											
22	11.4 (5.0)	201.0 (64.1)	239.0 (145.0)	597.0 (391.0)								
23	19.9 (6.7)	211.0 (95.5)	309.0 (134.0)	643.0 (190.0)								
24	14.9 (12.6)	219.0 (80.0)	351.0 (162.0)									
25	17.8 (11.2)	223.0 (150.0)	294.0 (166.0)									
26	32.5 (16.0)	261.0 (145.0)	301.0 (157.0)									
27	20.3 (9.5)	275.0 (258.0)	325.0 (141.0)									
28	23.1 (21.4)	273.0 (204.0)	283.0 (194.0)									
29	23.7 (14.6)	243.0 (164.0)	277.0 (167.0)									
30	7.6 (4.9)	218.0 (192.0)	268.0 (146.0)	149.0 (259.0)								
Avg	12.6	179.0	284.0	362.0								
n	30	29	29	15	0	0	0	0	0	0	0	0
SD	9.6	65.5	73.90	141.00								
Min	-0.5	60.5	138.0	149.0								
Max	32.5	296.0	443.0	643.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for December, 2008.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	5.4 (4.3)	257.0 (221.0)	235.0 (184.0)	241.0 (201.0)								
2	7.4 (5.3)	221.0 (193.0)	188.0 (260.0)	314.0 (298.0)								
3	8.8 (4.2)	235.0 (236.0)	280.0 (200.0)	669.0 (418.0)								
4	7.6 (4.2)	181.0 (181.0)	246.0 (179.0)	675.0 (373.0)								
5	9.7 (3.3)	135.0 (99.4)	164.0 (178.0)	534.0 (313.0)								
6	9.0 (3.4)	162.0 (71.1)	354.0 (134.0)	451.0 (147.0)								
7	8.5 (3.7)	137.0 (68.9)	166.0 (121.0)	506.0 (149.0)								
8	9.0 (3.9)	133.0 (53.5)	224.0 (168.0)	520.0 (225.0)								
9	6.1 (4.4)	175.0 (158.0)	283.0 (116.0)	537.0 (234.0)								
10	6.6 (4.4)	130.0 (63.8)	167.0 (133.0)	490.0 (248.0)								
11	8.0 (4.5)	127.0 (62.5)	231.0 (171.0)	527.0 (276.0)								
12												
13									5.5 (4.2)	179.0 (73.3)	690.0 (383.0)	1100.0 (413.0)
14									26.4 (40.8)	204.0 (103.0)	821.0 (473.0)	1040.0 (435.0)
15									20.3 (6.7)	390.0 (682.0)	697.0 (325.0)	1050.0 (489.0)
16									63.6 (87.2)	220.0 (107.0)	402.0 (244.0)	1340.0 (716.0)
17									14.6 (5.6)	227.0 (150.0)	448.0 (203.0)	1170.0 (1000.0)
18									14.5 (7.4)	277.0 (272.0)	378.0 (352.0)	1050.0 (414.0)
19									11.6 (7.0)	449.0 (216.0)	656.0 (734.0)	1100.0 (499.0)
20									11.5 (10.4)	457.0 (227.0)	797.0 (754.0)	994.0 (446.0)
21									13.0 (9.1)	343.0 (193.0)	1010.0 (623.0)	1130.0 (853.0)
22									15.1 (12.4)	285.0 (283.0)	501.0 (436.0)	1000.0 (640.0)
23												
24	9.8 (4.5)	230.0 (299.0)	416.0 (157.0)									
25	7.4 (4.1)	191.0 (158.0)	133.0 (90.8)									
26	7.6 (6.1)	150.0 (77.5)	318.0 (208.0)									
27	8.9 (5.4)	191.0 (112.0)	400.0 (169.0)									
28	4.9 (3.9)	202.0 (315.0)	184.0 (170.0)									
29	4.9 (3.8)	82.1 (60.6)	262.0 (193.0)									
30	7.0 (6.2)	196.0 (290.0)	253.0 (224.0)									
31	9.9 (6.8)	195.0 (212.0)	239.0 (201.0)									
Avg	7.7	175.0	250.0	497.0					19.6	303.0	640.0	1100.0
n	19	19	19	11	0	0	0	0	10	10	10	10
SD	1.5	43.6	76.70	123.00					15.6	96.4	195.00	96.80
Min	4.9	82.1	133.0	241.0					5.5	179.0	378.0	994.0
Max	9.9	257.0	416.0	675.0					63.6	457.0	1010.0	1340.0

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Table E4. Daily means (SD) of PM concentration at site IA4B for January, 2009.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	9.0 (4.4)	234.0 (111.0)	138.0 (204.0)									
2	17.6 (10.0)	258.0 (225.0)	296.0 (155.0)									
3	13.5 (6.0)	89.2 (54.8)	367.0 (136.0)	451.0 (194.0)								
4	5.2 (3.2)	98.6 (49.9)	379.0 (133.0)	444.0 (236.0)								
5	10.2 (5.0)	86.9 (44.4)	337.0 (130.0)	352.0 (268.0)								
6	18.2 (11.5)	85.4 (46.9)	369.0 (152.0)	344.0 (274.0)								
7	20.2 (12.3)	91.6 (71.1)	419.0 (168.0)	414.0 (298.0)								
8	17.0 (8.7)	85.3 (104.0)	343.0 (117.0)	422.0 (241.0)								
9	13.8 (5.4)	210.0 (204.0)	340.0 (122.0)	544.0 (278.0)								
10	8.5 (5.1)	483.0 (156.0)	343.0 (139.0)	510.0 (599.0)								
11	7.3 (3.9)	458.0 (185.0)	356.0 (134.0)	395.0 (294.0)								
12	7.9 (5.7)	479.0 (206.0)	333.0 (162.0)	402.0 (367.0)								
13	10.0 (10.9)	459.0 (205.0)	332.0 (146.0)	392.0 (402.0)								
14	6.0 (4.9)	429.0 (168.0)	272.0 (129.0)	329.0 (192.0)								
15	5.8 (4.4)	409.0 (184.0)	258.0 (89.8)	279.0 (175.0)								
16	9.5 (5.0)	419.0 (209.0)	263.0 (107.0)									
17	8.9 (5.6)		283.0 (141.0)	127.0 (137.0)								
18	6.1 (4.8)		284.0 (123.0)	167.0 (150.0)								
19	6.9 (7.5)	567.0 (309.0)		281.0 (195.0)								
20	7.6 (6.2)			142.0 (52.0)								
21	11.1 (3.9)	553.0 (271.0)		85.1 (41.3)								
22	19.9 (7.7)	579.0 (207.0)		92.5 (43.0)								
23	19.8 (10.7)	618.0 (265.0)	407.0 (196.0)	130.0 (81.9)								
24	8.0 (4.2)	567.0 (240.0)	340.0 (137.0)	133.0 (99.8)								
25	9.3 (3.7)	645.0 (341.0)	341.0 (162.0)	148.0 (82.3)								
26	9.0 (4.6)	642.0 (312.0)	364.0 (148.0)	183.0 (95.1)								
27	10.0 (6.5)	491.0 (242.0)	358.0 (140.0)	197.0 (109.0)								
28	10.2 (6.3)	449.0 (198.0)	392.0 (177.0)	200.0 (117.0)								
29												
30					7.0 (6.4)	61.9 (28.4)	67.7 (18.6)	29.8 (101.0)				
31					2.7 (5.8)	46.8 (26.3)	57.9 (18.7)	22.7 (7.8)				
Avg	10.9	379.0	330.0	287.0	4.9	54.3	62.8	26.3				
n	28	25	24	25	2	2	2	2	0	0	0	0
SD	4.6	196.0	58.40	139.00	2.2	7.6	4.90	3.60				
Min	5.2	85.3	138.0	85.1	2.7	46.8	57.9	22.7				
Max	20.2	645.0	419.0	544.0	7.0	61.9	67.7	29.8				

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Table E4. Daily means (SD) of PM concentration at site IA4B for February, 2009.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1					-0.7 (4.5)	48.6 (26.4)	72.5 (25.4)	29.5 (9.4)				
2					-0.3 (3.7)	48.5 (26.0)	74.3 (30.3)	37.4 (12.6)				
3					0.8 (4.9)	52.3 (21.6)	81.8 (26.9)	44.6 (21.3)				
4					1.7 (4.0)	64.0 (52.5)	66.4 (23.8)	28.2 (16.5)				
5					5.3 (5.5)	59.5 (29.0)	84.4 (38.8)	27.0 (13.6)				
6					10.2 (5.5)	59.5 (37.8)	77.1 (40.1)	32.4 (74.6)				
7					5.3 (4.7)	42.9 (25.1)	73.5 (28.3)	28.0 (17.7)				
8					4.4 (5.8)	56.0 (29.4)	76.5 (32.4)	35.6 (18.9)				
9					7.0 (7.8)	47.3 (41.5)	65.4 (44.5)					
10					1.6 (6.8)	55.5 (142.0)	50.9 (33.3)	4.7 (31.5)				
11					1.0 (4.8)		71.4 (38.9)	36.3 (85.2)				
12												
13									12.8 (11.7)	1430.0 (633.0)	948.0 (402.0)	1850.0 (1400.0)
14									8.6 (5.4)	1340.0 (674.0)	1010.0 (535.0)	1760.0 (977.0)
15									7.5 (5.2)	1840.0 (1000.0)	1030.0 (457.0)	1690.0 (912.0)
16									7.9 (5.7)	1410.0 (651.0)	1050.0 (659.0)	1400.0 (588.0)
17									9.7 (7.6)		863.0 (525.0)	932.0 (456.0)
18									6.5 (6.3)		927.0 (525.0)	1120.0 (647.0)
19											1210.0 (691.0)	1590.0 (1020.0)
20	13.5 (5.1)	536.0 (177.0)	510.0 (191.0)	920.0 (524.0)								
21	16.0 (7.6)	494.0 (164.0)	498.0 (356.0)	618.0 (146.0)								
22	6.7 (5.3)	474.0 (157.0)	485.0 (190.0)	626.0 (177.0)								
23	9.2 (3.7)	493.0 (162.0)	440.0 (226.0)	695.0 (233.0)								
24	15.8 (9.3)		466.0 (215.0)	518.0 (176.0)								
25	18.9 (10.8)		438.0 (214.0)	601.0 (194.0)								
26	8.3 (9.4)		485.0 (228.0)	660.0 (215.0)								
27	4.1 (6.4)	485.0 (137.0)	471.0 (239.0)	752.0 (193.0)								
28	4.3 (4.7)	499.0 (171.0)	473.0 (380.0)	776.0 (220.0)								
Avg	10.8	497.0	474.0	685.0	3.3	53.4	72.2	30.4	8.8	1510.0	1010.0	1480.0
n	9	6	9	9	11	10	11	10	6	4	7	7
SD	5.2	19.3	22.60	111.00	3.3	6.3	8.60	10.00	2.0	198.0	103.00	318.00
Min	4.1	474.0	438.0	518.0	-0.7	42.9	50.9	4.7	6.5	1340.0	863.0	932.0
Max	18.9	536.0	510.0	920.0	10.2	64.0	84.4	44.6	12.8	1840.0	1210.0	1850.0

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Table E4. Daily means (SD) of PM concentration at site IA4B for March, 2009.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	7.5 (5.2)	463.0 (134.0)	453.0 (139.0)	690.0 (210.0)								
2	6.5 (5.2)	503.0 (155.0)	564.0 (508.0)	560.0 (229.0)								
3	11.1 (6.8)	488.0 (226.0)	448.0 (496.0)	601.0 (312.0)								
4	21.2 (14.6)	431.0 (220.0)	429.0 (284.0)									
5	26.2 (8.9)	388.0 (205.0)		244.0 (204.0)								
6	19.4 (8.4)	474.0 (189.0)		279.0 (144.0)								
7	6.0 (5.6)	424.0 (169.0)		279.0 (112.0)								
8	4.9 (6.5)	392.0 (144.0)		415.0 (207.0)								
9	5.1 (5.6)	375.0 (145.0)		716.0 (358.0)								
10	2.7 (5.9)	341.0 (131.0)		920.0 (515.0)								
11	7.3 (4.0)	466.0 (228.0)		841.0 (233.0)								
12	8.2 (6.1)	525.0 (201.0)		1080.0 (652.0)								
13	12.8 (6.0)	541.0 (217.0)		1030.0 (516.0)								
14	15.3 (5.9)	478.0 (211.0)		556.0 (184.0)								
15	20.9 (7.7)	443.0 (215.0)		495.0 (195.0)								
16	21.4 (6.1)	375.0 (210.0)		508.0 (222.0)								
17	22.2 (7.7)	355.0 (172.0)		426.0 (173.0)								
18	15.3 (7.8)	441.0 (218.0)		484.0 (187.0)								
19	13.5 (8.0)	408.0 (199.0)		679.0 (438.0)								
20	23.6 (13.8)	485.0 (171.0)		660.0 (311.0)								
21	28.2 (12.2)	434.0 (220.0)		451.0 (150.0)								
22	16.7 (7.3)	381.0 (155.0)		444.0 (138.0)								
23	16.7 (7.5)	334.0 (160.0)		484.0 (216.0)								
24	3.6 (9.3)	330.0 (164.0)		481.0 (149.0)								
25	7.3 (4.7)	451.0 (186.0)		723.0 (266.0)								
26	9.0 (6.3)	437.0 (184.0)		648.0 (229.0)								
27	9.9 (6.6)	564.0 (195.0)		399.0 (225.0)								
28	7.3 (5.5)	568.0 (217.0)		278.0 (97.6)								
29	6.0 (5.9)	475.0 (193.0)		262.0 (109.0)								
30	7.1 (5.6)	445.0 (187.0)										
31	7.6 (5.3)	377.0 (172.0)		247.0 (112.0)								
Avg	12.6	438.0	473.0	548.0								
n	31	31	4	29	0	0	0	0	0	0	0	0
SD	7.1	63.5	52.90	223.00								
Min	2.7	330.0	429.0	244.0								
Max	28.2	568.0	564.0	1080.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for April, 2009.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	14.8 (13.9)	396.0 (160.0)		518.0 (273.0)								
2	19.6 (11.2)	542.0 (223.0)		988.0 (630.0)								
3	27.0 (19.5)	546.0 (247.0)	342.0 (166.0)	873.0 (372.0)								
4	18.0 (10.1)	548.0 (226.0)	371.0 (130.0)	466.0 (149.0)								
5	2.0 (6.2)	484.0 (182.0)	308.0 (128.0)	392.0 (134.0)								
6	4.1 (5.9)	477.0 (166.0)	350.0 (121.0)	414.0 (124.0)								
7	11.3 (6.9)	492.0 (190.0)	349.0 (140.0)	375.0 (134.0)								
8	14.5 (8.2)	468.0 (308.0)	315.0 (149.0)	377.0 (132.0)								
9	23.5 (13.7)	497.0 (278.0)	337.0 (157.0)	414.0 (167.0)								
10	58.7 (68.3)	562.0 (165.0)	444.0 (147.0)	463.0 (136.0)								
11	36.0 (13.8)	474.0 (238.0)	404.0 (187.0)	440.0 (144.0)								
12	28.7 (17.9)	449.0 (255.0)	427.0 (184.0)	516.0 (181.0)								
13	8.6 (7.8)	401.0 (159.0)	363.0 (149.0)	687.0 (228.0)								
14	13.0 (6.8)	360.0 (184.0)	323.0 (143.0)	519.0 (157.0)								
15	15.1 (5.3)	367.0 (228.0)	300.0 (169.0)	590.0 (261.0)								
16												
17									28.5 (16.8)	598.0 (272.0)	654.0 (313.0)	1190.0 (506.0)
18									29.6 (10.6)	497.0 (270.0)	488.0 (295.0)	1360.0 (456.0)
19									11.7 (6.7)	477.0 (195.0)	572.0 (279.0)	1430.0 (502.0)
20									12.3 (11.7)	699.0 (304.0)	916.0 (421.0)	1560.0 (576.0)
21									25.9 (26.8)	801.0 (715.0)	746.0 (397.0)	
22									43.5 (12.6)	745.0 (397.0)	665.0 (430.0)	442.0 (375.0)
23												
24	34.7 (12.6)	224.0 (196.0)	232.0 (154.0)	308.0 (125.0)								
25	6.2 (12.0)	397.0 (217.0)	390.0 (111.0)	829.0 (608.0)								
26	11.5 (9.1)	234.0 (164.0)	202.0 (137.0)	362.0 (155.0)								
27	4.4 (6.0)	392.0 (205.0)	332.0 (146.0)	406.0 (152.0)								
28	4.6 (8.7)	394.0 (239.0)	415.0 (167.0)	607.0 (472.0)								
29	8.4 (7.5)	288.0 (160.0)	323.0 (194.0)	519.0 (203.0)								
30	7.3 (6.8)	241.0 (173.0)	214.0 (96.4)	431.0 (210.0)								
Avg	16.9	420.0	337.0	522.0					25.3	636.0	674.0	1200.0
n	22	22	20	22	0	0	0	0	6	6	6	5
SD	13.2	101.0	64.20	174.00					10.9	122.0	135.00	396.00
Min	2.0	224.0	202.0	308.0					11.7	477.0	488.0	442.0
Max	58.7	562.0	444.0	988.0					43.5	801.0	916.0	1560.0

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Table E4. Daily means (SD) of PM concentration at site IA4B for May, 2009.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	10.3 (11.6)	443.0 (265.0)	360.0 (196.0)	640.0 (227.0)								
2	19.0 (8.0)	461.0 (298.0)	398.0 (266.0)	472.0 (251.0)								
3	22.2 (6.7)	393.0 (319.0)	274.0 (248.0)	423.0 (264.0)								
4	29.3 (12.7)	374.0 (287.0)	292.0 (255.0)	502.0 (241.0)								
5	25.8 (8.7)	296.0 (234.0)	209.0 (210.0)	347.0 (218.0)								
6	15.0 (7.7)	237.0 (196.0)	171.0 (146.0)	320.0 (218.0)								
7	12.6 (9.7)	296.0 (187.0)	249.0 (194.0)	484.0 (258.0)								
8	12.4 (9.2)	253.0 (140.0)	214.0 (125.0)	508.0 (207.0)								
9	8.3 (10.5)	356.0 (124.0)	255.0 (141.0)	755.0 (250.0)								
10	14.3 (6.5)	435.0 (171.0)	402.0 (193.0)	770.0 (282.0)								
11	21.3 (16.0)	402.0 (207.0)	355.0 (187.0)	540.0 (287.0)								
12	28.5 (17.2)	313.0 (187.0)	284.0 (164.0)	431.0 (236.0)								
13	18.1 (6.1)	208.0 (149.0)	216.0 (110.0)									
14	10.0 (5.6)	343.0 (221.0)	327.0 (159.0)	267.0 (759.0)								
15	7.1 (10.7)	259.0 (206.0)	282.0 (153.0)	286.0 (241.0)								
16	9.7 (8.5)	358.0 (210.0)	432.0 (171.0)	366.0 (164.0)								
17	9.8 (5.8)	413.0 (198.0)	399.0 (197.0)	335.0 (145.0)								
18	20.3 (11.6)	272.0 (170.0)	362.0 (199.0)	324.0 (185.0)								
19	25.0 (7.8)	213.0 (160.0)	328.0 (189.0)	230.0 (143.0)								
20	31.7 (10.0)	220.0 (192.0)	207.0 (167.0)	149.0 (107.0)								
21	50.5 (27.2)	237.0 (101.0)	253.0 (97.6)	129.0 (65.9)								
22	38.6 (17.9)	211.0 (95.2)	216.0 (98.5)	85.6 (70.6)								
23	31.2 (13.8)	169.0 (84.0)	165.0 (71.0)	55.8 (30.7)								
24	20.4 (8.9)	174.0 (69.7)	172.0 (62.7)	47.3 (22.4)								
25	19.3 (8.5)	241.0 (113.0)		76.3 (23.2)								
26	17.8 (10.5)	194.0 (124.0)		59.9 (29.1)								
27	3.7 (5.4)	214.0 (76.1)		71.7 (34.0)								
28	10.4 (6.5)	292.0 (157.0)		90.1 (43.8)								
29	18.5 (14.2)	265.0 (172.0)		79.3 (125.0)								
30	21.9 (7.3)	239.0 (190.0)		88.4 (65.2)								
31	28.8 (11.7)	285.0 (220.0)		108.0 (105.0)								
Avg	19.7	292.0	284.0	301.0								
n	31	31	24	30	0	0	0	0	0	0	0	0
SD	10.0	82.6	79.30	212.00								
Min	3.7	169.0	165.0	47.3								
Max	50.5	461.0	432.0	770.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for June, 2009.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	18.6 (7.3)	139.0 (82.9)		68.1 (38.7)								
2	10.1 (5.7)	213.0 (110.0)		194.0 (69.2)								
3	15.9 (10.6)	252.0 (168.0)		179.0 (103.0)								
4	22.3 (10.2)	303.0 (183.0)		192.0 (118.0)								
5	30.2 (6.8)	348.0 (273.0)		219.0 (113.0)								
6	22.6 (7.4)	228.0 (176.0)		198.0 (79.7)								
7	13.0 (9.8)	134.0 (116.0)		149.0 (69.0)								
8	8.7 (8.6)	168.0 (132.0)		153.0 (67.3)								
9	7.1 (13.8)	273.0 (262.0)		146.0 (126.0)								
10	17.0 (8.4)	236.0 (242.0)										
11	18.8 (10.2)	203.0 (171.0)										
12												
13												
14												
15												
16												
17	13.4 (9.6)	146.0 (84.0)	136.0 (74.3)	76.3 (44.2)								
18												
19									26.7 (34.6)	241.0 (87.8)	179.0 (95.8)	99.9 (96.1)
20									20.1 (6.3)	286.0 (104.0)	182.0 (82.1)	146.0 (94.6)
21									18.3 (8.0)	185.0 (77.3)	140.0 (56.1)	93.8 (49.5)
22									23.4 (14.8)	148.0 (75.6)	258.0 (137.0)	97.7 (37.2)
23									25.5 (12.5)	86.3 (62.1)	219.0 (182.0)	267.0 (232.0)
24									18.7 (5.2)	111.0 (68.1)	190.0 (91.3)	330.0 (223.0)
25												
26	22.6 (8.3)	202.0 (75.3)	145.0 (65.5)	121.0 (111.0)								
27	27.1 (9.0)	154.0 (60.1)	86.1 (32.2)	145.0 (62.9)								
28	22.6 (9.1)	238.0 (114.0)	225.0 (106.0)	255.0 (117.0)								
29	21.1 (6.2)	232.0 (127.0)	225.0 (129.0)	303.0 (97.0)								
30	19.6 (12.1)	243.0 (119.0)	234.0 (148.0)	320.0 (101.0)								
Avg	18.3	218.0	175.0	181.0					22.1	176.0	195.0	172.0
n	17	17	6	15	0	0	0	0	6	6	6	6
SD	6.1	57.2	55.90	69.90					3.3	70.0	36.40	92.50
Min	7.1	134.0	86.1	68.1					18.3	86.3	140.0	93.8
Max	30.2	348.0	234.0	320.0					26.7	286.0	258.0	330.0

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Table E4. Daily means (SD) of PM concentration at site IA4B for July, 2009.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	21.7 (8.1)	184.0 (92.4)	172.0 (77.1)	289.0 (99.0)								
2	27.1 (10.3)	194.0 (106.0)	201.0 (113.0)	241.0 (121.0)								
3	34.5 (10.8)	168.0 (113.0)	172.0 (91.6)	214.0 (153.0)								
4	6.0 (6.0)	128.0 (70.3)	144.0 (60.3)	330.0 (92.2)								
5	12.4 (5.2)	148.0 (99.3)	183.0 (108.0)	250.0 (156.0)								
6	20.0 (8.4)	143.0 (105.0)	162.0 (97.1)	234.0 (130.0)								
7	16.7 (9.5)	130.0 (87.0)	136.0 (91.8)	235.0 (134.0)								
8	8.6 (5.1)	138.0 (94.3)	180.0 (88.0)	238.0 (121.0)								
9	15.4 (6.3)	157.0 (109.0)	198.0 (84.2)	302.0 (194.0)								
10	13.7 (7.2)	89.7 (75.1)	169.0 (102.0)	169.0 (110.0)								
11	13.1 (6.4)	107.0 (100.0)	199.0 (124.0)	215.0 (147.0)								
12	14.1 (6.3)	126.0 (86.3)	138.0 (71.8)	302.0 (159.0)								
13	17.4 (5.6)	117.0 (92.1)	130.0 (87.9)	263.0 (175.0)								
14	23.6 (9.8)	86.1 (74.2)	76.3 (60.9)	212.0 (133.0)								
15												
16												
17					2.7 (4.7)	12.5 (8.1)	34.3 (17.9)	52.7 (16.4)				
18					2.9 (4.6)	16.1 (24.7)	24.0 (9.2)	43.9 (14.1)				
19					4.5 (4.6)	15.6 (20.9)	22.2 (10.4)	44.5 (17.8)				
20					6.3 (4.2)	14.4 (10.9)	19.3 (7.7)	39.2 (17.3)				
21					6.8 (4.7)	11.4 (8.5)	17.5 (7.8)					
22					4.8 (4.9)	9.0 (12.2)	18.0 (9.3)	10.5 (4.5)				
23					6.7 (5.3)	9.4 (8.2)	16.3 (6.1)	13.3 (5.5)				
24					8.4 (5.3)	7.5 (7.3)	14.3 (7.1)	16.9 (21.6)				
25					4.8 (4.6)	9.0 (7.0)	16.3 (7.9)	14.5 (12.9)				
26					5.3 (4.0)	7.8 (6.9)	18.6 (9.1)	16.0 (15.0)				
27					7.8 (5.1)	7.5 (6.3)	15.6 (8.5)	22.4 (17.9)				
28					7.2 (5.5)	6.6 (6.6)	16.0 (7.7)	24.3 (46.4)				
29					6.1 (5.7)	10.1 (8.5)	18.1 (11.3)	24.7 (8.4)				
30												
31	29.3 (27.5)	224.0 (131.0)	212.0 (125.0)	207.0 (104.0)								
Avg	18.2	143.0	165.0	247.0	5.7	10.5	19.3	26.9				
n	15	15	15	15	13	13	13	12	0	0	0	0
SD	7.6	36.9	34.20	41.90	1.7	3.1	5.00	13.80				
Min	6.0	86.1	76.3	169.0	2.7	6.6	14.3	10.5				
Max	34.5	224.0	212.0	330.0	8.4	16.1	34.3	52.7				

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Table E4. Daily means (SD) of PM concentration at site IA4B for August, 2009.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	21.3 (13.9)	186.0 (78.4)	165.0 (66.0)	298.0 (147.0)								
2	22.8 (6.1)	163.0 (148.0)	174.0 (163.0)	260.0 (122.0)								
3	16.8 (9.6)	106.0 (56.4)	93.8 (40.6)	251.0 (98.5)								
4	25.8 (8.9)	141.0 (68.4)	115.0 (46.4)	254.0 (126.0)								
5	23.3 (10.5)	207.0 (117.0)	195.0 (127.0)	372.0 (123.0)								
6	28.6 (6.1)	175.0 (93.8)	154.0 (121.0)	356.0 (189.0)								
7	21.5 (10.7)	102.0 (83.2)	97.1 (64.3)									
8	26.5 (8.9)	70.3 (41.6)	60.8 (33.5)	93.0 (52.8)								
9	12.0 (10.2)	81.2 (64.3)	72.7 (44.2)	146.0 (135.0)								
10	13.5 (6.1)	98.0 (66.0)	101.0 (53.0)	228.0 (151.0)								
11	22.3 (12.2)	116.0 (83.3)	131.0 (71.4)	246.0 (195.0)								
12	22.9 (5.3)	107.0 (75.8)	99.4 (51.1)	173.0 (136.0)								
13	30.9 (21.0)	94.7 (95.1)	93.1 (45.5)	162.0 (94.7)								
14	33.1 (9.8)	91.2 (82.2)	80.9 (46.1)	182.0 (89.3)								
15	35.4 (11.3)	113.0 (90.2)	90.0 (51.3)	222.0 (117.0)								
16	15.4 (13.3)	70.3 (68.9)	61.2 (41.4)	159.0 (107.0)								
17	16.1 (10.0)	85.6 (71.8)	76.7 (44.6)	148.0 (99.1)								
18	24.3 (12.2)	165.0 (107.0)	158.0 (90.7)	201.0 (168.0)								
19	12.1 (8.6)	90.7 (98.6)	80.6 (68.9)	140.0 (174.0)								
20	12.8 (5.8)	163.0 (101.0)	141.0 (72.3)	379.0 (201.0)								
21	13.5 (10.4)	232.0 (96.2)	203.0 (103.0)	569.0 (245.0)								
22	9.1 (4.8)	252.0 (142.0)	209.0 (126.0)	524.0 (239.0)								
23	16.4 (6.0)	203.0 (131.0)	159.0 (110.0)	439.0 (265.0)								
24	23.8 (8.8)	146.0 (105.0)	123.0 (83.1)	366.0 (308.0)								
25	31.5 (15.3)	135.0 (63.4)	100.0 (40.4)	267.0 (175.0)								
26	6.1 (6.3)	87.6 (51.0)	63.3 (22.7)	156.0 (85.4)								
27	1.6 (4.6)	113.0 (60.3)	118.0 (55.1)	369.0 (213.0)								
28	12.8 (5.6)	147.0 (66.5)	131.0 (66.8)									
29	13.8 (8.8)	275.0 (119.0)	253.0 (144.0)	0.7 (43.2)								
30	9.1 (6.7)	301.0 (154.0)	305.0 (160.0)	12.9 (36.8)								
31	12.8 (5.1)	274.0 (168.0)	260.0 (175.0)	95.1 (176.0)								
Avg	19.0	148.0	134.0	244.0								
n	31	31	31	29	0	0	0	0	0	0	0	0
SD	8.2	64.3	61.40	134.00								
Min	1.6	70.3	60.8	0.7								
Max	35.4	301.0	305.0	569.0								

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Table E4. Daily means (SD) of PM concentration at site IA4B for September, 2009.

Day	PM_{10} concentration, µg·dsm^{-3}				$PM_{2.5}$ concentration, µg·dsm^{-3}				TSP concentration, µg·dsm^{-3}			
	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing	Inlet	Barn 1	Barn 2	Farrowing
1	18.4 (12.1)	254.0 (156.0)	223.0 (153.0)	146.0 (104.0)								
2	19.5 (7.7)	215.0 (150.0)	188.0 (135.0)	152.0 (95.0)								
3	29.3 (14.7)	205.0 (150.0)	197.0 (140.0)	179.0 (85.2)								
4	33.5 (11.5)	180.0 (131.0)		172.0 (122.0)								
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
Avg	25.2	213.0	203.0	162.0								
n	4	4	3	4	0	0	0	0	0	0	0	0
SD	6.4	26.4	14.80	13.70								
Min	18.4	180.0	188.0	146.0								
Max	33.5	254.0	223.0	179.0								

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Table E5. NH_3 Concentrations

Table E5. Daily means (SD) of PM10 emissions at site IA4B for July, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31	114 (172)	53 (80)	112 (169)	225 (339)								
Avg												
n	1	1	1	1	0	0	0	0	0	0	0	0
SD												
Min												
Max												

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for August, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	79 (152)	37 (71)	78 (150)	155 (300)								
2	28 (179)	13 (84)	28 (176)	55 (353)								
3	105 (267)	49 (124)	103 (262)	206 (525)								
4	140 (191)	65 (89)	138 (187)	276 (375)								
5												
6	62 (186)	29 (86)	60 (182)	121 (365)								
7	81 (273)	38 (127)	79 (268)	159 (536)								
8	115 (160)	53 (74)	112 (156)	225 (313)								
9	213 (284)	99 (132)	209 (277)	418 (555)								
10	296 (283)	138 (131)	289 (276)	579 (553)								
11												
12												
13												
14												
15												
16												
17	368 (334)	171 (155)	357 (324)	716 (650)								
18	167 (152)	78 (71)	162 (147)	324 (295)	348 (430)	162 (200)	307 (380)	616 (761)				
19	150 (129)	70 (60)	145 (125)	291 (251)	8 (116)	4 (54)	7 (102)	15 (205)				
20	86 (145)	40 (68)	84 (141)	168 (282)	123 (256)	57 (119)	108 (226)	217 (453)				
21												
22	146 (134)	68 (63)	142 (130)	284 (260)	233 (245)	108 (114)	205 (216)	411 (432)	11 (8)	77 (61)	444 (349)	826 (650)
23	105 (172)	49 (80)	102 (167)	204 (334)	318 (205)	148 (96)	280 (181)	561 (363)	6 (6)	39 (43)	227 (248)	419 (458)
24	134 (194)	62 (90)	129 (187)	258 (376)	317 (189)	148 (88)	279 (167)	559 (334)	6 (6)	46 (43)	263 (249)	481 (456)
25	246 (186)	115 (86)	238 (179)	476 (359)	477 (257)	222 (120)	419 (226)	840 (453)	17 (11)	124 (76)	715 (436)	1300 (791)
26	158 (139)	73 (65)	152 (134)	304 (269)	428 (196)	199 (91)	376 (173)	753 (346)	14 (10)	98 (74)	566 (425)	1020 (764)
27												
28												
29	295 (189)	137 (88)	284 (181)	569 (363)	349 (186)	162 (86)	306 (163)	613 (326)	11 (9)	81 (67)	466 (386)	819 (679)
30	339 (241)	158 (112)	326 (232)	654 (464)	461 (282)	214 (131)	403 (247)	809 (495)	19 (15)	135 (105)	777 (607)	1360 (1060)
31												
Avg	166	77	161	322	306	142	269	539	12	86	494	888
n	20	20	20	20	10	10	10	10	7	7	7	7
SD	94.0	43.7	90.70	182.00	141.0	65.7	124.00	248.00	4.7	33.6	194.00	338.00
Min	28	13	28	55	8	4	7	15	6	39	227	419
Max	368	171	357	716	477	222	419	840	19	135	777	1360

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for September, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	300 (230)	140 (107)	288 (221)	578 (443)	329 (239)	153 (111)	287 (209)	575 (419)	15 (12)	110 (90)	636 (516)	1100 (893)
2	308 (219)	143 (102)	295 (210)	592 (421)	307 (200)	143 (93)	268 (175)	537 (350)	12 (12)	86 (88)	498 (506)	855 (868)
3	265 (246)	123 (114)	254 (235)	510 (472)	298 (210)	139 (98)	260 (183)	521 (367)	9 (11)	68 (78)	391 (450)	666 (767)
4	177 (285)	82 (132)	169 (273)	339 (546)	248 (181)	115 (84)	216 (158)	433 (316)				
5	34 (164)	16 (76)	32 (157)	65 (314)	245 (183)	114 (85)	213 (160)	428 (320)				
6	156 (185)	73 (86)	149 (177)	299 (354)	397 (236)	185 (110)	346 (205)	693 (411)				
7												
8									5 (6)	37 (45)	216 (257)	423 (503)
9									9 (11)	67 (77)	385 (443)	743 (854)
10									13 (16)	91 (113)	526 (650)	1010 (1240)
11									24 (29)	176 (206)	1020 (1190)	1920 (2250)
12									22 (26)	161 (189)	930 (1090)	1750 (2050)
13									17 (16)	124 (115)	716 (664)	1330 (1240)
14									12 (12)	85 (90)	487 (518)	899 (957)
15									15 (16)	109 (118)	629 (683)	1150 (1250)
16									18 (14)	129 (104)	742 (599)	1350 (1090)
17												
18									8 (13)	59 (92)	338 (530)	604 (946)
19									16 (10)	113 (72)	653 (413)	1160 (731)
20									14 (15)	98 (111)	564 (642)	991 (1130)
21												
22									30 (21)	219 (150)	1260 (864)	2190 (1500)
23												
24												
25									23 (16)	165 (118)	952 (683)	1610 (1160)
26									38 (27)	277 (193)	1600 (1110)	2940 (2020)
27	816 (404)	380 (188)	786 (389)	1580 (780)	830 (447)	386 (208)	728 (392)	1460 (786)				
28	962 (566)	448 (263)	927 (545)	1860 (1090)	965 (521)	449 (243)	847 (458)	1700 (917)				
29	669 (570)	311 (265)	645 (549)	1290 (1100)	897 (442)	417 (205)	788 (388)	1580 (777)	6 (16)	45 (117)	258 (677)	507 (1330)
30	451 (470)	210 (219)	434 (453)	871 (909)	677 (407)	315 (189)	595 (357)	1190 (716)	18 (43)	130 (309)	752 (1780)	1450 (3430)
Avg	414	193	398	798	519	241	455	911	16	117	677	1230
n	10	10	10	10	10	10	10	10	20	20	20	20
SD	290.0	135.0	280.00	561.00	275.0	128.0	242.00	486.00	8.0	57.9	334.00	605.00
Min	34	16	32	65	245	114	213	428	5	37	216	423
Max	962	448	927	1860	965	449	847	1700	38	277	1600	2940

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for October, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	596 (440)	277 (205)	575 (424)	1150 (850)	628 (295)	292 (137)	552 (260)	1110 (520)	14 (23)	100 (167)	575 (962)	1200 (2010)
2	497 (701)	231 (326)	480 (676)	962 (1360)	547 (293)	254 (136)	481 (258)	964 (517)				
3	663 (573)	308 (266)	640 (553)	1280 (1110)	770 (490)	358 (228)	677 (431)	1360 (864)	39 (36)	283 (262)	1630 (1510)	3350 (3110)
4	526 (481)	245 (224)	509 (465)	1020 (932)	644 (408)	300 (190)	567 (359)	1140 (720)	30 (33)	213 (239)	1230 (1380)	2510 (2800)
5	361 (438)	168 (204)	348 (423)	698 (849)	622 (370)	290 (172)	548 (326)	1100 (652)				
6	241 (231)	112 (107)	233 (223)	468 (448)	574 (241)	267 (112)	506 (212)	1010 (426)				
7	205 (245)	95 (114)	198 (237)	397 (475)	426 (148)	198 (69)	376 (130)	754 (261)	12 (5)	83 (37)	481 (214)	951 (424)
8	720 (685)	335 (319)	697 (663)	1400 (1330)	664 (473)	309 (220)	586 (417)	1170 (836)	32 (23)	232 (164)	1340 (946)	2620 (1860)
9	855 (393)	398 (183)	828 (380)	1660 (762)					35 (25)	254 (177)	1470 (1020)	2850 (1980)
10	830 (369)	386 (172)	804 (357)	1610 (715)					41 (35)	296 (252)	1710 (1450)	3290 (2800)
11	945 (510)	439 (237)	914 (493)	1830 (989)	1070 (396)	496 (184)	940 (349)	1880 (700)	44 (37)	318 (264)	1830 (1520)	3500 (2900)
12	923 (475)	429 (221)	893 (460)	1790 (922)	954 (515)	444 (239)	842 (454)	1690 (910)	41 (30)	294 (220)	1700 (1270)	3210 (2400)
13	565 (355)	263 (165)	547 (343)	1100 (688)	607 (289)	282 (135)	536 (255)	1070 (512)	33 (27)	236 (196)	1360 (1130)	2560 (2130)
14	365 (211)	170 (98)	353 (204)	707 (409)	518 (193)	241 (90)	457 (171)	915 (342)	29 (28)	209 (203)	1210 (1170)	2250 (2180)
15	418 (416)	194 (194)	404 (403)	810 (808)	542 (279)	252 (130)	478 (246)	958 (492)	25 (35)	183 (250)	1050 (1440)	1950 (2670)
16	512 (333)	238 (155)	495 (322)	993 (646)	573 (332)	267 (154)	506 (293)	1010 (587)	25 (23)	178 (164)	1030 (947)	1880 (1740)
17	433 (307)	201 (143)	418 (297)	839 (594)	578 (324)	269 (151)	509 (286)	1020 (572)	51 (48)	366 (349)	2110 (2010)	3850 (3670)
18	351 (262)	163 (122)	340 (253)	681 (508)								
19	601 (327)	280 (152)	582 (316)	1170 (633)	726 (391)	338 (182)	640 (345)	1280 (690)				
20	477 (391)	222 (182)	461 (378)	924 (758)	682 (423)	317 (197)	601 (373)	1210 (747)	4 (12)	28 (89)		
21	515 (358)	240 (167)	498 (346)	998 (694)	597 (383)	278 (178)	526 (337)	1050 (676)	3 (10)	21 (71)		
22	511 (345)	238 (161)	494 (334)	991 (669)	626 (388)	291 (180)	552 (342)	1110 (685)	6 (15)	43 (106)	247 (609)	485 (1190)
23	416 (271)	193 (126)	402 (262)	806 (525)	769 (454)	358 (211)	678 (400)	1360 (802)	12 (20)	85 (141)	491 (813)	947 (1570)
24	440 (375)	205 (174)	425 (362)	852 (726)	864 (539)	402 (251)	761 (475)	1530 (952)	25 (35)	179 (256)	1030 (1470)	1980 (2820)
25	505 (353)	235 (164)	488 (342)	978 (685)	853 (403)	397 (187)	751 (355)	1510 (711)	43 (56)	307 (406)	1770 (2340)	3350 (4430)
26	529 (217)	246 (101)	511 (209)	1020 (420)	865 (300)	403 (140)	762 (265)	1530 (530)	28 (28)	202 (199)	1170 (1150)	2190 (2150)
27												
28												
29	560 (240)	261 (112)	541 (232)	1090 (466)	749 (380)	348 (177)	659 (335)	1320 (671)	25 (26)	181 (186)	1050 (1070)	1910 (1970)
30	519 (264)	241 (123)	501 (255)	1000 (511)	675 (342)	314 (159)	594 (301)	1190 (604)	28 (31)	204 (222)	1180 (1280)	2130 (2330)
31	587 (316)	273 (147)	567 (305)	1140 (612)	748 (412)	348 (192)	659 (363)	1320 (727)	30 (24)	214 (169)	1230 (978)	2220 (1760)
Avg	540	251	522	1050	687	320	606	1210	27	196	1220	2330
n	29	29	29	29	26	26	26	26	24	24	22	22
SD	178.0	82.6	172.00	344.00	143.0	66.5	126.00	253.00	12.9	93.1	466.00	882.00
Min	205	95	198	397	426	198	376	754	3	21	247	485
Max	945	439	914	1830	1070	496	940	1880	51	366	2110	3850

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for November, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1	532 (351)	248 (163)	514 (339)	1030 (679)	759 (397)	353 (185)	668 (349)	1340 (700)	27 (32)	198 (234)	1140 (1350)	2050 (2420)
2	533 (302)	248 (141)	514 (292)	1030 (585)	873 (441)	406 (205)	768 (388)	1540 (779)	30 (32)	218 (233)	1260 (1350)	2240 (2390)
3	585 (293)	272 (136)	565 (283)	1130 (568)	956 (512)	445 (238)	842 (451)	1690 (903)	35 (39)	252 (281)	1460 (1620)	2570 (2860)
4	564 (382)	262 (178)	544 (369)	1090 (739)	981 (804)	456 (374)	863 (707)	1730 (1420)	37 (35)	265 (253)	1530 (1460)	2670 (2550)
5	592 (269)	275 (125)	572 (260)	1150 (521)					37 (28)	268 (199)	1540 (1150)	2680 (2000)
6	529 (228)	246 (106)	511 (220)	1020 (441)	734 (254)	342 (118)	646 (224)	1290 (448)	27 (29)	195 (208)	1120 (1200)	1940 (2070)
7					667 (243)	310 (113)	586 (214)	1180 (429)	33 (40)	237 (287)	1370 (1660)	2340 (2830)
8	510 (272)	237 (127)	492 (263)	986 (527)	820 (261)	382 (122)	721 (230)	1450 (461)	39 (47)	281 (339)	1620 (1950)	2750 (3310)
9	547 (339)	254 (158)	528 (328)	1060 (656)	887 (518)	413 (241)	780 (456)	1560 (914)	19 (28)	139 (203)	803 (1170)	1350 (1970)
10	570 (343)	265 (159)	550 (331)	1100 (663)	581 (507)	270 (236)	511 (446)	1020 (893)	10 (14)	74 (104)	425 (598)	710 (999)
11	490 (374)	228 (174)	472 (361)	947 (723)	634 (513)	295 (239)	557 (451)	1120 (904)	18 (24)	127 (173)	731 (1000)	1220 (1670)
12	598 (429)	278 (199)	577 (414)	1160 (829)	604 (582)	281 (271)	531 (511)	1060 (1030)				
13	398 (250)	185 (116)	384 (241)	770 (483)	854 (590)	397 (274)	751 (519)	1500 (1040)	6 (10)	46 (68)		
14	425 (296)	198 (138)	410 (286)	822 (573)	763 (577)	355 (269)	670 (507)	1340 (1020)	10 (14)	75 (103)		
15	494 (348)	230 (162)	476 (336)	954 (673)	860 (798)	400 (371)	755 (701)	1510 (1410)	28 (39)	202 (279)	1160 (1610)	2270 (3130)
16	531 (231)	247 (107)	512 (222)	1030 (446)	936 (667)	435 (310)	822 (586)	1650 (1170)	40 (53)	286 (382)	1650 (2200)	3180 (4250)
17	495 (207)	230 (96)	477 (199)	956 (399)	606 (438)	282 (204)	532 (384)	1070 (770)	22 (28)	156 (203)	900 (1170)	1720 (2230)
18	433 (191)	202 (89)	418 (184)	837 (369)	822 (383)	382 (178)	722 (337)	1450 (675)	15 (21)	106 (152)	610 (876)	1150 (1660)
19	406 (212)	189 (99)	391 (204)	784 (409)	805 (383)	374 (178)	707 (336)	1420 (674)	28 (63)	205 (455)	1180 (2630)	2210 (4930)
20	464 (265)	216 (123)	447 (255)	895 (511)	903 (470)	420 (219)	793 (413)	1590 (828)	25 (27)	179 (193)	1030 (1110)	1920 (2070)
21	452 (208)	210 (97)	435 (201)	872 (402)	803 (374)	373 (174)	705 (329)	1410 (659)	24 (31)	175 (227)	1010 (1310)	1860 (2420)
22												
23	509 (252)	237 (117)	490 (243)	982 (486)	862 (559)	401 (260)	756 (490)	1520 (983)	24 (32)	175 (232)	1010 (1340)	1830 (2430)
24	516 (259)	240 (121)	497 (250)	996 (501)	883 (525)	411 (244)	775 (461)	1550 (923)	28 (36)	202 (262)	1160 (1510)	2090 (2720)
25	464 (238)	216 (111)	447 (230)	896 (460)	853 (525)	397 (244)	749 (461)	1500 (923)	22 (29)	162 (211)	935 (1220)	1670 (2180)
26	467 (296)	217 (138)	449 (285)	900 (571)	885 (627)	412 (291)	776 (550)	1560 (1100)	24 (33)	173 (237)	995 (1370)	1760 (2420)
27	429 (265)	200 (123)	413 (255)	828 (512)	849 (683)	395 (318)	745 (599)	1490 (1200)	19 (29)	140 (207)	809 (1200)	1420 (2100)
28	431 (343)	200 (160)	414 (330)	830 (662)	756 (656)	351 (305)	663 (575)	1330 (1150)	23 (31)	167 (220)	964 (1270)	1680 (2220)
29												
30												
Avg	499	232	481	964	805	374	707	1420	25	181	1100	1970
n	26	26	26	26	26	26	26	26	26	26	24	24
SD	57.5	26.8	55.90	112.00	109.0	50.6	95.50	191.00	8.7	62.5	311.00	563.00
Min	398	185	384	770	581	270	511	1020	6	46	425	710
Max	598	278	577	1160	981	456	863	1730	40	286	1650	3180

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for December, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29					843 (791)	392 (368)	775 (728)	1550 (1460)	4 (5)	29 (39)	166 (226)	320 (436)
30	636 (255)	296 (119)	643 (258)	1290 (518)	1080 (703)	503 (327)	996 (648)	2000 (1300)	4 (3)	32 (18)	182 (106)	348 (202)
31	558 (289)	260 (135)	566 (293)	1130 (588)					7 (10)	53 (69)	305 (398)	579 (754)
Avg	597	278	605	1210	962	447	886	1780	5	38	218	416
n	2	2	2	2	2	2	2	2	3	3	3	3
SD	38.9	18.1	38.70	77.50	119.0	55.3	111.00	222.00	1.5	10.8	62.30	116.00
Min	558	260	566	1130	843	392	775	1550	4	29	166	320
Max	636	296	643	1290	1080	503	996	2000	7	53	305	579

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for January, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	496 (214)	231 (100)	504 (218)	1010 (436)					11 (19)	82 (134)	474 (773)	899 (1460)
2	586 (300)	272 (139)	597 (305)	1200 (612)	780 (523)	363 (243)	724 (486)	1450 (974)	5 (7)	39 (53)	223 (304)	418 (570)
3					899 (607)	418 (282)	837 (565)	1680 (1130)	4 (3)	27 (22)	157 (128)	292 (239)
4												
5	727 (290)	338 (135)	746 (298)	1500 (597)	977 (404)	454 (188)	914 (378)	1830 (758)				
6	659 (273)	307 (127)	679 (281)	1360 (563)	963 (331)	448 (154)	903 (310)	1810 (622)				
7	663 (241)	308 (112)	684 (249)	1370 (499)	976 (386)	454 (180)	918 (363)	1840 (728)				
8	609 (291)	283 (135)	631 (301)	1260 (603)	952 (430)	443 (200)	898 (406)	1800 (813)	19 (24)	133 (171)	769 (987)	1370 (1760)
9	581 (219)	270 (102)	603 (227)	1210 (455)	898 (424)	418 (197)	849 (400)	1700 (802)	19 (28)	135 (203)	778 (1170)	1380 (2070)
10	614 (345)	286 (160)	638 (358)	1280 (718)	1000 (438)	465 (204)	947 (415)	1900 (831)	18 (26)	129 (189)	745 (1090)	1310 (1920)
11	655 (278)	305 (129)	682 (289)	1370 (580)	1030 (402)	479 (187)	977 (381)	1960 (764)	20 (27)	141 (195)	815 (1130)	1420 (1970)
12	567 (236)	264 (110)	592 (246)	1190 (494)	984 (418)	457 (194)	935 (397)	1870 (796)	23 (31)	166 (225)	956 (1300)	1660 (2250)
13	557 (259)	259 (121)	582 (271)	1170 (543)	971 (358)	452 (166)	925 (341)	1850 (683)	26 (38)	188 (273)	1090 (1580)	1870 (2710)
14	575 (268)	267 (125)	602 (280)	1210 (562)					25 (33)	182 (238)	1050 (1370)	1790 (2340)
15					858 (512)	399 (238)	820 (490)	1640 (981)	18 (50)	130 (361)	751 (2080)	1270 (3530)
16					836 (420)	389 (195)	801 (402)	1610 (805)	13 (29)	94 (212)	542 (1230)	975 (2180)
17	656 (343)	305 (160)	691 (361)	1380 (724)					9 (45)	66 (324)		
18	682 (462)	317 (215)	720 (488)	1440 (978)								
19	509 (174)	237 (81)	538 (184)	1080 (369)					1 (1)	10 (7)	57 (40)	111 (78)
20	512 (216)	238 (100)	543 (229)	1090 (459)	804 (439)	374 (204)	776 (424)	1560 (850)	3 (2)	24 (12)	140 (67)	271 (129)
21	527 (207)	245 (96)	560 (220)	1120 (441)	467 (281)	217 (130)	451 (271)	905 (544)	9 (11)	61 (80)	354 (461)	678 (881)
22	625 (423)	290 (197)	664 (450)	1330 (902)					14 (20)	103 (143)	594 (826)	1130 (1570)
23	649 (307)	302 (143)	692 (327)	1390 (655)					21 (34)	153 (244)	884 (1410)	1660 (2640)
24	569 (291)	265 (135)	607 (311)	1220 (623)					19 (22)	137 (155)	790 (895)	1470 (1670)
25									15 (17)	107 (125)	617 (720)	1140 (1330)
26	662 (271)	308 (126)	710 (290)	1420 (582)	930 (361)	433 (168)	909 (353)	1820 (707)	17 (27)	120 (198)	690 (1140)	1270 (2090)
27	642 (364)	299 (169)	690 (391)	1380 (783)	749 (405)	349 (189)	734 (397)	1470 (795)	16 (25)	117 (182)	677 (1050)	1230 (1910)
28	777 (387)	361 (180)	836 (417)	1680 (836)	524 (265)	244 (123)	514 (260)	1030 (522)				
29	603 (260)	280 (121)	650 (281)	1300 (563)								
30	581 (390)	270 (182)	628 (422)	1260 (845)					21 (78)	151 (567)	873 (3270)	1550 (5800)
31	557 (292)	259 (136)	603 (316)	1210 (634)	602 (339)	280 (158)	594 (335)	1190 (671)				
Avg	609	283	641	1290	852	397	812	1630	15	109	637	1140
n	26	26	26	26	19	19	19	19	23	23	22	22
SD	66.2	30.8	71.40	143.00	160.0	74.3	146.00	292.00	6.9	49.5	287.00	495.00
Min	496	231	504	1010	467	217	451	905	1	10	57	111
Max	777	361	836	1680	1030	479	977	1960	26	188	1090	1870

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for February, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1	669 (279)	311 (130)	726 (303)	1460 (607)	723 (296)	336 (138)	714 (293)	1430 (586)				
2	716 (299)	333 (139)	778 (325)	1560 (652)	671 (197)	312 (92)	665 (195)	1330 (391)				
3	716 (298)	333 (139)	780 (325)	1560 (651)	450 (224)	209 (104)	447 (222)	896 (445)				
4	632 (239)	294 (111)	689 (261)	1380 (523)	388 (213)	181 (99)	386 (212)	774 (426)				
5	554 (269)	258 (125)	606 (294)	1210 (589)								
6	555 (286)	258 (133)	609 (313)	1220 (628)								
7	699 (290)	325 (135)	767 (319)	1540 (639)	638 (259)	297 (120)	638 (259)	1280 (519)				
8	772 (299)	359 (139)	849 (329)	1700 (659)	628 (201)	292 (94)	630 (202)	1260 (405)				
9	664 (342)	309 (159)	731 (376)	1460 (754)								
10	622 (276)	289 (128)	683 (303)	1370 (606)								
11	536 (225)	249 (105)	588 (246)	1180 (494)	352 (328)	164 (153)	351 (328)	704 (657)				
12	481 (294)	224 (137)	527 (322)	1060 (645)								
13	427 (246)	199 (114)	466 (268)	934 (537)	608 (407)	283 (189)	605 (405)	1210 (813)				
14												
15	647 (259)	301 (120)	703 (281)	1410 (564)								
16	595 (257)	277 (120)	645 (279)	1290 (559)	594 (308)	276 (143)	587 (305)	1180 (611)				
17	544 (246)	253 (115)	589 (267)	1180 (535)								
18												
19												
20												
21					761 (528)	354 (245)	745 (517)	1490 (1040)				
22					954 (381)	444 (177)	933 (372)	1870 (746)	34 (54)	247 (391)	1420 (2260)	2510 (3990)
23					949 (344)	441 (160)	926 (336)	1860 (673)	31 (42)	225 (303)	1300 (1750)	2280 (3070)
24												
25												
26												
27												
28												
29												
Avg	614	286	671	1340	643	299	636	1270	33	236	1360	2400
n	16	16	16	16	12	12	12	12	2	2	2	2
SD	90.4	42.1	99.30	199.00	183.0	85.1	176.00	354.00	1.5	10.7	61.60	118.00
Min	427	199	466	934	352	164	351	704	31	225	1300	2280
Max	772	359	849	1700	954	444	933	1870	34	247	1420	2510

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for March, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1					570 (341)	265 (159)	549 (329)	1100 (659)				
2					552 (229)	257 (106)	530 (220)	1060 (441)				
3												
4					723 (382)	336 (178)	692 (366)	1390 (733)				
5												
6												
7												
8					751 (388)	349 (181)	713 (369)	1430 (739)				
9					883 (383)	411 (178)	838 (363)	1680 (728)				
10					831 (417)	386 (194)	788 (396)	1580 (793)				
11					691 (326)	321 (152)	656 (310)	1310 (621)				
12					630 (348)	293 (162)	598 (330)	1200 (662)				
13												
14												
15												
16												
17												
18												
19												
20												
21					583 (332)	271 (154)	554 (316)	1110 (633)				
22					498 (350)	232 (163)	473 (333)	949 (667)	5 (6)	33 (43)		
23									5 (7)	36 (49)	206 (280)	401 (545)
24					437 (269)	203 (125)	415 (255)	832 (512)	7 (11)	49 (80)	283 (460)	544 (882)
25					672 (404)	312 (188)	639 (385)	1280 (771)	13 (15)	93 (105)	536 (608)	1020 (1160)
26					514 (351)	239 (163)	489 (334)	979 (669)	22 (28)	161 (202)	929 (1160)	1750 (2190)
27					482 (314)	224 (146)	458 (299)	919 (599)	39 (55)	284 (400)	1640 (2310)	3050 (4310)
28					458 (349)	213 (162)	436 (332)	874 (666)	50 (70)	364 (509)	2100 (2940)	3880 (5420)
29					516 (262)	240 (122)	491 (249)	983 (500)	53 (63)	381 (455)	2200 (2620)	4030 (4800)
30	1010 (740)	468 (344)	1050 (772)	2110 (1550)	643 (297)	299 (138)	612 (283)	1230 (567)	51 (38)	366 (275)	2110 (1590)	3830 (2880)
31	685 (354)	319 (164)	715 (369)	1430 (740)	627 (297)	292 (138)	597 (282)	1200 (566)	38 (36)	277 (261)	1600 (1500)	2880 (2700)
Avg	846	393	883	1770	614	286	585	1170	28	204	1290	2370
n	2	2	2	2	18	18	18	18	10	10	9	9
SD	161.0	74.9	168.00	337.00	123.0	57.4	117.00	234.00	19.1	138.0	764.00	1390.00
Min	685	319	715	1430	437	203	415	832	5	33	206	401
Max	1010	468	1050	2110	883	411	838	1680	53	381	2200	4030

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for April, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1									34 (35)	243 (255)	1400 (1470)	2500 (2630)
2									45 (43)	324 (313)	1870 (1810)	3300 (3190)
3									39 (46)	285 (330)	1640 (1910)	2880 (3340)
4									45 (43)	326 (308)	1880 (1780)	3270 (3090)
5									37 (38)	265 (272)	1530 (1570)	2640 (2720)
6												
7												
8												
9	706 (268)	328 (125)	738 (280)	1480 (562)	498 (232)	232 (108)	474 (221)	951 (443)	51 (45)	368 (326)	2120 (1880)	3550 (3150)
10					248 (241)	115 (112)	236 (230)	473 (460)	39 (39)	282 (283)	1630 (1630)	2710 (2720)
11	706 (286)	328 (133)	737 (299)	1480 (599)					37 (33)	268 (236)	1550 (1360)	2550 (2250)
12	586 (241)	272 (112)	611 (251)	1230 (504)					47 (48)	336 (348)	1940 (2010)	3170 (3290)
13					909 (430)	423 (200)	865 (409)	1730 (819)	48 (58)	347 (416)	2000 (2400)	3260 (3910)
14					810 (476)	377 (221)	770 (452)	1540 (906)	56 (58)	405 (421)	2340 (2430)	3780 (3930)
15					495 (453)	230 (211)	470 (430)	943 (862)	46 (47)	333 (336)	1920 (1940)	3080 (3110)
16	704 (447)	327 (208)	733 (466)	1470 (934)	416 (300)	193 (139)	395 (284)	791 (570)	35 (43)	255 (310)	1470 (1790)	2620 (3130)
17	661 (386)	308 (179)	688 (401)	1380 (804)	858 (489)	399 (228)	814 (464)	1630 (930)				
18	565 (426)	263 (198)	588 (443)	1180 (888)	662 (377)	308 (175)	628 (357)	1260 (716)	2 (15)	17 (108)	101 (622)	197 (1210)
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
Avg	655	304	683	1370	612	285	581	1170	40	290	1670	2820
n	6	6	6	6	8	8	8	8	14	14	14	14
SD	58.5	27.2	61.60	123.00	220.0	103.0	209.00	419.00	12.1	87.7	506.00	820.00
Min	565	263	588	1180	248	115	236	473	2	17	101	197
Max	706	328	738	1480	909	423	865	1730	56	405	2340	3780

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for May, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4	289 (690)	134 (321)	298 (711)	596 (1420)					33 (31)	237 (225)	1370 (1300)	2340 (2220)
5	256 (764)	119 (355)	263 (787)	528 (1580)					53 (39)	382 (278)	2210 (1610)	3740 (2730)
6	398 (647)	185 (301)	409 (666)	820 (1340)					53 (36)	384 (260)	2210 (1500)	3730 (2530)
7	377 (439)	175 (204)	388 (452)	778 (906)					74 (40)	535 (289)	3090 (1670)	5170 (2790)
8	490 (615)	228 (286)	504 (633)	1010 (1270)					81 (55)	581 (393)	3350 (2270)	5590 (3780)
9	693 (695)	322 (323)	712 (714)	1430 (1430)					81 (61)	584 (438)	3370 (2530)	5580 (4180)
10	794 (563)	369 (262)	815 (578)	1630 (1160)								
11									42 (39)	302 (278)	1740 (1600)	2850 (2620)
12	782 (861)	364 (400)	801 (882)	1610 (1770)								
13	744 (842)	346 (392)	761 (862)	1530 (1730)								
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31	825 (549)	384 (255)	829 (551)	1660 (1100)								
Avg	565	263	578	1160					60	429	2480	4140
n	10	10	10	10	0	0	0	0	7	7	7	7
SD	214.0	99.4	216.00	433.00					17.8	129.0	742.00	1220.00
Min	256	119	263	528					33	237	1370	2340
Max	825	384	829	1660					81	584	3370	5590

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for June, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1	986 (1020)	459 (472)	989 (1020)	1980 (2040)								
2	686 (500)	319 (232)	688 (501)	1380 (1000)								
3	651 (567)	303 (263)	652 (567)	1310 (1140)								
4	410 (269)	191 (125)	410 (269)	821 (538)								
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
Avg	683	318	684	1370								
n	4	4	4	4	0	0	0	0	0	0	0	0
SD	205.0	95.2	206.00	412.00								
Min	410	191	410	821								
Max	986	459	989	1980								

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for July, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4					459 (358)	214 (166)	410 (320)	822 (641)				
5					347 (300)	162 (140)	310 (268)	622 (538)				
6					252 (319)	117 (148)	225 (284)	450 (570)				
7					126 (253)	58 (118)	112 (226)	225 (452)				
8					222 (302)	103 (141)	198 (269)	396 (540)				
9					371 (366)	173 (170)	331 (326)	663 (654)				
10					213 (246)	99 (114)	189 (219)	379 (439)				
11					203 (248)	94 (115)	180 (221)	361 (442)	58 (90)	416 (648)	2400 (3740)	4160 (6480)
12	1000 (724)	466 (337)	978 (707)	1960 (1420)	378 (392)	176 (182)	336 (349)	674 (699)	88 (58)	635 (416)	3670 (2400)	6320 (4130)
13	1020 (663)	476 (308)	1000 (647)	2000 (1300)	489 (423)	228 (197)	435 (376)	872 (754)	82 (58)	594 (419)	3430 (2420)	5870 (4140)
14	861 (775)	401 (360)	840 (756)	1680 (1520)	376 (396)	175 (184)	335 (352)	671 (705)	80 (72)	579 (523)	3340 (3020)	5680 (5120)
15	575 (552)	267 (257)	561 (538)	1120 (1080)	227 (273)	106 (127)	202 (242)	405 (486)	92 (56)	661 (403)	3810 (2320)	6430 (3920)
16	453 (493)	211 (229)	441 (480)	884 (962)	124 (215)	58 (100)	110 (191)	221 (383)				
17	555 (702)	258 (327)	540 (684)	1080 (1370)	191 (294)	89 (137)	169 (261)	340 (522)	12 (28)	89 (204)		
18	606 (493)	282 (229)	590 (480)	1180 (963)	266 (265)	124 (123)	236 (235)	473 (471)	22 (23)	155 (167)		
19	591 (477)	275 (222)	575 (465)	1150 (931)	220 (365)	102 (170)	195 (324)	391 (649)	26 (28)	189 (202)	1090 (1170)	1780 (1900)
20	650 (696)	302 (324)	632 (677)	1270 (1360)	256 (365)	119 (170)	227 (323)	456 (648)	22 (50)	155 (359)	897 (2070)	1590 (3680)
21	800 (641)	372 (298)	777 (623)	1560 (1250)	261 (406)	121 (189)	231 (360)	463 (721)	44 (42)	317 (306)	1830 (1770)	3500 (3380)
22	941 (1110)	438 (516)	914 (1080)	1830 (2160)	353 (326)	164 (152)	313 (288)	626 (578)	46 (33)	329 (241)	1900 (1390)	3610 (2640)
23	883 (380)	411 (177)	857 (369)	1720 (739)	383 (234)	178 (109)	339 (207)	680 (415)	44 (20)	318 (145)	1830 (838)	3450 (1580)
24												
25												
26					350 (151)	163 (70)	309 (133)	620 (267)	48 (24)	346 (174)	1990 (1000)	3660 (1840)
27					297 (221)	138 (103)	262 (195)	526 (391)	45 (29)	325 (207)	1880 (1190)	3420 (2170)
28					242 (164)	113 (77)	214 (145)	429 (291)	39 (18)	278 (130)	1610 (749)	2900 (1350)
29					174 (139)	81 (64)	154 (122)	308 (245)	30 (15)	215 (106)	1240 (609)	2220 (1090)
30					199 (127)	93 (59)	176 (112)	353 (224)	32 (21)	233 (152)	1340 (877)	2390 (1560)
31												
Avg	745	347	726	1450	279	130	248	497	48	343	2150	3800
n	12	12	12	12	25	25	25	25	17	17	15	15
SD	187.0	87.1	183.00	366.00	95.1	44.2	84.80	170.00	23.8	172.0	931.00	1550.00
Min	453	211	441	884	124	58	110	221	12	89	897	1590
Max	1020	476	1000	2000	489	228	435	872	92	661	3810	6430

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for August, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4												
5												
6												
7												
8												
9	694 (396)	323 (184)	668 (381)	1340 (764)	400 (264)	186 (123)	351 (231)	704 (464)	19 (11)	139 (79)	802 (453)	1560 (887)
10	714 (441)	332 (205)	688 (424)	1380 (851)	460 (250)	214 (116)	404 (219)	810 (440)	29 (16)	207 (113)	1190 (651)	2300 (1250)
11	740 (410)	344 (191)	712 (395)	1430 (791)	529 (294)	246 (137)	465 (258)	932 (518)	73 (99)	527 (713)	3040 (4120)	5800 (7860)
12	685 (325)	318 (151)	660 (313)	1320 (627)	416 (218)	194 (101)	366 (191)	733 (384)	31 (19)	225 (136)	1300 (787)	2460 (1490)
13	627 (402)	292 (187)	605 (387)	1210 (776)	404 (275)	188 (128)	355 (242)	712 (484)	25 (21)	183 (153)	1050 (883)	1980 (1660)
14	734 (438)	342 (204)	708 (422)	1420 (846)	462 (337)	215 (157)	406 (297)	814 (594)	25 (18)	177 (127)	1020 (735)	1900 (1370)
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30	634 (315)	295 (146)	615 (305)	1230 (611)	548 (350)	255 (163)	484 (309)	970 (620)	20 (11)	143 (82)	825 (472)	1590 (911)
31	522 (332)	243 (154)	506 (322)	1020 (645)	508 (261)	236 (121)	449 (230)	899 (462)	21 (12)	154 (85)	888 (490)	1700 (938)
Avg	669	311	645	1290	466	217	410	822	30	219	1270	2410
n	8	8	8	8	8	8	8	8	8	8	8	8
SD	67.7	31.5	64.10	128.00	53.8	25.0	48.10	96.40	16.6	120.0	690.00	1320.00
Min	522	243	506	1020	400	186	351	704	19	139	802	1560
Max	740	344	712	1430	548	255	484	970	73	527	3040	5800

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for September, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	370 (243)	172 (113)	359 (236)	720 (473)	302 (152)	140 (71)	267 (134)	535 (269)	42 (34)	301 (243)	1730 (1400)	3290 (2660)
2	374 (301)	174 (140)	363 (292)	728 (586)	389 (286)	181 (133)	344 (253)	690 (507)	55 (44)	396 (315)	2280 (1820)	4290 (3420)
3					694 (365)	323 (170)	614 (323)	1230 (648)	52 (62)	375 (450)	2160 (2590)	4030 (4840)
4					584 (318)	272 (148)	517 (282)	1040 (565)	26 (23)	185 (166)	1060 (957)	1970 (1770)
5					647 (330)	301 (154)	573 (292)	1150 (586)	38 (47)	274 (342)	1580 (1970)	2900 (3620)
6					628 (340)	292 (158)	557 (301)	1120 (603)	29 (25)	206 (178)	1190 (1030)	2170 (1870)
7					621 (322)	289 (150)	550 (286)	1100 (573)	32 (25)	233 (180)	1350 (1040)	2430 (1880)
8					578 (330)	269 (153)	512 (292)	1030 (586)	25 (25)	182 (177)	1050 (1020)	1880 (1830)
9					677 (422)	315 (196)	600 (374)	1200 (750)	33 (27)	236 (193)	1360 (1110)	2420 (1980)
10					543 (377)	252 (175)	482 (334)	966 (670)	32 (27)	230 (195)	1330 (1130)	2350 (1990)
11					220 (238)	102 (111)	195 (212)	392 (425)	22 (17)	155 (125)	894 (722)	1570 (1260)
12					211 (198)	98 (92)	188 (177)	376 (354)	27 (17)	193 (124)	1110 (718)	1940 (1250)
13					306 (247)	142 (115)	273 (220)	547 (442)	32 (15)	227 (107)	1310 (616)	2260 (1060)
14									44 (26)	320 (184)	1850 (1060)	3170 (1820)
15									47 (33)	337 (237)	1940 (1370)	3310 (2330)
16									37 (25)	266 (177)	1530 (1020)	2840 (1880)
17					490 (376)	228 (175)	440 (337)	881 (676)	45 (29)	323 (211)		
18												
19												
20												
21												
22												
23												
24	46 (632)	21 (294)	45 (622)	90 (1250)	469 (412)	218 (192)	425 (374)	852 (749)	26 (20)	186 (144)	1070 (829)	1980 (1530)
25	38 (128)	17 (59)	37 (126)	74 (252)	499 (438)	232 (204)	453 (397)	908 (796)	62 (42)	446 (306)	2570 (1770)	4710 (3240)
26	-25 (125)	-12 (58)	-25 (123)	-50 (246)	397 (384)	185 (179)	361 (349)	724 (699)				
27	-37 (139)	-17 (65)	-36 (137)	-73 (275)	505 (529)	235 (246)	460 (481)	922 (965)				
28	17 (183)	8 (85)	17 (180)	34 (361)	505 (388)	235 (181)	461 (354)	923 (709)				
29					457 (551)	212 (256)	417 (503)	836 (1010)				
30												
Avg	112	52	109	218	486	226	434	871	37	267	1520	2750
n	7	7	7	7	20	20	20	20	19	19	18	18
SD	167.0	77.7	162.00	325.00	141.0	65.6	125.00	250.00	11.0	79.3	463.00	871.00
Min	-37	-17	-36	-73	211	98	188	376	22	155	894	1570
Max	374	174	363	728	694	323	614	1230	62	446	2570	4710

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for October, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1	100 (113)	47 (52)	99 (111)	199 (223)	702 (492)	326 (229)	642 (450)	1290 (903)				
2	157 (482)	73 (224)	156 (478)	312 (958)	557 (435)	259 (203)	511 (399)	1020 (800)				
3	135 (494)	63 (230)	134 (490)	268 (982)	649 (529)	302 (246)	596 (486)	1190 (974)				
4	48 (77)	22 (36)	47 (76)	95 (153)	612 (380)	285 (177)	562 (349)	1130 (700)	31 (25)	227 (181)	1310 (1040)	2250 (1790)
5					462 (385)	215 (179)	425 (354)	853 (710)	28 (26)	204 (189)	1180 (1090)	2000 (1850)
6	-41 (123)	-19 (57)	-41 (122)	-82 (244)	346 (234)	161 (109)	319 (216)	640 (432)	35 (17)	251 (119)	1450 (687)	2440 (1160)
7					470 (259)	219 (121)	434 (239)	870 (480)	35 (22)	252 (155)	1450 (894)	2430 (1500)
8					636 (434)	296 (202)	588 (401)	1180 (804)	35 (30)	255 (218)	1470 (1260)	2440 (2100)
9					705 (505)	328 (235)	653 (468)	1310 (937)	30 (28)	215 (205)	1240 (1180)	2050 (1950)
10	110 (122)	51 (57)	110 (122)	220 (244)	705 (461)	328 (214)	654 (428)	1310 (857)	37 (32)	264 (234)	1520 (1350)	2500 (2210)
11	57 (94)	26 (44)	57 (93)	114 (187)	583 (452)	271 (210)	541 (419)	1080 (840)	29 (24)	212 (171)	1220 (987)	1990 (1610)
12	47 (90)	22 (42)	47 (90)	95 (180)	363 (251)	169 (117)	337 (234)	676 (468)	22 (17)	161 (124)	927 (713)	1500 (1150)
13					352 (306)	164 (142)	328 (285)	657 (572)	23 (17)	166 (126)	955 (725)	1690 (1280)
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25	231 (119)	107 (56)	232 (120)	465 (240)	611 (249)	284 (116)	575 (234)	1150 (469)	26 (25)	186 (179)	1080 (1030)	1930 (1850)
26									23 (23)	163 (167)	940 (964)	1680 (1720)
27					486 (269)	226 (125)	454 (251)	910 (503)	25 (30)	182 (219)	1050 (1260)	1860 (2240)
28					419 (216)	195 (100)	389 (201)	780 (402)	20 (28)	146 (200)	844 (1160)	1480 (2030)
29	175 (172)	81 (80)	174 (171)	349 (343)	378 (311)	176 (145)	350 (288)	701 (577)	20 (25)	145 (179)	838 (1030)	1460 (1800)
30	195 (356)	91 (166)	193 (355)	388 (711)	433 (335)	201 (156)	399 (309)	800 (620)	19 (23)	138 (165)	798 (950)	1380 (1640)
31	260 (333)	121 (155)	259 (331)	518 (662)	364 (318)	169 (148)	334 (292)	670 (586)	27 (34)	193 (244)	1110 (1410)	1910 (2420)
Avg	123	57	122	245	518	241	479	959	27	198	1140	1940
n	12	12	12	12	19	19	19	19	17	17	17	17
SD	83.2	38.7	82.90	166.00	127.0	59.0	117.00	234.00	5.6	40.4	233.00	365.00
Min	-41	-19	-41	-82	346	161	319	640	19	138	798	1380
Max	260	121	259	518	705	328	654	1310	37	264	1520	2500

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for November, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1	197 (178)	92 (83)	195 (176)	391 (353)	307 (199)	143 (93)	281 (182)	563 (365)	24 (26)	174 (184)	1010 (1060)	1710 (1810)
2	132 (245)	61 (114)	130 (242)	261 (485)	404 (421)	188 (196)	368 (384)	738 (769)	22 (25)	158 (177)	911 (1020)	1540 (1720)
3	94 (393)	44 (183)	92 (387)	185 (776)	557 (372)	259 (173)	506 (338)	1010 (678)	26 (32)	186 (230)	1080 (1330)	1800 (2230)
4	86 (274)	40 (128)	84 (270)	169 (541)	544 (420)	253 (196)	492 (380)	987 (762)	23 (24)	163 (173)	938 (995)	1710 (1810)
5	212 (697)	99 (324)	208 (685)	417 (1370)	537 (385)	250 (179)	484 (347)	971 (696)				
6												
7									4 (5)	28 (37)	163 (213)	315 (411)
8									6 (8)	41 (55)	237 (315)	458 (608)
9												
10	314 (635)	146 (295)	306 (619)	613 (1240)	527 (237)	245 (110)	469 (211)	940 (422)				
11	169 (124)	79 (58)	165 (121)	331 (243)	640 (242)	298 (112)	569 (215)	1140 (431)				
12	213 (185)	99 (86)	208 (181)	416 (362)	496 (216)	231 (101)	441 (193)	885 (386)				
13					478 (206)	223 (96)	426 (183)	853 (368)				
14	195 (392)	91 (182)	190 (381)	381 (764)	479 (309)	223 (144)	426 (275)	855 (551)				
15	170 (222)	79 (103)	165 (216)	332 (433)	359 (240)	167 (112)	320 (213)	641 (428)	12 (21)	83 (150)	481 (868)	874 (1580)
16	134 (136)	62 (63)	130 (132)	261 (265)	293 (308)	136 (143)	261 (274)	523 (549)	13 (18)	96 (127)	556 (734)	1000 (1320)
17	186 (297)	87 (138)	181 (289)	363 (580)	304 (271)	141 (126)	270 (241)	542 (484)	15 (20)	107 (142)	617 (821)	1100 (1470)
18	188 (172)	88 (80)	183 (167)	367 (335)	263 (348)	122 (162)	234 (309)	469 (620)	12 (17)	83 (122)	481 (703)	852 (1250)
19	218 (198)	101 (92)	212 (193)	424 (387)	305 (321)	142 (149)	272 (285)	545 (572)	15 (19)	104 (137)	603 (791)	1060 (1390)
20					322 (303)	150 (141)	286 (269)	574 (540)	16 (22)	113 (156)	655 (900)	1140 (1570)
21												
22					259 (211)	120 (98)	230 (188)	461 (377)	25 (30)	178 (220)	1020 (1270)	1760 (2180)
23	220 (125)	102 (58)	214 (122)	428 (244)	415 (263)	193 (122)	369 (234)	739 (469)	34 (38)	242 (277)	1400 (1600)	2390 (2730)
24	216 (111)	101 (52)	210 (108)	421 (216)	384 (227)	179 (105)	342 (202)	685 (404)				
25	197 (169)	92 (78)	192 (164)	384 (328)	316 (223)	147 (104)	281 (199)	564 (398)				
26	285 (211)	133 (98)	277 (205)	555 (411)	315 (229)	147 (106)	280 (204)	562 (408)				
27	256 (193)	119 (90)	249 (187)	499 (375)	351 (200)	163 (93)	312 (178)	625 (357)				
28	249 (242)	116 (113)	242 (235)	484 (471)	353 (297)	164 (138)	314 (264)	628 (530)				
29	216 (211)	100 (98)	209 (205)	419 (411)	332 (240)	154 (111)	295 (213)	592 (427)				
30	206 (221)	96 (103)	200 (214)	400 (429)	348 (233)	162 (109)	309 (208)	619 (416)	2 (4)	16 (29)	90 (169)	172 (324)
Avg	198	92	193	386	396	184	353	708	16	118	682	1190
n	22	22	22	22	25	25	25	25	15	15	15	15
SD	53.5	24.9	51.70	104.00	104.0	48.4	93.80	188.00	8.6	62.2	359.00	600.00
Min	86	40	84	169	259	120	230	461	2	16	90	172
Max	314	146	306	613	640	298	569	1140	34	242	1400	2390

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for December, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	186 (215)	87 (100)	181 (208)	362 (417)					10 (18)	73 (130)	419 (751)	806 (1440)
2	183 (204)	85 (95)	177 (197)	355 (395)	223 (332)	104 (154)	199 (295)	398 (592)	22 (31)	157 (224)	903 (1290)	1720 (2460)
3	195 (216)	91 (100)	189 (209)	378 (419)	266 (264)	124 (123)	237 (235)	474 (470)	21 (33)	153 (237)	884 (1370)	1670 (2580)
4	130 (176)	61 (82)	126 (170)	253 (342)	208 (175)	97 (81)	185 (155)	371 (312)	22 (34)	158 (244)	913 (1410)	1710 (2630)
5	90 (83)	42 (39)	87 (81)	174 (162)	158 (215)	73 (100)	140 (191)	281 (383)	34 (42)	248 (301)	1430 (1740)	2650 (3220)
6									36 (26)	258 (186)	1490 (1070)	2730 (1970)
7					148 (130)	69 (61)	131 (116)	263 (232)	36 (36)	263 (262)	1520 (1510)	2760 (2750)
8	112 (77)	52 (36)	108 (74)	217 (148)	284 (268)	132 (125)	253 (238)	506 (478)	57 (44)	414 (319)	2390 (1840)	4300 (3320)
9	131 (165)	61 (77)	127 (159)	254 (319)	214 (118)	100 (55)	190 (105)	381 (211)	51 (39)	370 (280)	2140 (1610)	3820 (2880)
10	94 (64)	44 (30)	90 (61)	181 (123)	149 (150)	69 (70)	133 (134)	266 (268)	52 (51)	374 (366)	2160 (2110)	3820 (3740)
11	103 (68)	48 (32)	99 (66)	199 (132)	269 (243)	125 (113)	239 (216)	478 (433)	44 (44)	321 (317)	1850 (1830)	3250 (3210)
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24	135 (178)	63 (83)	131 (173)	262 (346)	326 (131)	152 (61)	291 (117)	583 (234)				
25	126 (114)	59 (53)	123 (111)	246 (223)	99 (95)	46 (44)	88 (85)	177 (169)				
26	125 (99)	58 (46)	122 (97)	245 (193)	402 (329)	187 (153)	360 (295)	722 (591)				
27					422 (292)	196 (136)	379 (262)	759 (525)				
28					142 (176)	66 (82)	128 (158)	256 (317)				
29					274 (273)	127 (127)	247 (246)	495 (493)				
30												
31					179 (161)	83 (75)	162 (145)	325 (291)				
Avg	134	62	130	260	235	109	210	421	35	253	1460	2660
n	12	12	12	12	16	16	16	16	11	11	11	11
SD	34.2	15.9	33.10	66.40	90.1	41.9	80.80	162.00	14.4	104.0	602.00	1040.00
Min	90	42	87	174	99	46	88	177	10	73	419	806
Max	195	91	189	378	422	196	379	759	57	414	2390	4300

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for January, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1					129 (255)	60 (119)	117 (232)	235 (464)				
2					244 (188)	113 (87)	222 (171)	445 (342)				
3	55 (33)	26 (16)	56 (33)	111 (67)	362 (241)	168 (112)	330 (219)	662 (440)	17 (25)	125 (183)	721 (1060)	1300 (1900)
4	57 (31)	27 (15)	58 (32)	116 (63)					16 (23)	113 (166)	651 (958)	1160 (1710)
5	56 (40)	26 (19)	56 (41)	113 (82)	280 (155)	130 (72)	256 (142)	514 (285)	20 (33)	142 (235)	822 (1360)	1460 (2400)
6	50 (40)	23 (19)	51 (41)	102 (81)	307 (168)	143 (78)	282 (154)	564 (309)	31 (39)	221 (282)	1280 (1630)	2240 (2860)
7	47 (44)	22 (20)	48 (45)	96 (89)					22 (28)	155 (199)	895 (1150)	1560 (2000)
8	48 (75)	23 (35)	50 (77)	99 (154)	262 (125)	122 (58)	242 (115)	484 (231)	29 (30)	210 (214)	1210 (1240)	2090 (2130)
9					370 (258)	172 (120)	343 (239)	687 (479)	30 (37)	215 (269)	1240 (1550)	2120 (2660)
10	319 (134)	149 (63)	330 (139)	661 (278)	269 (123)	125 (57)	250 (114)	501 (228)	25 (49)	178 (356)	1030 (2060)	1750 (3490)
11	317 (159)	147 (74)	329 (164)	659 (330)	288 (150)	134 (70)	268 (140)	537 (280)	22 (34)	157 (242)	906 (1400)	1530 (2350)
12									22 (34)	155 (248)	895 (1430)	1500 (2400)
13	293 (137)	136 (64)	306 (143)	613 (287)	230 (115)	107 (53)	214 (107)	430 (215)	22 (37)	158 (265)	911 (1530)	1510 (2540)
14	259 (104)	120 (48)	271 (109)	544 (218)	187 (87)	87 (41)	176 (82)	352 (164)	20 (25)	143 (182)	825 (1050)	1360 (1730)
15	267 (119)	124 (55)	281 (125)	564 (251)	195 (68)	91 (32)	183 (64)	367 (128)	15 (22)	105 (158)	608 (910)	1090 (1620)
16					190 (78)	88 (36)	179 (74)	359 (148)				
17									2 (6)	15 (40)		
18									5 (9)	34 (63)	197 (363)	391 (722)
19									9 (16)	64 (112)	369 (646)	720 (1260)
20									6 (9)	40 (63)	232 (363)	445 (697)
21	381 (208)	177 (97)	399 (218)	799 (438)					2 (3)	15 (21)	84 (121)	160 (231)
22	405 (210)	188 (98)	417 (216)	836 (433)					2 (4)	16 (25)	94 (146)	178 (275)
23									3 (11)	24 (77)	139 (441)	260 (826)
24	370 (162)	172 (75)	369 (162)	739 (325)	260 (109)	121 (51)	232 (98)	466 (196)	3 (6)	24 (41)	137 (238)	254 (441)
25	433 (233)	202 (108)	425 (229)	852 (459)	266 (138)	124 (64)	235 (121)	471 (243)	4 (5)	26 (39)	152 (227)	280 (418)
26	435 (217)	202 (101)	420 (210)	842 (420)	296 (146)	138 (68)	258 (128)	517 (256)	5 (7)	34 (51)	195 (292)	357 (534)
27	330 (168)	154 (78)	314 (160)	630 (321)	279 (117)	130 (54)	240 (101)	481 (202)	6 (9)	40 (63)	229 (365)	416 (661)
28	285 (135)	133 (63)	267 (127)	535 (255)	300 (197)	140 (92)	254 (166)	510 (333)	8 (12)	58 (86)	337 (495)	605 (889)
29												
30												
31												
Avg	245	114	247	495	262	122	238	477	14	99	590	1030
n	18	18	18	18	18	18	18	18	25	25	24	24
SD	145.0	67.3	145.00	290.00	58.7	27.3	52.30	105.00	9.6	69.5	397.00	670.00
Min	47	22	48	96	129	60	117	235	2	15	84	160
Max	435	202	425	852	370	172	343	687	31	221	1280	2240

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for February, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20					446 (217)	208 (101)	405 (197)	812 (395)	32 (54)	234 (393)	1350 (2270)	2450 (4110)
21	264 (86)	123 (40)	262 (85)	525 (171)					17 (20)	125 (141)	719 (814)	1300 (1470)
22	315 (119)	147 (55)	314 (118)	629 (237)	394 (196)	183 (91)	356 (177)	713 (355)	17 (22)	125 (161)	723 (931)	1290 (1660)
23					390 (242)	181 (113)	352 (219)	705 (439)	22 (31)	162 (226)	934 (1300)	1660 (2310)
24					516 (340)	240 (158)	465 (306)	932 (614)	25 (29)	180 (212)	1040 (1220)	1830 (2160)
25	534 (330)	248 (154)	535 (331)	1070 (663)	583 (421)	271 (196)	525 (379)	1050 (759)	36 (35)	259 (253)	1500 (1460)	2630 (2560)
26	376 (215)	175 (100)	379 (216)	759 (434)	605 (378)	281 (176)	543 (340)	1090 (682)	30 (37)	214 (268)	1240 (1550)	2160 (2690)
27	334 (149)	155 (69)	337 (150)	675 (301)					28 (35)	202 (254)	1160 (1470)	2010 (2540)
28	357 (159)	166 (74)	362 (162)	726 (324)					28 (37)	205 (270)	1180 (1560)	2030 (2680)
Avg	363	169	365	731	489	227	441	884	26	190	1090	1930
n	6	6	6	6	6	6	6	6	9	9	9	9
SD	83.9	39.0	84.90	170.00	85.4	39.7	75.90	152.00	6.0	43.5	251.00	436.00
Min	264	123	262	525	390	181	352	705	17	125	719	1290
Max	534	248	535	1070	605	281	543	1090	36	259	1500	2630

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for March, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	304 (102)	141 (47)	310 (104)	621 (208)	350 (108)	163 (50)	315 (97)	632 (195)	25 (35)	183 (254)	1050 (1460)	1800 (2500)
2	392 (167)	182 (78)	401 (170)	803 (341)	529 (538)	246 (250)	477 (485)	955 (972)	29 (39)	206 (281)	1190 (1620)	2020 (2750)
3					439 (567)	204 (264)	396 (511)	793 (1020)	36 (48)	256 (349)	1480 (2020)	2550 (3490)
4					467 (398)	217 (185)	421 (359)	845 (720)				
5	583 (299)	271 (139)	603 (310)	1210 (621)					6 (8)	42 (55)		
6	565 (197)	263 (92)	583 (204)	1170 (409)					12 (15)	85 (108)	492 (623)	950 (1200)
7	423 (213)	197 (99)	435 (219)	871 (439)					10 (13)	68 (95)	394 (546)	759 (1050)
8	370 (189)	172 (88)	379 (193)	759 (387)					13 (19)	91 (134)	525 (772)	1010 (1480)
9	355 (177)	165 (83)	363 (181)	727 (363)					27 (41)	198 (295)	1140 (1700)	2170 (3210)
10									31 (48)	224 (344)	1290 (1990)	2430 (3720)
11									19 (24)	139 (174)	804 (1010)	1500 (1870)
12									29 (50)	210 (362)	1210 (2090)	2230 (3830)
13									38 (60)	277 (430)	1600 (2480)	2910 (4530)
14									27 (30)	192 (218)	1110 (1260)	2000 (2280)
15	578 (300)	269 (140)	581 (302)	1160 (606)					29 (29)	206 (208)	1190 (1200)	2140 (2160)
16	574 (252)	267 (117)	577 (253)	1160 (507)					28 (31)	200 (224)	1150 (1290)	2060 (2300)
17	560 (243)	260 (113)	562 (244)	1130 (489)					26 (24)	186 (174)	1070 (1000)	1900 (1780)
18	551 (324)	256 (151)	552 (325)	1110 (651)					34 (33)	243 (237)	1400 (1370)	2460 (2400)
19	449 (258)	209 (120)	449 (258)	900 (517)					41 (49)	299 (354)	1720 (2040)	3000 (3570)
20	558 (231)	259 (107)	558 (231)	1120 (463)					40 (43)	287 (312)	1650 (1800)	2860 (3120)
21	631 (236)	294 (110)	632 (236)	1270 (473)					34 (27)	246 (194)	1420 (1120)	2440 (1920)
22	549 (258)	256 (120)	551 (259)	1110 (518)					40 (27)	286 (198)	1650 (1140)	2810 (1950)
23	532 (268)	247 (125)	535 (269)	1070 (539)					42 (34)	305 (246)	1760 (1420)	2980 (2400)
24	489 (275)	228 (128)	493 (277)	988 (555)					37 (26)	266 (185)	1530 (1070)	2580 (1800)
25	445 (206)	207 (96)	450 (208)	901 (416)					38 (40)	275 (291)	1590 (1680)	2650 (2800)
26	475 (227)	221 (106)	481 (229)	963 (460)					33 (37)	236 (268)	1360 (1540)	2260 (2560)
27	491 (235)	228 (109)	497 (238)	997 (476)					13 (22)	92 (157)	532 (903)	878 (1490)
28	425 (223)	198 (104)	432 (226)	866 (454)					5 (4)	34 (28)	197 (160)	322 (262)
29	432 (199)	201 (93)	440 (202)	881 (406)					37 (28)	264 (199)	1520 (1150)	2560 (1930)
30	411 (245)	191 (114)	419 (250)	840 (501)								
31									7 (10)	51 (69)		
Avg	484	225	490	983	446	208	402	806	27	195	1190	2080
n	23	23	23	23	4	4	4	4	29	29	27	27
SD	84.9	39.5	84.30	169.00	64.4	29.9	58.10	116.00	11.4	82.4	429.00	724.00
Min	304	141	310	621	350	163	315	632	5	34	197	322
Max	631	294	632	1270	529	246	477	955	42	305	1760	3000

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for April, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	422 (191)	196 (89)	432 (196)	867 (392)					24 (30)	173 (214)	998 (1230)	1960 (2420)
2	535 (260)	249 (121)	548 (267)	1100 (535)					46 (69)	332 (501)	1920 (2890)	3690 (5550)
3	621 (238)	289 (111)	635 (244)	1270 (489)	519 (249)	241 (116)	463 (222)	928 (445)	46 (58)	329 (417)	1900 (2400)	3630 (4580)
4	610 (334)	284 (155)	622 (340)	1250 (682)	520 (305)	242 (142)	465 (273)	933 (547)	22 (24)	159 (170)	916 (981)	1730 (1860)
5	351 (163)	163 (76)	357 (166)	716 (332)					17 (21)	126 (150)	727 (867)	1360 (1630)
6	413 (195)	192 (91)	418 (198)	839 (396)	449 (222)	209 (103)	404 (199)	810 (400)	15 (17)	105 (120)	605 (693)	1120 (1290)
7	497 (230)	231 (107)	502 (232)	1010 (465)	492 (270)	229 (126)	443 (244)	888 (488)	19 (22)	134 (158)	772 (914)	1420 (1690)
8	519 (433)	241 (202)	523 (436)	1050 (875)	452 (262)	210 (122)	408 (237)	818 (475)	19 (20)	135 (143)	781 (823)	1430 (1500)
9	555 (364)	258 (169)	558 (366)	1120 (733)	503 (299)	234 (139)	456 (271)	914 (543)	26 (30)	191 (215)	1100 (1240)	1990 (2250)
10	649 (240)	302 (111)	654 (241)	1310 (484)	702 (400)	326 (186)	636 (362)	1270 (725)	28 (25)	205 (183)	1180 (1060)	2130 (1900)
11	619 (322)	288 (150)	626 (325)	1250 (652)	626 (293)	291 (136)	567 (266)	1140 (532)	31 (26)	220 (186)	1270 (1070)	2260 (1910)
12					646 (306)	301 (142)	586 (277)	1170 (556)	32 (32)	233 (233)	1340 (1340)	2370 (2370)
13	301 (144)	140 (67)	306 (147)	614 (295)	555 (326)	258 (152)	503 (296)	1010 (593)	40 (43)	288 (312)	1660 (1800)	2900 (3140)
14	484 (231)	225 (107)	494 (235)	990 (472)	546 (275)	254 (128)	495 (249)	991 (500)	42 (33)	304 (238)	1750 (1370)	3040 (2380)
15	535 (328)	249 (152)	548 (336)	1100 (673)	508 (281)	236 (131)	461 (255)	923 (511)	47 (41)	342 (294)	1970 (1690)	3390 (2910)
16												
17												
18												
19												
20												
21												
22												
23												
24	590 (522)	275 (243)	594 (525)	1190 (1050)					33 (26)	237 (185)	1370 (1070)	2630 (2050)
25	413 (288)	192 (134)	415 (289)	832 (580)					39 (58)	281 (418)	1620 (2410)	3110 (4630)
26	458 (295)	213 (137)	460 (296)	922 (594)	431 (278)	201 (129)	391 (252)	784 (506)	31 (25)	220 (183)	1270 (1050)	2410 (2000)
27									23 (24)	163 (171)	941 (985)	1770 (1850)
28	502 (333)	233 (155)	503 (334)	1010 (669)	626 (299)	291 (139)	570 (272)	1140 (545)	57 (70)	414 (502)	2390 (2900)	4430 (5370)
29	468 (299)	218 (139)	469 (299)	939 (600)	509 (399)	237 (185)	465 (364)	932 (729)	40 (40)	290 (286)	1670 (1650)	3090 (3040)
30	439 (385)	204 (179)	439 (385)	879 (773)					44 (32)	317 (229)	1830 (1320)	3350 (2420)
Avg	499	232	505	1010	539	251	487	977	33	236	1360	2510
n	20	20	20	20	15	15	15	15	22	22	22	22
SD	91.4	42.5	92.80	186.00	76.0	35.4	69.70	140.00	11.4	82.1	474.00	866.00
Min	301	140	306	614	431	201	391	784	15	105	605	1120
Max	649	302	654	1310	702	326	636	1270	57	414	2390	4430

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for May, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1									50 (43)	360 (310)	2070 (1790)	3780 (3260)
2									41 (37)	295 (268)	1700 (1540)	3100 (2810)
3	721 (650)	335 (302)	725 (653)	1450 (1310)	490 (488)	228 (227)	448 (446)	898 (895)	40 (40)	289 (287)	1670 (1650)	3040 (3010)
4	799 (742)	372 (345)	804 (747)	1610 (1500)	558 (568)	260 (264)	510 (519)	1020 (1040)	52 (40)	374 (289)	2160 (1670)	3930 (3040)
5	698 (644)	325 (299)	704 (649)	1410 (1300)	481 (566)	224 (263)	439 (517)	881 (1040)	39 (32)	281 (233)	1620 (1340)	2970 (2460)
6	596 (576)	277 (268)	602 (582)	1210 (1170)	432 (448)	201 (208)	395 (409)	792 (820)	43 (34)	307 (246)	1770 (1420)	3250 (2610)
7	637 (384)	296 (179)	644 (388)	1290 (778)	565 (493)	263 (229)	516 (450)	1040 (903)	59 (44)	424 (316)	2450 (1830)	4510 (3370)
8									56 (34)	407 (243)	2350 (1400)	4310 (2570)
9									64 (47)	463 (337)	2670 (1940)	4890 (3550)
10	631 (317)	294 (148)	635 (319)	1270 (639)					68 (53)	494 (385)	2850 (2220)	5190 (4050)
11	682 (421)	317 (196)	684 (422)	1370 (845)	601 (308)	280 (143)	544 (279)	1090 (559)	50 (44)	361 (317)	2080 (1830)	3780 (3330)
12	576 (348)	268 (162)	576 (348)	1150 (698)	519 (352)	241 (164)	469 (318)	940 (638)	45 (38)	327 (271)	1880 (1560)	3450 (2860)
13	431 (297)	201 (138)	431 (297)	863 (595)	430 (261)	200 (121)	388 (235)	777 (471)				
14					600 (309)	279 (144)	540 (278)	1080 (557)	18 (64)	132 (459)		
15	491 (439)	228 (204)	488 (437)	977 (875)	590 (334)	274 (155)	530 (300)	1060 (601)	24 (32)	173 (230)	999 (1330)	1930 (2560)
16									20 (21)	141 (150)	812 (867)	1570 (1680)
17	579 (364)	269 (169)	565 (356)	1130 (713)	632 (321)	294 (149)	580 (294)	1160 (589)	20 (24)	144 (170)	830 (982)	1610 (1900)
18	562 (412)	261 (192)	543 (398)	1090 (798)	687 (429)	319 (199)	637 (398)	1280 (797)	30 (30)	216 (216)	1240 (1250)	2400 (2400)
19	602 (554)	280 (258)	578 (532)	1160 (1070)	639 (410)	297 (191)	599 (384)	1200 (769)	19 (18)	140 (131)	806 (754)	1560 (1460)
20	715 (948)	333 (441)	688 (912)	1380 (1830)					11 (14)	82 (100)	474 (577)	911 (1110)
21	587 (323)	273 (150)	567 (312)	1140 (624)	686 (391)	319 (182)	641 (365)	1290 (732)	5 (9)	34 (62)	197 (356)	378 (681)
22	581 (241)	270 (112)	563 (233)	1130 (467)	555 (230)	258 (107)	519 (215)	1040 (432)	3 (5)	21 (34)	120 (194)	229 (371)
23	509 (228)	237 (106)	495 (222)	993 (445)	505 (220)	235 (102)	471 (205)	945 (411)	2 (3)	15 (20)	87 (118)	164 (224)
24	586 (248)	272 (115)	572 (242)	1150 (485)	608 (278)	283 (129)	566 (259)	1130 (519)	2 (3)	16 (22)	93 (124)	175 (234)
25	632 (350)	294 (163)	620 (343)	1240 (687)								
26	517 (331)	240 (154)	508 (325)	1020 (652)					3 (4)	20 (27)	112 (156)	211 (293)
27	491 (205)	228 (95)	485 (202)	972 (405)					3 (4)	23 (30)	132 (173)	247 (323)
28	634 (317)	295 (147)	628 (313)	1260 (628)					4 (5)	29 (36)	167 (209)	311 (389)
29	700 (456)	326 (212)	693 (451)	1390 (904)					5 (17)	33 (124)	190 (713)	352 (1320)
30	601 (510)	279 (237)	593 (504)	1190 (1010)					4 (6)	30 (46)	170 (266)	315 (492)
31	772 (603)	359 (281)	762 (595)	1530 (1190)					5 (10)	36 (71)	208 (411)	382 (758)
Avg	613	285	606	1210	563	262	517	1040	27	195	1140	2110
n	25	25	25	25	17	17	17	17	29	29	28	28
SD	88.1	41.0	90.30	181.00	76.2	35.5	73.20	147.00	21.7	157.0	919.00	1670.00
Min	431	201	431	863	430	200	388	777	2	15	87	164
Max	799	372	804	1610	687	319	641	1290	68	494	2850	5190

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for June, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1	542 (374)	252 (174)	534 (369)	1070 (739)					6 (5)	46 (39)	268 (225)	490 (412)
2	514 (289)	239 (135)	506 (285)	1010 (570)								
3	629 (472)	293 (219)	618 (463)	1240 (928)					10 (12)	69 (84)	396 (483)	719 (879)
4	847 (609)	394 (283)	830 (596)	1660 (1200)					15 (17)	107 (122)	618 (705)	1120 (1280)
5	869 (723)	404 (336)	850 (707)	1700 (1420)					23 (18)	167 (130)	964 (748)	1740 (1350)
6	652 (494)	303 (230)	636 (482)	1270 (966)					22 (12)	161 (89)	930 (514)	1670 (925)
7	526 (543)	245 (252)	511 (528)	1020 (1060)					22 (11)	158 (79)	909 (456)	1630 (816)
8	499 (445)	232 (207)	484 (432)	971 (865)					18 (11)	129 (80)	743 (459)	1330 (819)
9	680 (670)	316 (312)	658 (648)	1320 (1300)					11 (18)	82 (131)	472 (757)	847 (1350)
10	637 (642)	296 (299)	615 (619)	1230 (1240)								
11	638 (611)	297 (284)	615 (588)	1230 (1180)								
12												
13												
14												
15												
16												
17	425 (235)	198 (109)	418 (231)	838 (463)	491 (302)	228 (140)	441 (272)	885 (544)	9 (7)	67 (54)	403 (324)	807 (648)
18												
19												
20												
21												
22												
23												
24												
25												
26	960 (400)	447 (186)	952 (396)	1910 (795)	658 (329)	306 (153)	594 (297)	1190 (596)	23 (29)	165 (207)	995 (1250)	1880 (2360)
27	676 (321)	314 (149)	669 (318)	1340 (637)	329 (184)	153 (85)	297 (166)	596 (332)	22 (11)	161 (80)	970 (479)	1830 (902)
28	938 (554)	436 (258)	928 (548)	1860 (1100)					28 (18)	205 (128)	1230 (768)	2300 (1440)
29	754 (422)	351 (196)	744 (417)	1490 (835)					33 (18)	238 (133)	1440 (800)	2670 (1490)
30	702 (315)	327 (147)	692 (311)	1390 (622)					32 (19)	234 (137)	1410 (822)	2600 (1520)
Avg	676	314	662	1330	493	229	444	891	20	142	839	1540
n	17	17	17	17	3	3	3	3	14	14	14	14
SD	151.0	70.4	151.00	302.00	134.0	62.5	121.00	243.00	8.2	59.1	359.00	669.00
Min	425	198	418	838	329	153	297	596	6	46	268	490
Max	960	447	952	1910	658	306	594	1190	33	238	1440	2670

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for July, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1	622 (361)	289 (168)	612 (355)	1230 (712)	658 (399)	306 (186)	593 (360)	1190 (721)	36 (18)	257 (130)	1550 (780)	2840 (1430)
2	668 (365)	311 (170)	655 (358)	1310 (718)	782 (487)	364 (227)	704 (439)	1410 (879)	33 (19)	237 (140)	1430 (844)	2600 (1540)
3	541 (397)	251 (185)	528 (388)	1060 (778)	693 (463)	322 (215)	623 (416)	1250 (833)	32 (29)	230 (211)	1390 (1270)	2520 (2310)
4	432 (251)	201 (117)	420 (245)	843 (491)	566 (272)	263 (127)	508 (244)	1020 (490)	49 (20)	356 (143)	2140 (860)	3870 (1550)
5	543 (352)	253 (164)	527 (341)	1060 (684)	808 (557)	376 (259)	724 (499)	1450 (999)	39 (23)	281 (165)	1690 (994)	3030 (1790)
6	536 (455)	249 (212)	518 (440)	1040 (881)	700 (527)	326 (245)	626 (471)	1250 (945)	40 (22)	291 (159)	1750 (957)	3130 (1710)
7	496 (412)	231 (192)	477 (397)	956 (795)	576 (466)	268 (217)	514 (416)	1030 (834)	44 (27)	318 (195)	1920 (1170)	
8	528 (401)	246 (186)	506 (384)	1020 (770)	827 (516)	385 (240)	737 (460)	1480 (922)	44 (22)	315 (155)	1900 (935)	
9	493 (375)	229 (174)	472 (358)	945 (718)	780 (459)	363 (213)	694 (408)	1390 (818)	47 (28)	339 (202)	2040 (1220)	
10					861 (526)	400 (244)	766 (468)	1540 (937)	44 (36)	315 (257)	1900 (1540)	
11					1080 (767)	501 (357)	958 (682)	1920 (1370)	50 (35)	358 (256)	2150 (1540)	
12					646 (408)	301 (190)	575 (363)	1150 (728)	60 (31)	431 (225)	2600 (1350)	
13					540 (463)	251 (216)	480 (412)	963 (826)	51 (31)	366 (227)	2200 (1360)	
14					260 (329)	121 (153)	231 (292)	464 (586)	47 (33)	341 (239)	2050 (1440)	
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31									23 (17)	164 (123)		
Avg	540	251	524	1050	698	325	624	1250	43	307	1910	3000
n	9	9	9	9	14	14	14	14	15	15	14	6
SD	65.9	30.7	67.50	135.00	183.0	84.9	163.00	326.00	8.8	63.9	319.00	445.00
Min	432	201	420	843	260	121	231	464	23	164	1390	2520
Max	668	311	655	1310	1080	501	958	1920	60	431	2600	3870

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for August, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1					672 (299)	313 (139)			31 (24)	227 (172)		
2					447 (460)	208 (214)			30 (19)	216 (133)		
3					411 (239)	191 (111)			43 (24)	313 (169)		
4	541 (320)	251 (149)			438 (244)	204 (114)			33 (20)	237 (142)		
5	681 (365)	317 (170)							44 (28)	315 (202)		
6	603 (323)	280 (150)			566 (581)	263 (270)			51 (38)	370 (274)		
7	357 (374)	166 (174)			390 (352)	181 (164)						
8					210 (225)	98 (105)			19 (15)	135 (110)		
9					367 (243)	170 (113)			28 (24)	205 (172)		
10					491 (297)	228 (138)			41 (24)	294 (176)		
11					594 (421)	276 (196)			46 (45)	329 (322)		
12					470 (304)	219 (141)			31 (24)	226 (172)		
13					392 (344)	182 (160)			35 (26)	253 (190)		
14	317 (457)	147 (213)			302 (314)	140 (146)			43 (26)	310 (184)		
15	380 (442)	177 (206)			324 (313)	151 (146)			50 (30)	361 (217)		
16					290 (274)	135 (127)			38 (26)	276 (184)		
17					354 (288)	165 (134)			32 (25)	230 (178)		
18	585 (488)	272 (227)			677 (502)	315 (234)			31 (29)	222 (207)		
19	320 (410)	149 (191)			360 (381)	167 (177)			28 (33)	201 (240)		
20									56 (33)	402 (235)		
21									73 (42)	526 (301)		
22	850 (466)	395 (217)							69 (42)	500 (301)		
23	624 (350)	290 (163)							65 (42)	466 (303)		
24	414 (327)	193 (152)			374 (289)	174 (134)			56 (52)	408 (378)		
25	459 (271)	214 (126)			326 (178)	152 (83)			54 (38)	393 (273)		
26	441 (270)	205 (125)			323 (124)	150 (58)			43 (24)	311 (170)		
27	489 (279)	228 (130)							60 (41)	435 (297)		
28	640 (322)	298 (150)										
29									0 (1)	-2 (5)		
30									0 (1)	0 (5)		
31									2 (7)	16 (48)		
Avg	513	239			418	194			39	282		
n	15	15	0	0	21	21	0	0	29	29	0	0
SD	146.0	68.0			121.0	56.3			18.4	133.0		
Min	317	147			210	98			0	-2		
Max	850	395			677	315			73	526		

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Table E5. Daily means (SD) of PM10 emissions at site IA4B for September, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1									8 (11)	61 (81)		
2									13 (13)	94 (95)		
3									18 (17)	127 (123)		
4	469 (507)	218 (236)							14 (16)	103 (115)		
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
Avg									13	96		
n	1	1	0	0	0	0	0	0	4	4	0	0
SD									3.3	24.0		
Min									8	61		
Max									18	127		

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Table E6. NH_3 Emissions

Table E6. Daily means (SD) of PM2.5 emissions at site IA4B for December, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4												
5												
6												
7	43.6 (20.8)	20.3 (9.7)	41.8 (20.0)	83.9 (40.1)	61.8 (25.5)	28.7 (11.8)	54.1 (22.3)	108.0 (44.7)	2.6 (3.2)	18.9 (23.4)	109.0 (135.0)	210.0 (260.0)
8												
9												
10	39.7 (32.0)	18.4 (14.9)	38.2 (30.9)	76.6 (61.9)					3.9 (5.9)	28.2 (42.7)	163.0 (246.0)	306.0 (462.0)
11	65.8 (159.0)	30.6 (73.7)	63.6 (153.0)	128.0 (307.0)					3.5 (4.9)	25.0 (35.6)	144.0 (205.0)	269.0 (382.0)
12	50.0 (28.7)	23.3 (13.4)	48.4 (27.9)	97.1 (55.8)					2.2 (3.4)	15.9 (24.4)	91.8 (141.0)	170.0 (260.0)
13	55.6 (35.7)	25.9 (16.6)	54.0 (34.6)	108.0 (69.4)					2.3 (3.1)	16.3 (22.7)	94.0 (131.0)	172.0 (240.0)
14	53.1 (41.5)	24.7 (19.3)	51.7 (40.4)	104.0 (80.9)					2.3 (3.8)	16.7 (27.1)	96.5 (157.0)	175.0 (285.0)
15	55.4 (28.2)	25.8 (13.1)	54.1 (27.5)	108.0 (55.1)					1.7 (2.8)	12.0 (20.0)	69.2 (115.0)	125.0 (208.0)
16	48.0 (36.0)	22.3 (16.7)	46.9 (35.2)	94.0 (70.6)					2.1 (3.4)	15.1 (24.4)	86.8 (141.0)	155.0 (251.0)
17									2.4 (4.7)	17.2 (34.0)	99.5 (196.0)	176.0 (348.0)
18					90.7 (31.9)	42.2 (14.8)	81.2 (28.6)	163.0 (57.3)	2.6 (4.1)	19.1 (29.3)	110.0 (169.0)	194.0 (297.0)
19	51.6 (40.5)	24.0 (18.8)	50.8 (39.9)	102.0 (80.0)	117.0 (57.6)	54.5 (26.8)	105.0 (51.8)	211.0 (104.0)	2.4 (4.0)	17.2 (28.8)	99.2 (166.0)	173.0 (290.0)
20	54.6 (56.7)	25.4 (26.4)	53.9 (56.0)	108.0 (112.0)	102.0 (49.5)	47.3 (23.0)	91.6 (44.5)	184.0 (89.3)	2.4 (3.9)	17.5 (28.1)	101.0 (162.0)	175.0 (281.0)
21	48.2 (47.7)	22.4 (22.2)	47.7 (47.2)	95.6 (94.6)	89.1 (47.0)	41.4 (21.8)	80.3 (42.3)	161.0 (84.8)	2.7 (4.0)	19.3 (28.5)	111.0 (165.0)	191.0 (283.0)
22									2.4 (3.3)	17.5 (24.2)	101.0 (139.0)	172.0 (238.0)
23									2.8 (3.7)	19.9 (27.0)	115.0 (156.0)	194.0 (264.0)
24	44.6 (41.7)	20.7 (19.4)	44.5 (41.6)	89.1 (83.4)					3.3 (4.7)	23.7 (34.2)	137.0 (197.0)	229.0 (332.0)
25	47.5 (47.3)	22.1 (22.0)	47.5 (47.3)	95.3 (94.8)	84.4 (71.5)	39.3 (33.2)	76.9 (65.1)	154.0 (130.0)	2.5 (4.3)	18.0 (31.1)	104.0 (180.0)	189.0 (327.0)
26	58.9 (67.5)	27.4 (31.4)	59.0 (67.6)	118.0 (136.0)	80.9 (46.2)	37.6 (21.5)	73.9 (42.2)	148.0 (84.6)	1.7 (3.8)	11.9 (27.2)		
27												
28												
29												
30												
31												
Avg	51.2	23.8	50.2	101.0	89.4	41.6	80.5	161.0	2.5	18.3	108.0	193.0
n	14	14	14	14	7	7	7	7	18	18	17	17
SD	6.5	3.0	6.4	12.9	16.0	7.4	14.6	29.2	0.6	4.0	21.7	41.3
Min	39.7	18.4	38.2	76.6	61.8	28.7	54.1	108.0	1.7	11.9	69.2	125.0
Max	65.8	30.6	63.6	128.0	117.0	54.5	105.0	211.0	3.9	28.2	163.0	306.0

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Table E6. Daily means (SD) of PM2.5 emissions at site IA4B for August, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16	107.0 (33.0)	49.8 (15.4)	103.0 (31.9)	207.0 (63.8)	19.8 (35.6)	9.2 (16.6)	17.4 (31.4)	34.8 (62.9)	7.5 (4.2)	54.4 (30.4)	314.0 (175.0)	574.0 (320.0)
17	66.4 (34.3)	30.9 (16.0)	64.1 (33.1)	129.0 (66.4)	20.3 (33.2)	9.4 (15.5)	17.9 (29.3)	35.8 (58.6)	7.1 (4.2)	51.0 (30.1)	294.0 (174.0)	533.0 (315.0)
18	49.1 (37.5)	22.8 (17.4)	47.4 (36.2)	95.0 (72.6)	13.3 (42.0)	6.2 (19.5)	11.7 (37.0)	23.5 (74.1)	8.7 (4.5)	62.9 (32.1)	363.0 (185.0)	652.0 (333.0)
19	45.6 (50.8)	21.2 (23.6)	44.1 (49.0)	88.3 (98.3)	14.4 (41.9)	6.7 (19.5)	12.7 (36.9)	25.4 (74.0)	7.7 (3.6)	55.9 (25.8)	322.0 (149.0)	575.0 (265.0)
20	59.8 (60.2)	27.8 (28.0)	57.8 (58.1)	116.0 (117.0)	24.4 (54.9)	11.4 (25.5)	21.5 (48.4)	43.1 (97.0)	8.2 (4.2)	59.1 (30.4)	341.0 (175.0)	602.0 (309.0)
21												
22												
23												
24	38.6 (32.4)	17.9 (15.1)	37.3 (31.4)	74.8 (62.9)	21.3 (28.2)	9.9 (13.1)	18.8 (24.9)	37.7 (49.8)	11.6 (7.9)	84.0 (56.9)	484.0 (328.0)	829.0 (562.0)
25	33.1 (30.4)	15.4 (14.2)	32.1 (29.5)	64.3 (59.0)	26.0 (104.0)	12.1 (48.6)	22.9 (92.1)	45.9 (185.0)	9.7 (7.7)	69.7 (55.6)	402.0 (321.0)	683.0 (544.0)
26	33.4 (32.3)	15.6 (15.0)	32.4 (31.3)	64.9 (62.7)	26.3 (81.8)	12.3 (38.0)	23.3 (72.2)	46.6 (145.0)	7.9 (5.7)	57.2 (41.4)	330.0 (239.0)	556.0 (402.0)
27	21.1 (39.0)	9.8 (18.1)	20.5 (37.8)	41.0 (75.7)	14.0 (36.7)	6.5 (17.0)	12.4 (32.4)	24.8 (64.9)				
28	4.9 (45.0)	2.3 (20.9)	4.8 (43.6)	9.6 (87.4)	-5.3 (39.9)	-2.5 (18.6)	-4.7 (35.3)	-9.4 (70.7)	1.2 (4.1)	8.9 (29.2)		
29												
30												
31												
Avg	45.9	21.4	44.4	88.9	17.5	8.1	15.4	30.8	7.7	55.9	356.0	625.0
n	10	10	10	10	10	10	10	10	9	9	8	8
SD	26.5	12.3	25.6	51.2	8.9	4.1	7.8	15.7	2.6	19.1	57.3	89.8
Min	4.9	2.3	4.8	9.6	-5.3	-2.5	-4.7	-9.4	1.2	8.9	294.0	533.0
Max	107.0	49.8	103.0	207.0	26.3	12.3	23.3	46.6	11.6	84.0	484.0	829.0

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Table E6. Daily means (SD) of PM2.5 emissions at site IA4B for January, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
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24												
25												
26												
27												
28												
29												
30	38.5 (19.7)	17.9 (9.2)	35.8 (18.3)	71.8 (36.6)	48.0 (16.8)	22.3 (7.8)	40.6 (14.2)	81.4 (28.4)	1.1 (3.4)	7.7 (24.8)	44.5 (143.0)	79.3 (256.0)
31	35.6 (23.1)	16.6 (10.8)	33.6 (21.8)	67.3 (43.7)	52.9 (24.5)	24.6 (11.4)	45.3 (21.0)	90.7 (42.1)	1.2 (1.5)	8.4 (10.5)	48.4 (60.8)	85.7 (108.0)
Avg	37.0	17.2	34.7	69.6	50.4	23.5	42.9	86.0	1.1	8.1	46.4	82.5
n	2	2	2	2	2	2	2	2	2	2	2	2
SD	1.4	0.7	1.1	2.3	2.5	1.2	2.3	4.7	0.0	0.3	1.9	3.2
Min	35.6	16.6	33.6	67.3	48.0	22.3	40.6	81.4	1.1	7.7	44.5	79.3
Max	38.5	17.9	35.8	71.8	52.9	24.6	45.3	90.7	1.2	8.4	48.4	85.7

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Table E6. Daily means (SD) of PM2.5 emissions at site IA4B for February, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1	41.8 (29.3)	19.5 (13.6)	39.9 (27.9)	79.9 (55.8)	66.9 (35.2)	31.1 (16.4)	57.8 (30.5)	116.0 (61.1)	1.7 (2.0)	12.5 (14.3)	71.8 (82.6)	127.0 (146.0)
2	36.9 (26.0)	17.1 (12.1)	35.5 (25.0)	71.2 (50.1)	63.2 (33.8)	29.4 (15.7)	55.2 (29.5)	111.0 (59.1)	1.8 (2.3)	13.1 (16.2)	75.7 (93.6)	133.0 (165.0)
3	31.5 (13.8)	14.7 (6.4)	30.7 (13.5)	61.6 (27.0)					1.8 (2.7)	12.8 (19.4)	73.6 (112.0)	129.0 (196.0)
4	44.9 (36.0)	20.9 (16.7)	44.2 (35.5)	88.7 (71.2)	52.1 (19.2)	24.3 (8.9)	46.5 (17.1)	93.2 (34.2)	1.3 (2.2)	9.5 (15.9)	54.8 (92.0)	95.6 (160.0)
5					74.7 (47.3)	34.7 (22.0)	67.3 (42.7)	135.0 (85.5)	1.4 (2.1)	9.8 (15.4)	56.3 (88.7)	97.4 (153.0)
6	45.4 (32.0)	21.1 (14.9)	45.3 (31.9)	90.7 (63.9)	75.2 (50.3)	35.0 (23.4)	67.9 (45.4)	136.0 (91.0)	1.7 (4.4)	12.1 (31.8)	70.0 (184.0)	120.0 (317.0)
7	44.7 (36.8)	20.8 (17.1)	44.4 (36.6)	89.0 (73.3)	80.1 (45.8)	37.2 (21.3)	72.5 (41.5)	145.0 (83.1)	2.2 (2.6)	16.0 (18.6)	92.6 (107.0)	158.0 (183.0)
8	43.7 (29.8)	20.3 (13.9)	43.3 (29.6)	86.8 (59.3)	71.7 (43.2)	33.4 (20.1)	65.1 (39.2)	130.0 (78.5)	2.5 (3.2)	18.2 (23.2)	105.0 (134.0)	181.0 (231.0)
9	60.0 (54.0)	27.9 (25.1)	59.2 (53.3)	119.0 (107.0)	69.2 (56.3)	32.2 (26.2)	62.9 (51.2)	126.0 (103.0)				
10	90.9 (292.0)	42.3 (136.0)	89.5 (287.0)	179.0 (576.0)	78.6 (75.6)	36.5 (35.2)	71.5 (68.8)	143.0 (138.0)	0.1 (0.8)	0.9 (5.7)		
11	49.5 (32.5)	23.0 (15.1)	48.6 (31.9)	97.4 (64.0)	89.3 (61.2)	41.5 (28.5)	81.5 (55.8)	163.0 (112.0)	1.3 (4.0)	9.1 (28.7)	52.2 (166.0)	103.0 (327.0)
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
Avg	48.9	22.8	48.1	96.3	72.1	33.5	64.8	130.0	1.6	11.4	72.4	127.0
n	10	10	10	10	10	10	10	10	10	10	9	9
SD	15.7	7.3	15.6	31.2	9.7	4.5	9.4	18.8	0.6	4.4	16.5	26.8
Min	31.5	14.7	30.7	61.6	52.1	24.3	46.5	93.2	0.1	0.9	52.2	95.6
Max	90.9	42.3	89.5	179.0	89.3	41.5	81.5	163.0	2.5	18.2	105.0	181.0

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Table E6. Daily means (SD) of PM2.5 emissions at site IA4B for July, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17									5.1 (3.5)	37.0 (25.1)	223.0 (151.0)	
18									4.7 (2.9)	33.7 (21.0)	203.0 (127.0)	
19									5.0 (3.3)	36.3 (23.8)	219.0 (143.0)	
20					50.5 (35.6)	23.5 (16.6)	45.5 (32.1)	91.1 (64.2)	5.2 (2.9)	37.2 (21.0)	224.0 (127.0)	
21					46.5 (35.9)	21.6 (16.7)						
22					50.7 (54.0)	23.6 (25.1)			0.1 (0.1)	0.7 (0.7)		
23					46.1 (38.6)	21.4 (17.9)			0.1 (0.2)	0.8 (1.4)		
24					25.6 (48.5)	11.9 (22.6)			0.5 (1.6)	4.0 (11.5)		
25					49.9 (46.5)	23.2 (21.6)			0.2 (0.2)	1.1 (1.5)		
26					49.3 (45.5)	22.9 (21.2)			0.2 (0.3)	1.2 (1.8)		
27					33.7 (44.6)	15.7 (20.8)			1.6 (2.3)	11.3 (16.3)		
28					39.2 (39.7)	18.2 (18.5)			2.0 (7.4)	14.2 (53.6)		
29					30.1 (54.4)	14.0 (25.3)			1.9 (1.6)	13.9 (11.6)		
30												
31												
Avg					42.2	19.6			2.2	16.0	217.0	
n	0	0	0	0	10	10	1	1	12	12	4	0
SD					8.9	4.1			2.1	15.0	8.5	
Min					25.6	11.9			0.1	0.7	203.0	
Max					50.7	23.6			5.2	37.2	224.0	

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Table E7. H2S concentrations

Table E7. Daily means (SD) of TSP emissions at site IA4B for November, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
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22												
23												
24												
25												
26												
27												
28												
29												
30	1160 (459)	539 (213)	1110 (441)	2230 (884)	1710 (771)	796 (359)	1500 (676)	3010 (1350)	44 (59)	316 (429)	1820 (2470)	3130 (4260)
Avg												
n	1	1	1	1	1	1	1	1	1	1	1	1
SD												
Min												
Max												

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Table E7. Daily means (SD) of TSP emissions at site IA4B for December, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1	1120 (574)	520 (267)	1070 (552)	2150 (1110)	1250 (947)	582 (440)	1100 (830)	2200 (1660)	62 (81)	447 (584)	2580 (3370)	4300 (5620)
2	1000 (457)	467 (213)	965 (440)	1930 (882)	1310 (728)	608 (339)	1150 (639)	2300 (1280)	61 (72)	438 (522)	2530 (3010)	4210 (5020)
3	1010 (473)	469 (220)	970 (454)	1940 (911)	1210 (774)	564 (360)	1060 (678)	2130 (1360)	74 (104)	531 (752)	3070 (4340)	5570 (7830)
4	1260 (587)	587 (273)	1210 (564)	2430 (1130)	1340 (806)	622 (375)	1170 (707)	2350 (1420)				
5	1310 (875)	607 (407)	1250 (841)	2510 (1690)	1160 (578)	539 (269)	1020 (507)	2040 (1020)				
6												
7												
8												
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28												
29												
30												
31												
Avg	1140	530	1100	2200	1250	583	1100	2200	65	472	2720	4700
n	5	5	5	5	5	5	5	5	3	3	3	3
SD	125.0	58.4	120.00	241.00	64.0	29.8	56.20	113.00	5.8	42.2	243.00	619.00
Min	1000	467	965	1930	1160	539	1020	2040	61	438	2530	4210
Max	1310	607	1250	2510	1340	622	1170	2350	74	531	3070	5570

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Table E7. Daily means (SD) of TSP emissions at site IA4B for March, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
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13												
14					1870 (904)	871 (420)	1780 (858)	3560 (1720)	108 (105)	781 (761)	4500 (4390)	7840 (7650)
15					2110 (1030)	981 (481)	2000 (981)	4010 (1970)	99 (111)	714 (799)	4120 (4610)	7130 (7980)
16					1850 (1000)	859 (465)	1750 (950)	3520 (1900)	107 (128)	774 (928)	4470 (5350)	7670 (9200)
17					1530 (764)	711 (355)	1450 (725)	2910 (1450)	105 (127)	758 (919)	4370 (5300)	7460 (9050)
18					1870 (952)	869 (443)	1770 (904)	3560 (1810)	122 (128)	880 (926)	5080 (5340)	8600 (9050)
19					1970 (1460)	916 (681)	1870 (1390)	3750 (2790)	149 (152)	1070 (1100)	6190 (6320)	10400 (10600)
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
Avg					1870	868	1770	3550	115	830	4790	8190
n	0	0	0	0	6	6	6	6	6	6	6	6
SD					175.0	81.2	166.00	332.00	16.6	120.0	691.00	1090.00
Min					1530	711	1450	2910	99	714	4120	7130
Max					2110	981	2000	4010	149	1070	6190	10400

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Table E7. Daily means (SD) of TSP emissions at site IA4B for May, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
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24												
25												
26												
27												
28												
29	1600 (1650)	746 (768)	1610 (1660)	3230 (3330)								
30												
31												
Avg												
n	1	1	1	1	0	0	0	0	0	0	0	0
SD												
Min												
Max												

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Table E7. Daily means (SD) of TSP emissions at site IA4B for August, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1					559 (322)	260 (150)	493 (284)	988 (568)	88 (43)	637 (311)	3680 (1800)	6440 (3150)
2					865 (401)	402 (187)	762 (354)	1530 (709)	95 (48)	688 (344)	3970 (1980)	6900 (3450)
3					483 (338)	225 (157)	425 (298)	852 (597)	84 (46)	606 (330)	3500 (1900)	6040 (3290)
4					395 (277)	184 (129)	348 (243)	697 (488)	72 (45)	519 (328)	2990 (1890)	5130 (3250)
5	1140 (676)	529 (314)	1100 (652)	2200 (1310)	628 (424)	292 (197)	552 (373)	1110 (748)	92 (42)	661 (302)	3810 (1740)	6500 (2980)
6	1010 (640)	470 (298)	973 (617)	1950 (1240)	825 (644)	384 (299)	726 (566)	1450 (1130)	116 (64)	839 (460)	4840 (2650)	8860 (4720)
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30												
31												
Avg	1070	499	1030	2070	626	291	551	1100	91	658	3800	6650
n	2	2	2	2	6	6	6	6	6	6	6	6
SD	63.6	29.6	61.50	123.00	171.0	79.4	150.00	301.00	13.4	96.8	559.00	1130.00
Min	1010	470	973	1950	395	184	348	697	72	519	2990	5130
Max	1140	529	1100	2200	865	402	762	1530	116	839	4840	8860

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Table E7. Daily means (SD) of TSP emissions at site IA4B for October, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
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6												
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13												
14												
15												
16												
17												
18					1360 (849)	631 (395)	1270 (796)	2550 (1600)	67 (77)	486 (553)	2810 (3190)	5350 (6080)
19					1250 (1060)	583 (492)	1180 (994)	2360 (1990)	102 (122)	735 (879)	4240 (5070)	8000 (9570)
20	337 (706)	157 (328)	338 (710)	678 (1420)					48 (50)	346 (359)	1990 (2070)	3730 (3870)
21	322 (311)	150 (145)	324 (313)	649 (627)	1270 (688)	589 (320)	1190 (648)	2390 (1300)	31 (42)	223 (302)	1290 (1740)	2380 (3230)
22	301 (158)	140 (73)	303 (159)	607 (318)	1250 (700)	582 (325)	1180 (660)	2370 (1320)				
23	247 (187)	115 (87)	249 (188)	499 (377)	1310 (724)	610 (337)	1240 (684)	2490 (1370)	46 (61)	332 (440)	1920 (2540)	3490 (4620)
24												
25												
26												
27												
28												
29												
30												
31												
Avg	302	140	304	608	1290	599	1210	2430	59	424	2450	4590
n	4	4	4	4	5	5	5	5	5	5	5	5
SD	34.0	15.8	34.00	68.10	40.5	18.8	37.10	74.40	24.4	177.0	1020.00	1950.00
Min	247	115	249	499	1250	582	1180	2360	31	223	1290	2380
Max	337	157	338	678	1360	631	1270	2550	102	735	4240	8000

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Table E7. Daily means (SD) of TSP emissions at site IA4B for December, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13	198 (115)	92 (53)	191 (111)	382 (222)	1040 (795)	483 (370)	923 (707)	1850 (1420)	51 (65)	371 (467)	2140 (2700)	3700 (4650)
14	199 (200)	93 (93)	192 (193)	386 (387)					41 (50)	297 (364)	1720 (2100)	2930 (3590)
15	221 (409)	103 (190)	213 (394)	427 (791)					49 (62)	350 (449)	2020 (2590)	3420 (4390)
16	109 (110)	51 (51)	105 (106)	211 (213)	318 (304)	148 (141)	282 (270)	566 (541)	40 (66)	290 (474)	1680 (2730)	2820 (4600)
17	155 (114)	72 (53)	149 (109)	299 (219)	385 (181)	179 (84)	343 (161)	687 (322)	25 (65)	180 (467)	1040 (2690)	1740 (4490)
18	190 (275)	88 (128)	183 (265)	367 (531)	342 (398)	159 (185)	304 (354)	609 (710)	22 (54)	156 (389)	899 (2240)	1490 (3710)
19	278 (140)	129 (65)	267 (135)	536 (270)	527 (758)	245 (352)	469 (673)	939 (1350)	27 (55)	194 (399)	1120 (2300)	1840 (3780)
20	280 (162)	130 (75)	269 (156)	540 (312)					40 (52)	291 (376)	1680 (2170)	2730 (3530)
21	176 (108)	82 (50)	169 (104)	339 (209)					59 (80)	423 (576)	2440 (3320)	3940 (5370)
22	188 (194)	87 (90)	181 (187)	362 (375)	426 (387)	198 (180)	379 (344)	759 (689)	94 (114)	679 (820)	3920 (4730)	6280 (7590)
23												
24												
25												
26												
27												
28												
29												
30												
31												
Avg	199	93	192	385	506	235	450	901	45	323	1860	3090
n	10	10	10	10	6	6	6	6	10	10	10	10
SD	48.9	22.7	47.10	94.40	247.0	115.0	220.00	441.00	19.9	144.0	831.00	1330.00
Min	109	51	105	211	318	148	282	566	22	156	899	1490
Max	280	130	269	540	1040	483	923	1850	94	679	3920	6280

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Table E7. Daily means (SD) of TSP emissions at site IA4B for February, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
3												
4												
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6												
7												
8												
9												
10												
11												
12												
13	1150 (660)	533 (307)	1120 (647)	2250 (1300)	971 (573)	452 (267)	887 (524)	1780 (1050)	39 (54)	280 (389)	1620 (2250)	3120 (4320)
14	932 (516)	433 (240)	913 (506)	1830 (1010)	873 (543)	406 (252)	797 (495)	1600 (993)	31 (27)	222 (194)	1280 (1120)	2440 (2130)
15	1340 (800)	624 (372)	1320 (785)	2640 (1570)	863 (454)	401 (211)	787 (414)	1580 (830)	28 (18)	205 (128)	1180 (739)	2240 (1400)
16					909 (664)	423 (309)	829 (605)	1660 (1210)	31 (44)	224 (315)	1290 (1820)	2430 (3400)
17					834 (669)	388 (311)	759 (609)	1520 (1220)	30 (42)	216 (307)	1240 (1770)	2320 (3290)
18	690 (405)	321 (188)	679 (399)	1360 (799)					33 (45)	238 (324)	1380 (1870)	2540 (3450)
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
Avg	1030	478	1010	2020	890	414	812	1630	32	231	1330	2510
n	4	4	4	4	5	5	5	5	6	6	6	6
SD	243.0	113.0	237.00	475.00	47.1	21.9	43.60	87.40	3.4	24.3	140.00	286.00
Min	690	321	679	1360	834	388	759	1520	28	205	1180	2240
Max	1340	624	1320	2640	971	452	887	1780	39	280	1620	3120

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Table E7. Daily means (SD) of TSP emissions at site IA4B for April, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
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11												
12												
13												
14												
15												
16												
17	1080 (570)	504 (265)	1110 (584)	2230 (1170)	1330 (696)	618 (324)	1200 (630)	2410 (1260)	126 (74)	911 (535)	5250 (3090)	8880 (5230)
18	880 (447)	409 (208)	900 (457)	1800 (917)	1130 (852)	526 (396)	1020 (771)	2050 (1550)	146 (81)	1050 (582)	6080 (3360)	10200 (5640)
19	693 (325)	322 (151)	706 (331)	1410 (664)	1190 (709)	552 (330)	1070 (641)	2150 (1290)	113 (82)	819 (594)	4720 (3430)	7850 (5700)
20	772 (430)	359 (200)	785 (437)	1570 (875)	1200 (775)	558 (360)	1080 (700)	2170 (1400)	91 (77)	659 (558)	3800 (3220)	6440 (5450)
21	953 (1120)	443 (519)	966 (1130)	1940 (2260)	1050 (763)	487 (355)	946 (689)	1900 (1380)				
22	1420 (1090)	663 (509)	1440 (1100)	2880 (2210)	1320 (910)	614 (423)	1190 (820)	2390 (1640)	22 (30)	157 (213)		
23												
24												
25												
26												
27												
28												
29												
30												
Avg	968	450	984	1970	1200	559	1090	2180	100	720	4960	8340
n	6	6	6	6	6	6	6	6	5	5	4	4
SD	239.0	111.0	241.00	482.00	99.2	46.2	89.90	180.00	42.8	309.0	827.00	1380.00
Min	693	322	706	1410	1050	487	946	1900	22	157	3800	6440
Max	1420	663	1440	2880	1330	618	1200	2410	146	1050	6080	10200

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Table E7. Daily means (SD) of TSP emissions at site IA4B for June, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1}\ m^{-2}$	$mg \cdot d^{-1}\ hd^{-1}$	$mg \cdot d^{-1}\ AU^{-1}$
1												
2												
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16												
17												
18												
19	1070 (429)	495 (200)	1050 (424)	2110 (850)	684 (455)	318 (211)	614 (408)	1230 (818)	15 (20)	111 (144)	667 (865)	1310 (1690)
20	1250 (537)	584 (250)	1240 (531)	2490 (1060)	705 (353)	328 (164)	633 (317)	1270 (635)	27 (19)	192 (137)	1160 (827)	2260 (1620)
21	789 (367)	367 (171)	782 (363)	1570 (728)	535 (249)	249 (116)	481 (224)	964 (450)	19 (12)	139 (86)	839 (515)	1630 (1010)
22	672 (410)	312 (191)	666 (406)	1330 (814)	1160 (689)	538 (320)	1040 (620)	2090 (1240)	21 (11)	151 (80)	907 (479)	1760 (929)
23	367 (272)	171 (126)	364 (269)	730 (540)					50 (42)	364 (306)	2190 (1840)	4210 (3530)
24	513 (380)	239 (177)	509 (377)	1020 (755)	922 (483)	429 (225)	832 (436)	1670 (874)	66 (58)	477 (416)	2870 (2500)	5500 (4800)
25												
26												
27												
28												
29												
30												
Avg	777	361	769	1540	800	372	720	1440	33	239	1440	2780
n	6	6	6	6	5	5	5	5	6	6	6	6
SD	305.0	142.0	302.00	605.00	217.0	101.0	196.00	393.00	18.7	135.0	811.00	1540.00
Min	367	171	364	730	535	249	481	964	15	111	667	1310
Max	1250	584	1240	2490	1160	538	1040	2090	66	477	2870	5500

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Table E8. H_2S emissions

Table E8. Daily mean (SD) of H2S concentrations at site IA4B for July, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19	26.5 (26.3)		490.0 (112.0)		456.0 (114.0)		68.1 (30.2)	
20	6.0 (7.8)	8.8 (11.3)	647.0 (153.0)	932.0 (223.0)	530.0 (153.0)	769.0 (220.0)	116.0 (57.8)	
21	9.4 (8.0)	13.4 (11.5)	634.0 (78.5)	910.0 (113.0)	630.0 (90.5)	903.0 (130.0)	228.0 (100.0)	328.0 (144.0)
22	21.4 (3.2)							
23	21.0 (6.3)							
24								
25								
26								
27	12.2 (6.6)		680.0 (52.2)		357.0 (52.7)	515.0 (76.1)	34.4 (10.4)	49.6 (15.0)
28	24.4 (18.5)		763.0 (71.6)		421.0 (91.2)	607.0 (131.0)	24.3 (12.5)	35.0 (17.9)
29	5.7 (10.4)		706.0 (53.9)		431.0 (74.7)	620.0 (108.0)	18.2 (11.1)	26.2 (15.9)
30	20.9 (25.8)		772.0 (75.9)		443.0 (93.8)	637.0 (136.0)	25.9 (15.7)	37.2 (22.8)
31	9.8 (17.6)		848.0 (150.0)		385.0 (177.0)	555.0 (255.0)	32.4 (15.5)	46.6 (22.2)
Avg	15.7	11.1	692.0	921.0	457.0	658.0	68.5	87
n	10	2	8	2	8	7	8	6
SD	7.5	2.3	101.0	11.1	81.0	124.0	67.6	108
Min	5.7	8.8	490.0	910.0	357.0	515.0	18.2	26.2
Max	26.5	13.4	848.0	932.0	630.0	903.0	228.0	328.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for August, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	45.1 (18.4)		801.0 (68.4)		435.0 (71.8)	627.0 (104.0)	39.9 (23.1)	57.4 (33.2)
2	29.7 (8.4)		746.0 (133.0)		408.0 (86.9)	588.0 (125.0)	41.6 (28.1)	59.9 (40.4)
3	23.1 (14.8)		836.0 (51.0)		548.0 (93.5)	788.0 (134.0)	34.4 (26.7)	49.4 (38.3)
4	-0.7 (1.0)		765.0 (61.8)		509.0 (146.0)	733.0 (209.0)	13.3 (6.4)	19.2 (9.2)
5	6.1 (6.2)							
6	2.9 (4.4)		648.0 (93.6)		557.0 (107.0)	809.0 (158.0)	22.0 (12.1)	32.2 (17.9)
7	29.9 (9.1)		559.0 (86.5)		622.0 (87.6)	900.0 (127.0)	72.4 (28.3)	105.0 (40.8)
8	7.8 (7.6)		534.0 (130.0)		768.0 (188.0)	1110.0 (273.0)	74.9 (13.0)	108.0 (18.7)
9	23.6 (12.7)		527.0 (71.3)		728.0 (100.0)	1050.0 (145.0)	88.4 (55.1)	128.0 (79.7)
10	23.1 (11.2)		596.0 (67.7)	860.0 (97.7)	779.0 (217.0)	1120.0 (314.0)	82.7 (68.2)	119.0 (98.4)
11	22.9 (18.7)	33.0 (26.8)	554.0 (47.1)	801.0 (67.0)	776.0 (146.0)	1120.0 (211.0)	93.5 (34.0)	135.0 (48.9)
12	14.0 (9.1)	20.2 (13.1)	548.0 (67.1)	792.0 (96.4)	709.0 (133.0)	1030.0 (194.0)	62.7 (13.0)	90.7 (18.9)
13	22.9 (13.8)	33.1 (20.0)	780.0 (98.8)	1130.0 (143.0)	620.0 (101.0)	896.0 (146.0)	120.0 (46.8)	173.0 (67.6)
14	21.5 (9.8)	31.1 (14.1)	670.0 (91.5)	969.0 (132.0)	571.0 (125.0)	826.0 (181.0)	142.0 (99.2)	
15	7.8 (8.1)	11.3 (11.7)	765.0 (138.0)	1110.0 (200.0)	715.0 (186.0)	1040.0 (269.0)	45.0 (12.3)	
16	45.3 (28.6)	65.2 (41.2)	941.0 (138.0)	1360.0 (198.0)	683.0 (66.0)	985.0 (95.2)	67.7 (30.4)	97.6 (43.8)
17	9.0 (18.5)	13.0 (26.5)	1190.0 (214.0)	1710.0 (307.0)	787.0 (160.0)	1130.0 (229.0)	53.3 (26.2)	76.6 (37.7)
18	21.9 (22.3)	31.6 (32.2)	1030.0 (215.0)	1480.0 (306.0)	609.0 (100.0)	877.0 (143.0)	89.5 (24.6)	129.0 (35.3)
19	6.8 (3.7)	9.9 (5.3)	839.0 (107.0)	1210.0 (154.0)	511.0 (69.5)	739.0 (101.0)	96.3 (58.4)	139.0 (84.2)
20	17.3 (19.3)	26.4 (28.3)	913.0 (117.0)	1320.0 (170.0)	547.0 (95.8)	790.0 (139.0)	103.0 (67.2)	149.0 (96.9)
21	12.0 (11.5)	14.6 (16.1)	943.0 (96.5)	1360.0 (139.0)	487.0 (78.5)	705.0 (113.0)	120.0 (74.3)	173.0 (107.0)
22	8.0 (6.3)	11.5 (9.1)	1070.0 (132.0)	1540.0 (191.0)	434.0 (77.8)	627.0 (113.0)	60.3 (29.0)	86.9 (41.8)
23	1.4 (4.6)	2.1 (6.6)	1070.0 (197.0)	1540.0 (283.0)			51.2 (44.9)	74.2 (64.9)
24	2.7 (2.6)	3.9 (3.7)	1140.0 (231.0)	1640.0 (332.0)	383.0 (76.5)	552.0 (110.0)	65.1 (57.0)	93.7 (82.0)
25	11.6 (13.0)	16.6 (18.7)	1210.0 (131.0)	1740.0 (188.0)	426.0 (126.0)	612.0 (181.0)	158.0 (90.4)	226.0 (130.0)
26	38.8 (27.2)	55.6 (39.0)	1100.0 (218.0)	1580.0 (313.0)	464.0 (64.5)	667.0 (92.8)	116.0 (77.8)	167.0 (112.0)
27	7.6 (9.0)	10.9 (12.9)	1150.0 (252.0)	1660.0 (359.0)	401.0 (68.7)	578.0 (98.5)	93.0 (72.0)	134.0 (103.0)
28	4.0 (8.1)	5.7 (11.6)	861.0 (95.6)	1240.0 (137.0)	420.0 (90.5)	607.0 (131.0)	31.5 (10.5)	45.5 (15.2)
29	10.4 (6.8)	15.0 (9.8)	1030.0 (113.0)	1480.0 (163.0)	464.0 (109.0)	667.0 (156.0)	54.9 (47.6)	79.0 (68.3)
30	17.9 (21.8)	22.2 (29.5)	1240.0 (218.0)	1770.0 (312.0)	770.0 (123.0)	1100.0 (177.0)	99.4 (84.4)	143.0 (121.0)
31	18.4 (15.2)							
Avg	16.5	21.6	864.0	1350.0	576.0	831.0	75.5	107
n	31	20	29	21	28	28	29	27
SD	12.0	16.0	224.0	304.0	134.0	194.0	34.9	47.9
Min	-0.7	2.1	527.0	792.0	383.0	552.0	13.3	19.2
Max	45.3	65.2	1240.0	1770.0	787.0	1130.0	158.0	226.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for September, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	34.6 (15.8)	49.6 (22.7)	984.0 (227.0)	1410.0 (325.0)	808.0 (97.7)	1160.0 (141.0)	88.5 (52.1)	127.0 (74.7)
2	8.4 (8.1)	12.1 (11.6)	858.0 (210.0)	1230.0 (302.0)	809.0 (135.0)	1160.0 (194.0)	72.7 (66.8)	104.0 (95.8)
3	6.1 (3.3)	8.8 (4.7)	810.0 (109.0)	1160.0 (156.0)	801.0 (112.0)	1150.0 (162.0)	61.6 (48.4)	88.4 (69.5)
4	19.5 (11.6)	28.0 (16.7)	760.0 (169.0)	1090.0 (242.0)	741.0 (123.0)	1070.0 (178.0)	59.1 (47.9)	85.1 (68.8)
5	9.3 (6.7)	13.4 (9.7)	647.0 (97.3)	933.0 (140.0)	704.0 (94.5)	1010.0 (137.0)		
6	7.8 (7.6)	9.9 (10.5)	537.0 (61.8)	774.0 (88.4)	612.0 (46.6)	882.0 (67.6)		
7	7.7 (5.5)							
8	1.9 (5.0)		1270.0 (108.0)	1820.0 (155.0)	719.0 (123.0)	1030.0 (177.0)	147.0 (21.8)	212.0 (31.3)
9	25.6 (26.4)		1310.0 (123.0)	1880.0 (176.0)	616.0 (66.1)	884.0 (94.9)	165.0 (31.2)	237.0 (44.9)
10	5.7 (7.8)							
11	4.5 (12.2)		2000.0 (487.0)	2860.0 (695.0)	869.0 (267.0)	1240.0 (382.0)	95.0 (19.9)	136.0 (28.4)
12	48.6 (40.9)		2510.0 (364.0)	3580.0 (520.0)	890.0 (264.0)	1270.0 (376.0)	121.0 (27.8)	174.0 (39.9)
13	27.3 (30.5)		1800.0 (500.0)	2580.0 (712.0)	453.0 (185.0)	649.0 (264.0)	76.4 (46.5)	109.0 (66.6)
14	7.7 (3.0)							
15	12.3 (6.1)		2570.0 (593.0)	3670.0 (846.0)	1080.0 (200.0)	1550.0 (285.0)	86.7 (12.5)	124.0 (17.9)
16	17.9 (11.2)		1470.0 (509.0)	2100.0 (726.0)	435.0 (177.0)	622.0 (252.0)	71.3 (27.2)	102.0 (38.9)
17	12.1 (10.6)		832.0 (207.0)	1200.0 (296.0)	514.0 (334.0)	740.0 (480.0)	48.3 (25.1)	69.4 (35.9)
18	3.4 (0.6)		1210.0 (230.0)	1740.0 (331.0)	1170.0 (219.0)	1690.0 (316.0)		
19	10.6 (7.2)	15.2 (10.3)	1590.0 (243.0)	2280.0 (349.0)	1230.0 (270.0)	1760.0 (387.0)	77.8 (31.7)	112.0 (45.5)
20	10.2 (10.4)	14.7 (15.0)	1340.0 (599.0)	1930.0 (856.0)	931.0 (148.0)	1340.0 (214.0)	75.2 (45.3)	108.0 (64.9)
21	10.8 (12.3)	15.5 (17.7)	1200.0 (312.0)	1740.0 (443.0)	899.0 (194.0)	1290.0 (280.0)	55.7 (44.6)	80.9 (64.3)
22	14.4 (9.9)	20.6 (14.2)	2290.0 (218.0)	3270.0 (312.0)	1530.0 (229.0)	2190.0 (327.0)	130.0 (62.2)	186.0 (89.1)
23	14.5 (8.3)	20.8 (11.9)	1600.0 (718.0)	2290.0 (1020.0)	1100.0 (172.0)	1580.0 (245.0)	89.0 (58.1)	128.0 (83.1)
24	4.7 (1.8)	6.8 (2.5)	846.0 (233.0)	1220.0 (335.0)	862.0 (136.0)	1240.0 (197.0)	38.7 (7.3)	55.8 (10.4)
25	15.3 (6.2)	21.9 (8.9)	1880.0 (842.0)	2690.0 (1200.0)	1060.0 (263.0)	1510.0 (376.0)	119.0 (42.0)	171.0 (60.2)
26	8.1 (5.7)	11.5 (8.1)	2600.0 (528.0)	3720.0 (755.0)	1070.0 (221.0)	1530.0 (316.0)	137.0 (46.4)	196.0 (66.6)
27	2.9 (1.6)	4.2 (2.3)	2330.0 (589.0)	3330.0 (844.0)	1110.0 (292.0)	1590.0 (419.0)		
28	25.2 (18.9)	36.0 (27.0)	2760.0 (655.0)	3950.0 (938.0)	1420.0 (292.0)	2020.0 (419.0)		
29	22.7 (11.6)	32.5 (16.5)	1840.0 (934.0)	2630.0 (1330.0)	1520.0 (304.0)	2170.0 (433.0)	152.0 (78.7)	218.0 (113.0)
30	13.6 (9.9)	19.5 (14.2)	1430.0 (734.0)	2050.0 (1050.0)	1280.0 (308.0)	1830.0 (439.0)	119.0 (58.4)	171.0 (83.8)
Avg	13.8	18.9	1530.0	2190.0	934.0	1340.0	94.8	136
n	30	18	27	27	27	27	22	22
SD	10.2	11.1	649.0	925.0	296.0	422.0	35.2	50.4
Min	1.9	4.2	537.0	774.0	435.0	622.0	38.7	55.8
Max	48.6	49.6	2760.0	3950.0	1530.0	2190.0	165.0	237.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for October, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	17.2 (17.0)	24.6 (24.4)	1300.0 (471.0)	1860.0 (675.0)	1120.0 (275.0)	1610.0 (393.0)	111.0 (41.4)	159.0 (59.5)
2	16.1 (10.8)	23.1 (15.4)	1610.0 (491.0)	2310.0 (700.0)	1480.0 (281.0)	2120.0 (401.0)	157.0 (36.2)	225.0 (52.2)
3	17.1 (16.6)	24.4 (23.7)	2730.0 (863.0)	3890.0 (1230.0)	1410.0 (216.0)	2020.0 (310.0)	83.2 (28.0)	119.0 (40.2)
4	23.3 (13.0)	33.5 (18.7)	1880.0 (1270.0)	2700.0 (1820.0)	1240.0 (447.0)	1780.0 (637.0)	73.4 (29.5)	105.0 (42.3)
5	31.0 (15.5)	44.5 (22.2)	873.0 (261.0)	1260.0 (374.0)	880.0 (133.0)	1270.0 (191.0)	73.8 (30.7)	106.0 (44.1)
6	27.6 (18.4)	39.7 (26.5)	789.0 (199.0)	1140.0 (286.0)	972.0 (244.0)	1350.0 (339.0)	61.2 (19.1)	88.2 (27.5)
7	21.4 (8.2)	30.8 (11.8)	709.0 (119.0)	1020.0 (170.0)	889.0 (223.0)	1310.0 (317.0)	53.7 (17.5)	77.5 (25.1)
8	5.5 (1.4)	7.9 (2.0)	2120.0 (904.0)	3040.0 (1290.0)	1140.0 (390.0)	1640.0 (555.0)	60.6 (15.2)	86.9 (21.7)
9	7.8 (1.5)	11.1 (2.1)	3560.0 (582.0)	5090.0 (830.0)	1470.0 (411.0)	2090.0 (588.0)	61.5 (15.2)	87.9 (21.8)
10	12.8 (5.5)	18.3 (7.8)	4190.0 (337.0)	5990.0 (481.0)	2110.0 (370.0)	3020.0 (529.0)	86.8 (13.2)	124.0 (19.0)
11	17.5 (17.9)	24.9 (25.5)	3790.0 (356.0)	5420.0 (507.0)	1710.0 (345.0)	2450.0 (493.0)	108.0 (4.2)	154.0 (6.0)
12	14.0 (15.2)	20.0 (21.7)	2670.0 (544.0)	3820.0 (777.0)	1390.0 (325.0)	1990.0 (464.0)	105.0 (24.3)	151.0 (34.9)
13	1.8 (0.2)	2.6 (0.3)	1250.0 (337.0)	1790.0 (484.0)	1060.0 (134.0)	1510.0 (191.0)	97.2 (6.1)	139.0 (8.7)
14	16.2 (14.2)	23.2 (20.3)	985.0 (121.0)	1410.0 (173.0)	709.0 (113.0)	1020.0 (161.0)	104.0 (8.9)	149.0 (12.8)
15	3.5 (4.1)	5.1 (5.9)	1050.0 (185.0)	1510.0 (265.0)	926.0 (166.0)	1330.0 (238.0)	143.0 (38.6)	206.0 (55.4)
16	5.0 (2.0)	7.1 (2.9)	1930.0 (569.0)	2760.0 (812.0)	1390.0 (229.0)	1990.0 (328.0)	116.0 (23.0)	167.0 (33.0)
17	8.9 (6.9)	12.8 (9.8)	1790.0 (713.0)	2560.0 (1020.0)	1240.0 (307.0)	1780.0 (437.0)	165.0 (36.1)	237.0 (52.0)
18	4.6 (2.2)	6.6 (3.1)					168.0 (32.9)	
19	4.9 (4.4)	7.0 (6.3)	867.0 (135.0)	1240.0 (192.0)	1350.0 (205.0)	1940.0 (291.0)	236.0 (94.6)	
20	10.8 (4.2)	15.4 (6.0)	900.0 (201.0)	1290.0 (286.0)	1040.0 (536.0)	1490.0 (764.0)	294.0 (136.0)	
21	10.5 (1.5)	15.0 (2.1)	1620.0 (592.0)	2320.0 (849.0)	791.0 (282.0)	1130.0 (402.0)	169.0 (44.6)	
22	10.4 (1.7)	14.8 (2.4)	1480.0 (166.0)	2110.0 (238.0)	1560.0 (203.0)	2230.0 (290.0)	248.0 (23.3)	
23	10.2 (2.6)	14.5 (3.7)	1690.0 (289.0)	2410.0 (414.0)	1430.0 (458.0)	2040.0 (653.0)	171.0 (96.1)	
24	9.8 (3.3)	13.9 (4.7)	2780.0 (688.0)	3960.0 (982.0)	1830.0 (255.0)	2610.0 (365.0)	134.0 (68.0)	
25	2.9 (1.0)	4.1 (1.4)			1770.0 (310.0)	2530.0 (443.0)	119.0 (19.3)	
26	9.5 (8.1)	13.6 (11.5)	3250.0 (474.0)	4650.0 (679.0)	1110.0 (225.0)	1580.0 (319.0)	89.6 (7.7)	128.0 (11.0)
27	17.3 (3.2)							
28	6.6 (2.9)							
29	9.0 (8.6)	12.8 (12.3)	3560.0 (751.0)	5080.0 (1080.0)	1120.0 (480.0)	1610.0 (686.0)	191.0 (125.0)	273.0 (179.0)
30	12.4 (6.9)	17.7 (9.8)	3560.0 (735.0)	5100.0 (1050.0)	697.0 (331.0)	998.0 (474.0)	106.0 (29.8)	151.0 (42.6)
31	14.3 (10.4)	20.4 (14.8)	3830.0 (716.0)	5480.0 (1020.0)	1170.0 (423.0)	1670.0 (603.0)	72.8 (16.3)	104.0 (23.2)
Avg	12.3	17.6	2100.0	3010.0	1250.0	1790.0	126.0	145
n	31	29	27	27	28	28	29	21
SD	7.0	10.2	1090.0	1560.0	342.0	487.0	59.2	51.8
Min	1.8	2.6	709.0	1020.0	697.0	998.0	53.7	77.5
Max	31.0	44.5	4190.0	5990.0	2110.0	3020.0	294.0	273.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for November, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	17.7 (8.5)	25.2 (12.1)			1950.0 (308.0)	2790.0 (442.0)	121.0 (16.9)	173.0 (24.2)
2	11.3 (2.8)	16.2 (4.0)	3150.0 (376.0)	4480.0 (543.0)	1760.0 (384.0)	2540.0 (547.0)	115.0 (27.5)	167.0 (38.2)
3	9.8 (4.3)	13.9 (6.1)	3000.0 (197.0)	4280.0 (282.0)	1900.0 (354.0)	2720.0 (508.0)	120.0 (16.7)	172.0 (24.0)
4	16.4 (16.7)	23.4 (23.8)	2980.0 (647.0)	4250.0 (923.0)	1500.0 (306.0)	2140.0 (438.0)	118.0 (18.6)	168.0 (26.7)
5	7.6 (1.8)	10.8 (2.5)	3140.0 (311.0)	4480.0 (444.0)	2090.0 (737.0)	3000.0 (1060.0)	193.0 (129.0)	275.0 (184.0)
6	5.2 (2.3)	7.3 (3.2)	3890.0 (849.0)	5560.0 (1230.0)	2130.0 (178.0)	3040.0 (257.0)	189.0 (21.0)	270.0 (30.0)
7	144.0 (132.0)	205.0 (188.0)	28100.0 (21000.0)	40300.0 (30100.0)	12600.0 (8790.0)	18100.0 (12600.0)	1080.0 (741.0)	1550.0 (1060.0)
8	215.0 (122.0)	307.0 (174.0)	20500.0 (19500.0)	29800.0 (28000.0)	12900.0 (9460.0)	18600.0 (13500.0)	1230.0 (926.0)	1780.0 (1320.0)
9	10.7 (5.9)	15.2 (8.4)	2150.0 (371.0)	3080.0 (530.0)	1930.0 (254.0)	2750.0 (365.0)	150.0 (27.2)	215.0 (39.0)
10	19.3 (6.8)	27.5 (9.7)	2960.0 (337.0)	4230.0 (483.0)	1520.0 (371.0)	2170.0 (530.0)	149.0 (33.2)	214.0 (47.6)
11	12.4 (2.7)	17.7 (3.9)	2860.0 (429.0)	4100.0 (614.0)	448.0 (144.0)	642.0 (205.0)	95.5 (19.8)	137.0 (28.2)
12	22.1 (9.1)	31.4 (12.9)	3110.0 (449.0)	4430.0 (635.0)	1230.0 (413.0)	1760.0 (587.0)		
13	16.3 (8.9)	23.2 (12.7)	3180.0 (415.0)	4550.0 (596.0)	1420.0 (347.0)	2020.0 (495.0)	169.0 (30.3)	242.0 (43.4)
14	6.2 (1.2)	8.9 (1.7)	3290.0 (396.0)	4700.0 (567.0)	1890.0 (375.0)	2700.0 (535.0)	167.0 (42.7)	238.0 (61.4)
15	23.1 (25.7)	33.0 (36.6)	2860.0 (294.0)	4090.0 (419.0)	2230.0 (399.0)	3180.0 (573.0)	133.0 (25.6)	190.0 (36.8)
16	24.4 (25.7)	34.7 (36.5)	2830.0 (260.0)	4030.0 (372.0)	1890.0 (573.0)	2710.0 (817.0)	128.0 (33.5)	184.0 (47.9)
17	12.5 (4.9)	17.8 (6.9)	3790.0 (604.0)	5420.0 (868.0)	1830.0 (444.0)	2620.0 (637.0)	138.0 (15.7)	197.0 (22.4)
18	5.1 (1.4)	7.2 (2.0)	4030.0 (543.0)	5770.0 (776.0)	1750.0 (313.0)	2500.0 (450.0)	151.0 (18.0)	216.0 (25.8)
19	19.4 (11.3)	27.6 (16.2)	3020.0 (947.0)	4320.0 (1350.0)	1350.0 (649.0)	1930.0 (925.0)	162.0 (24.8)	231.0 (35.5)
20	10.8 (5.7)	15.4 (8.1)	3990.0 (828.0)	5720.0 (1190.0)	1300.0 (238.0)	1860.0 (342.0)	149.0 (17.1)	214.0 (24.5)
21	15.6 (3.6)	22.3 (5.1)	5420.0 (562.0)	7750.0 (803.0)	1770.0 (549.0)	2530.0 (784.0)	168.0 (13.9)	241.0 (19.9)
22	12.7 (0.8)							
23	11.6 (3.1)	16.5 (4.4)	4310.0 (382.0)	6140.0 (545.0)	2500.0 (499.0)	3570.0 (715.0)	172.0 (14.0)	246.0 (19.9)
24	5.9 (0.9)	8.4 (1.3)	4010.0 (689.0)	5720.0 (980.0)	2350.0 (333.0)	3360.0 (479.0)	154.0 (13.9)	220.0 (19.9)
25	6.1 (0.9)	8.7 (1.3)	3770.0 (523.0)	5390.0 (745.0)	2540.0 (336.0)	3630.0 (484.0)	152.0 (14.2)	217.0 (20.3)
26	10.7 (1.7)	15.2 (2.4)	3750.0 (519.0)	5350.0 (740.0)	2680.0 (590.0)	3840.0 (848.0)	173.0 (26.5)	247.0 (38.1)
27	2.7 (2.3)	3.9 (3.2)	3970.0 (595.0)	5670.0 (852.0)	2880.0 (486.0)	4120.0 (693.0)	177.0 (21.7)	253.0 (31.0)
28	9.1 (4.8)	13.0 (6.8)	3240.0 (520.0)	4630.0 (739.0)	2520.0 (349.0)	3600.0 (499.0)	177.0 (18.7)	254.0 (26.8)
29	9.7 (4.7)	13.8 (6.7)	3180.0 (441.0)	4540.0 (627.0)	3060.0 (586.0)	4370.0 (840.0)	183.0 (21.3)	261.0 (30.5)
30	24.3 (3.4)	34.5 (4.8)	3360.0 (694.0)	4790.0 (987.0)	3230.0 (524.0)	4610.0 (751.0)	217.0 (36.8)	310.0 (52.7)
Avg	23.9	34.6	4930.0	7050.0	2730.0	3910.0	226.0	324
n	30	29	28	28	29	29	28	28
SD	43.0	62.3	5510.0	7930.0	2790.0	4010.0	261.0	375
Min	2.7	3.9	2150.0	3080.0	448.0	642.0	95.5	137.0
Max	215.0	307.0	28100.0	40300.0	12900.0	18600.0	1230.0	1780.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for December, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	30.8 (6.6)	43.8 (9.4)	2840.0 (1410.0)	4040.0 (2010.0)	6210.0 (7730.0)	8850.0 (11000.0)	231.0 (24.7)	330.0 (35.4)
2	29.8 (1.9)	42.3 (2.6)	1870.0 (294.0)	2660.0 (420.0)	1510.0 (336.0)	2150.0 (477.0)	201.0 (23.4)	287.0 (33.4)
3	36.6 (9.5)	51.9 (13.6)	1940.0 (231.0)	2760.0 (330.0)	1610.0 (322.0)	2290.0 (458.0)	214.0 (19.0)	307.0 (27.2)
4	27.8 (8.6)	39.5 (12.2)	1450.0 (250.0)	2070.0 (358.0)	1400.0 (298.0)	2000.0 (430.0)		
5	27.6 (3.5)	39.2 (4.9)	1440.0 (198.0)	2060.0 (283.0)	1960.0 (298.0)	2810.0 (426.0)		
6	26.2 (8.0)	37.2 (11.4)	1640.0 (304.0)	2350.0 (437.0)	2280.0 (604.0)	3240.0 (859.0)		
7	32.4 (2.3)	46.0 (3.3)	1200.0 (117.0)	1710.0 (167.0)	1470.0 (133.0)	2110.0 (190.0)	252.0 (45.5)	361.0 (65.1)
8	48.8 (8.3)							
9	42.6 (5.6)							
10	40.8 (13.4)	58.0 (19.0)	1480.0 (224.0)	2120.0 (321.0)	1850.0 (363.0)	2640.0 (521.0)	537.0 (450.0)	769.0 (645.0)
11	36.6 (10.6)	52.0 (15.1)	1490.0 (167.0)	2140.0 (239.0)	1380.0 (238.0)	1980.0 (340.0)	236.0 (55.6)	338.0 (79.6)
12	36.0 (10.3)	51.3 (14.7)	1650.0 (214.0)	2350.0 (308.0)	1740.0 (335.0)	2490.0 (482.0)	189.0 (18.5)	270.0 (26.3)
13	25.0 (7.8)	35.6 (11.0)	2120.0 (360.0)	3030.0 (514.0)	1620.0 (387.0)	2320.0 (553.0)	202.0 (105.0)	289.0 (150.0)
14	24.7 (6.7)	35.1 (9.4)	3620.0 (1290.0)	5170.0 (1840.0)	2860.0 (668.0)	4080.0 (956.0)		
15	21.1 (7.6)	29.9 (10.8)	3090.0 (141.0)	4410.0 (202.0)	3090.0 (428.0)	4420.0 (614.0)	173.0 (28.5)	248.0 (40.8)
16	8.0 (1.1)	11.4 (1.6)	3000.0 (235.0)	4290.0 (334.0)	3390.0 (453.0)	4850.0 (646.0)	144.0 (21.6)	207.0 (31.0)
17	8.1 (2.8)	11.4 (3.9)	3110.0 (524.0)	4440.0 (749.0)	3560.0 (582.0)	5100.0 (832.0)	161.0 (27.8)	230.0 (39.8)
18	12.2 (4.0)	17.3 (5.7)	2580.0 (254.0)	3680.0 (361.0)	2840.0 (522.0)	4060.0 (745.0)	158.0 (35.6)	226.0 (51.0)
19	13.8 (10.8)	19.6 (15.4)	2450.0 (494.0)	3500.0 (705.0)	3230.0 (445.0)	4630.0 (636.0)	154.0 (23.8)	221.0 (34.1)
20	1.3 (4.2)	1.9 (6.0)			2380.0 (334.0)	3400.0 (478.0)		
21	8.6 (8.4)	12.2 (11.9)	1930.0 (376.0)	2760.0 (538.0)	2310.0 (507.0)	3310.0 (726.0)	151.0 (39.4)	217.0 (56.5)
22	-0.2 (3.0)	-0.3 (4.3)	2410.0 (579.0)	3450.0 (826.0)	2890.0 (818.0)	4130.0 (1170.0)	160.0 (53.7)	229.0 (76.9)
23	1.7 (6.0)	2.4 (8.5)	3340.0 (616.0)	4770.0 (882.0)	4790.0 (814.0)	6860.0 (1170.0)	271.0 (47.3)	388.0 (67.7)
24	-1.2 (0.3)	-1.7 (0.5)	2300.0 (482.0)	3290.0 (688.0)	3890.0 (1140.0)	5580.0 (1630.0)	223.0 (224.0)	319.0 (320.0)
25	5.1 (6.2)	7.3 (8.8)	2010.0 (276.0)	2870.0 (394.0)	2790.0 (643.0)	4000.0 (919.0)	163.0 (21.0)	234.0 (30.1)
26	10.4 (5.9)	14.8 (8.4)	1850.0 (302.0)	2650.0 (432.0)	2680.0 (799.0)	3830.0 (1140.0)	137.0 (27.0)	196.0 (38.6)
27	4.9 (4.5)							
28	10.5 (7.8)		1390.0 (816.0)					
29	11.4 (7.4)	16.2 (10.5)	2420.0 (299.0)	3460.0 (426.0)	2420.0 (756.0)	3470.0 (1080.0)	122.0 (11.9)	175.0 (17.0)
30	3.9 (5.3)	5.6 (7.6)	2720.0 (383.0)	3890.0 (548.0)	2830.0 (1040.0)	4050.0 (1490.0)	135.0 (13.0)	193.0 (18.6)
31	5.4 (6.5)	7.6 (9.3)	2540.0 (280.0)	3640.0 (399.0)	2470.0 (531.0)	3530.0 (762.0)	180.0 (14.5)	258.0 (20.7)
Avg	19.1	25.5	2220.0	3210.0	2650.0	3780.0	200.0	286
n	31	27	27	26	27	27	22	22
SD	14.3	18.6	653.0	921.0	1080.0	1540.0	83.6	120
Min	-1.2	-1.7	1200.0	1710.0	1380.0	1980.0	122.0	175.0
Max	48.8	58.0	3620.0	5170.0	6210.0	8850.0	537.0	769.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for January, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	1.3 (1.1)	1.9 (1.6)	2510.0 (231.0)	3580.0 (329.0)	2680.0 (466.0)	3870.0 (658.0)	199.0 (24.6)	284.0 (35.2)
2	8.7 (6.9)	12.3 (9.8)	2530.0 (284.0)	3620.0 (402.0)	2130.0 (369.0)	3040.0 (528.0)	137.0 (17.4)	195.0 (24.9)
3	4.4 (3.4)	6.3 (4.9)	2670.0 (339.0)	3810.0 (485.0)	2260.0 (439.0)	3230.0 (626.0)	133.0 (19.7)	191.0 (28.2)
4	2.3 (2.9)							
5	15.2 (10.8)	21.7 (15.4)	2030.0 (186.0)	2900.0 (266.0)	1390.0 (290.0)	2000.0 (407.0)	110.0 (19.7)	157.0 (28.1)
6	10.3 (14.3)	14.7 (20.3)	1750.0 (304.0)	2500.0 (435.0)	1070.0 (305.0)	1580.0 (436.0)	87.8 (12.0)	126.0 (17.1)
7	-1.5 (1.6)	-2.1 (2.3)	1560.0 (323.0)	2230.0 (462.0)	1200.0 (181.0)	1720.0 (258.0)	95.8 (12.1)	137.0 (17.4)
8	-1.6 (1.1)	-2.3 (1.6)	1940.0 (263.0)	2770.0 (375.0)	1850.0 (514.0)	2650.0 (738.0)	108.0 (14.4)	155.0 (20.7)
9	6.4 (7.7)	9.1 (10.9)	2140.0 (361.0)	3060.0 (516.0)	2030.0 (848.0)	2900.0 (1210.0)	137.0 (23.7)	195.0 (34.0)
10	4.0 (4.3)	5.7 (6.1)	1890.0 (376.0)	2700.0 (538.0)				
11	3.9 (4.1)	5.6 (5.8)	2020.0 (339.0)	2890.0 (484.0)	2550.0 (597.0)	3650.0 (855.0)	206.0 (29.3)	295.0 (41.9)
12	5.8 (8.0)	8.3 (11.4)	2370.0 (236.0)	3380.0 (337.0)	2640.0 (684.0)	3780.0 (980.0)	248.0 (20.8)	355.0 (29.7)
13	2.1 (3.4)	2.9 (4.8)	2340.0 (229.0)	3350.0 (326.0)	2970.0 (646.0)	4260.0 (926.0)	238.0 (19.6)	340.0 (28.0)
14	5.3 (4.0)	7.5 (5.7)	2370.0 (337.0)	3390.0 (481.0)	3810.0 (1170.0)	5460.0 (1680.0)	307.0 (82.2)	439.0 (118.0)
15	-1.6 (1.9)	-2.3 (2.7)	2230.0 (353.0)	3190.0 (503.0)	2940.0 (763.0)	4210.0 (1090.0)	374.0 (29.6)	536.0 (42.2)
16	3.7 (7.4)	5.2 (10.5)	1830.0 (258.0)	2620.0 (368.0)	2380.0 (536.0)	3400.0 (766.0)	397.0 (52.7)	568.0 (75.7)
17	6.8 (9.7)	9.6 (13.7)	2130.0 (195.0)	3050.0 (277.0)	3520.0 (773.0)	5040.0 (1110.0)	381.0 (38.3)	545.0 (54.8)
18	8.5 (4.8)	12.1 (6.8)	2210.0 (356.0)	3150.0 (507.0)	2830.0 (477.0)	4050.0 (685.0)		
19	0.7 (4.1)	0.9 (5.9)	2540.0 (262.0)	3630.0 (373.0)	3060.0 (413.0)	4390.0 (592.0)	132.0 (19.8)	189.0 (28.3)
20	-1.9 (1.5)	-2.6 (2.1)	2270.0 (221.0)	3250.0 (314.0)	2440.0 (854.0)	3500.0 (1220.0)	105.0 (31.9)	150.0 (45.5)
21	-3.0 (0.6)	-4.2 (0.8)	2350.0 (166.0)	3360.0 (237.0)	2080.0 (713.0)		76.4 (51.2)	109.0 (73.3)
22	2.1 (4.7)	2.9 (6.6)	2260.0 (224.0)	3230.0 (318.0)	2560.0 (690.0)		147.0 (101.0)	211.0 (145.0)
23	1.9 (5.0)	2.7 (7.1)	2240.0 (227.0)	3210.0 (317.0)	2970.0 (1210.0)		139.0 (33.2)	199.0 (47.4)
24	-1.4 (1.7)	-2.0 (2.3)	2590.0 (509.0)	3690.0 (728.0)	3050.0 (947.0)		178.0 (41.9)	254.0 (59.9)
25	9.0 (5.2)	12.8 (7.4)	2550.0 (335.0)	3640.0 (479.0)	2310.0 (617.0)		115.0 (23.5)	164.0 (33.7)
26	4.6 (4.6)	6.5 (6.6)	2480.0 (221.0)	3550.0 (316.0)	1980.0 (1080.0)		126.0 (73.9)	179.0 (106.0)
27	16.6 (9.2)	23.6 (13.0)	2420.0 (169.0)	3460.0 (242.0)	1550.0 (286.0)		115.0 (13.8)	164.0 (19.8)
28	9.7 (3.6)	13.8 (5.1)	2040.0 (556.0)	2920.0 (794.0)	1030.0 (225.0)		104.0 (13.4)	149.0 (19.1)
29	10.4 (5.3)	14.8 (7.5)	2600.0 (424.0)	3720.0 (604.0)	2910.0 (1590.0)		299.0 (205.0)	427.0 (292.0)
30	13.2 (5.7)	18.7 (8.0)	2830.0 (343.0)	4050.0 (486.0)	4370.0 (1450.0)		194.0 (63.0)	277.0 (90.2)
31	8.7 (1.9)	12.4 (2.7)	2420.0 (280.0)	3460.0 (399.0)	2860.0 (850.0)		244.0 (105.0)	349.0 (151.0)
Avg	5.0	7.2	2270.0	3250.0	2460.0	3480.0	183.0	262
n	31	30	30	30	29	18	28	28
SD	5.1	7.3	290.0	412.0	771.0	1030.0	92.3	132
Min	-3.0	-4.2	1560.0	2230.0	1030.0	1580.0	76.4	109.0
Max	16.6	23.6	2830.0	4050.0	4370.0	5460.0	397.0	568.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for February, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	12.2 (4.0)	17.3 (5.7)	2450.0 (319.0)	3500.0 (454.0)	2090.0 (821.0)		206.0 (30.0)	295.0 (42.9)
2	11.1 (2.6)	15.7 (3.7)	2310.0 (273.0)	3310.0 (391.0)	1690.0 (200.0)		189.0 (9.5)	270.0 (13.6)
3	10.6 (3.9)	15.0 (5.6)	2650.0 (303.0)	3790.0 (433.0)	2050.0 (343.0)		199.0 (11.8)	285.0 (16.9)
4	20.6 (4.7)	29.3 (6.7)	2170.0 (309.0)	3110.0 (439.0)	2290.0 (898.0)		223.0 (20.5)	319.0 (29.4)
5	30.7 (2.5)	43.9 (3.7)	2220.0 (353.0)	3220.0 (506.0)	2760.0 (659.0)		284.0 (37.7)	407.0 (54.2)
6	17.4 (10.8)	21.9 (13.3)	2120.0 (534.0)	3180.0 (637.0)	3350.0 (726.0)		362.0 (106.0)	531.0 (155.0)
7	8.0 (1.2)	11.4 (1.6)	2270.0 (243.0)	3250.0 (347.0)	2780.0 (522.0)		455.0 (155.0)	651.0 (222.0)
8	15.0 (7.9)	21.3 (11.2)	2410.0 (361.0)	3450.0 (517.0)	2500.0 (599.0)		239.0 (39.3)	342.0 (55.6)
9	20.7 (3.8)	28.8 (5.8)	2540.0 (370.0)	3630.0 (530.0)	3650.0 (1440.0)		214.0 (26.3)	306.0 (37.5)
10	18.9 (10.6)	26.8 (15.0)	2580.0 (226.0)	3690.0 (321.0)	5190.0 (928.0)		289.0 (57.0)	413.0 (81.6)
11	6.1 (1.2)	8.7 (1.8)	2620.0 (205.0)	3740.0 (291.0)	2810.0 (690.0)		230.0 (109.0)	329.0 (156.0)
12	11.9 (3.4)	16.8 (4.8)	2630.0 (414.0)	3760.0 (589.0)	3270.0 (593.0)		170.0 (40.5)	243.0 (58.1)
13	18.9 (4.8)	26.8 (6.7)	2840.0 (473.0)	4050.0 (673.0)	2410.0 (544.0)		178.0 (45.5)	255.0 (65.2)
14	13.2 (2.1)							
15	13.8 (8.1)	19.5 (11.5)	2730.0 (454.0)	3900.0 (647.0)	3090.0 (762.0)		179.0 (24.5)	256.0 (35.1)
16	10.8 (6.4)	15.4 (9.1)	2860.0 (436.0)	4090.0 (623.0)	2350.0 (675.0)		148.0 (25.0)	211.0 (35.7)
17	11.9 (3.7)	16.9 (5.3)	2910.0 (345.0)	4160.0 (495.0)	2540.0 (482.0)		178.0 (72.4)	255.0 (103.0)
18	8.7 (5.4)	12.4 (7.7)	2880.0 (315.0)	4110.0 (450.0)	4520.0 (886.0)		561.0 (399.0)	803.0 (571.0)
19	14.9 (10.8)	21.1 (15.4)	2870.0 (466.0)	4110.0 (665.0)	3520.0 (1430.0)		142.0 (43.4)	203.0 (61.9)
20	31.7 (9.5)	44.9 (13.5)	2390.0 (371.0)	3410.0 (526.0)	3810.0 (509.0)		139.0 (12.4)	200.0 (17.8)
21	7.1 (1.5)	10.0 (2.1)	2360.0 (545.0)	3370.0 (778.0)	2710.0 (509.0)		111.0 (23.4)	159.0 (33.5)
22	15.6 (8.5)	22.2 (12.1)	2450.0 (223.0)	3500.0 (323.0)	2890.0 (428.0)		115.0 (15.3)	164.0 (22.1)
23			2540.0 (398.0)	3630.0 (569.0)	2650.0 (565.0)		126.0 (11.9)	180.0 (17.0)
24								
25								
26								
27								
28								
29	11.3 (3.3)	16.0 (4.7)	2270.0 (257.0)	3250.0 (369.0)	3540.0 (765.0)	5060.0 (1090.0)		
Avg	14.8	21.0	2520.0	3620.0	2980.0		224.0	322
n	23	22	23	23	23	1	22	22
SD	6.4	9.3	239.0	328.0	794.0		109.0	156
Min	6.1	8.7	2120.0	3110.0	1690.0		111.0	159.0
Max	31.7	44.9	2910.0	4160.0	5190.0		561.0	803.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for March, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	13.5 (8.4)	19.3 (12.0)	2500.0 (482.0)	3570.0 (691.0)	2710.0 (363.0)	3870.0 (518.0)		
2	13.3 (5.9)	19.0 (8.5)	2040.0 (496.0)	2920.0 (708.0)	2260.0 (481.0)	3240.0 (687.0)		
3	7.4 (2.6)	10.6 (3.7)	2270.0 (210.0)	3250.0 (299.0)	3720.0 (567.0)	5330.0 (812.0)		
4	6.6 (1.8)	9.4 (2.5)	2200.0 (428.0)	3140.0 (610.0)	3110.0 (672.0)	4440.0 (963.0)		
5	11.7 (4.1)	16.6 (5.8)	2360.0 (408.0)	3380.0 (586.0)	3030.0 (366.0)	4330.0 (528.0)	244.0 (60.3)	349.0 (86.2)
6	12.2 (6.6)	17.3 (9.3)	2240.0 (574.0)	3200.0 (821.0)	3430.0 (627.0)	4920.0 (900.0)	253.0 (92.1)	362.0 (132.0)
7	28.8 (16.0)	40.8 (22.8)	2770.0 (302.0)	3950.0 (431.0)	3620.0 (588.0)	5170.0 (839.0)	212.0 (27.1)	304.0 (38.8)
8	10.0 (7.0)	14.2 (9.9)	2940.0 (512.0)	4200.0 (730.0)	3050.0 (643.0)	4350.0 (923.0)	188.0 (35.4)	269.0 (50.8)
9	7.3 (2.4)	10.4 (3.4)	2590.0 (246.0)	3710.0 (352.0)	2610.0 (912.0)	3730.0 (1310.0)	143.0 (26.9)	204.0 (38.5)
10	11.9 (7.4)	17.0 (10.5)	2950.0 (740.0)	4220.0 (1060.0)	3100.0 (524.0)	4440.0 (748.0)	126.0 (27.6)	181.0 (39.4)
11	11.7 (9.7)	16.7 (13.8)	2640.0 (526.0)	3780.0 (751.0)	3120.0 (860.0)	4460.0 (1230.0)	113.0 (23.3)	161.0 (33.3)
12	4.1 (0.7)	5.8 (1.0)	2420.0 (809.0)	3460.0 (1160.0)	4350.0 (3110.0)	6220.0 (4440.0)	119.0 (25.9)	170.0 (37.1)
13	22.7 (7.8)	32.4 (11.2)	2200.0 (449.0)	3140.0 (640.0)	4040.0 (1490.0)	5770.0 (2140.0)	132.0 (35.0)	189.0 (50.2)
14	28.1 (13.4)	40.0 (19.0)	2350.0 (531.0)	3370.0 (758.0)	6890.0 (1110.0)	9850.0 (1590.0)	159.0 (22.2)	227.0 (31.8)
15	14.2 (5.0)	20.1 (7.1)	2690.0 (245.0)	3850.0 (349.0)	5880.0 (1130.0)	8410.0 (1610.0)	163.0 (19.3)	233.0 (27.6)
16	6.5 (4.5)	9.3 (6.4)	2540.0 (302.0)	3640.0 (430.0)	4130.0 (1900.0)	5910.0 (2720.0)	176.0 (30.4)	252.0 (43.6)
17	7.4 (5.1)	11.1 (7.4)	2590.0 (325.0)	3700.0 (464.0)	3990.0 (794.0)	5690.0 (1130.0)	202.0 (56.8)	289.0 (81.2)
18	20.7 (8.3)	29.4 (11.7)	2020.0 (387.0)	2890.0 (555.0)	5070.0 (992.0)	7260.0 (1420.0)	198.0 (18.8)	284.0 (27.0)
19	20.6 (6.9)	29.3 (9.8)	1620.0 (342.0)	2320.0 (488.0)	5690.0 (2970.0)	8140.0 (4250.0)	213.0 (29.7)	305.0 (42.7)
20	5.4 (7.6)	7.7 (10.9)	1920.0 (297.0)	2740.0 (426.0)	4450.0 (1530.0)	6370.0 (2200.0)	203.0 (33.6)	290.0 (48.1)
21	12.2 (7.2)	17.4 (10.3)	2220.0 (565.0)	3180.0 (807.0)	3800.0 (1060.0)	5420.0 (1510.0)		
22	9.6 (6.0)	13.7 (8.5)	2310.0 (359.0)	3300.0 (512.0)	4090.0 (636.0)	5860.0 (907.0)	144.0 (14.1)	208.0 (20.3)
23	14.0 (4.3)	19.9 (6.1)	2670.0 (512.0)	3820.0 (731.0)	4970.0 (721.0)	7110.0 (1030.0)	169.0 (7.5)	243.0 (10.7)
24	15.7 (5.5)		2730.0 (555.0)	3900.0 (793.0)	3410.0 (1060.0)	4870.0 (1510.0)	165.0 (65.8)	237.0 (94.7)
25	17.1 (10.0)	24.4 (14.5)	2130.0 (447.0)	3040.0 (639.0)	2830.0 (670.0)	4050.0 (959.0)	72.8 (19.1)	104.0 (27.5)
26	11.0 (7.0)	15.6 (9.9)	2580.0 (714.0)	3690.0 (1020.0)	3310.0 (1160.0)	4740.0 (1660.0)	86.2 (28.3)	123.0 (40.6)
27	9.6 (8.1)		3580.0 (458.0)	5120.0 (657.0)	3080.0 (525.0)	4410.0 (750.0)	75.0 (7.6)	107.0 (10.9)
28	29.8 (22.6)		3550.0 (586.0)	5080.0 (836.0)	3040.0 (691.0)	4350.0 (988.0)	93.4 (34.4)	134.0 (49.4)
29	-3.0 (5.8)		5420.0 (4100.0)	7750.0 (5860.0)	2480.0 (632.0)	3540.0 (905.0)	73.0 (12.9)	105.0 (18.6)
30	-5.7 (7.0)	-8.1 (10.0)	2430.0 (545.0)	3470.0 (779.0)	2140.0 (457.0)	3060.0 (654.0)	63.1 (15.8)	90.2 (22.6)
31	-8.2 (3.9)	-11.6 (5.6)	2240.0 (684.0)	3200.0 (978.0)	2590.0 (478.0)	3720.0 (684.0)	76.7 (9.2)	110.0 (13.1)
Avg	11.8	16.6	2570.0	3680.0	3680.0	5260.0	149.0	213
n	31	27	31	31	31	31	26	26
SD	8.7	11.6	660.0	944.0	1090.0	1560.0	55.1	78.9
Min	-8.2	-11.6	1620.0	2320.0	2140.0	3060.0	63.1	90.2
Max	29.8	40.8	5420.0	7750.0	6890.0	9850.0	253.0	362.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for April, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	-7.1 (3.9)	-10.1 (5.5)	3430.0 (843.0)	4910.0 (1200.0)	3740.0 (555.0)	5350.0 (795.0)	144.0 (98.9)	207.0 (142.0)
2	-0.7 (9.8)	-1.0 (13.9)	3670.0 (1420.0)	5260.0 (2020.0)	2660.0 (611.0)	3800.0 (874.0)	75.7 (21.5)	108.0 (30.8)
3	-4.4 (5.7)	-6.2 (8.1)	4370.0 (2120.0)	6250.0 (3030.0)	3010.0 (375.0)	4310.0 (536.0)	68.4 (10.9)	97.9 (15.6)
4	-0.1 (4.8)	-0.2 (6.8)	3430.0 (1250.0)	4910.0 (1790.0)	2690.0 (983.0)	3860.0 (1400.0)	118.0 (161.0)	168.0 (231.0)
5	-6.8 (2.5)	-9.7 (3.5)	2420.0 (617.0)	3460.0 (883.0)	2330.0 (504.0)	3330.0 (722.0)	41.3 (18.6)	59.0 (26.6)
6	-4.9 (6.5)	-8.5 (8.0)	2370.0 (275.0)	3360.0 (392.0)	2020.0 (619.0)	2850.0 (904.0)	74.7 (32.0)	109.0 (47.0)
7	-3.7 (6.5)	-5.2 (9.2)	3580.0 (2360.0)	5120.0 (3380.0)	3230.0 (845.0)	4620.0 (1210.0)	150.0 (130.0)	214.0 (186.0)
8	-5.7 (4.9)	-8.1 (7.0)	2900.0 (745.0)	4150.0 (1070.0)	3130.0 (459.0)	4490.0 (656.0)	58.4 (13.5)	83.5 (19.4)
9	-16.9 (7.3)	-24.0 (10.4)	2200.0 (523.0)	3150.0 (748.0)	2880.0 (682.0)	4120.0 (975.0)	60.5 (15.6)	86.5 (22.2)
10	-19.2 (15.2)	-27.4 (21.7)	1330.0 (308.0)	1900.0 (440.0)	2290.0 (604.0)	3290.0 (863.0)	116.0 (31.3)	167.0 (44.9)
11	-13.0 (9.4)	-18.5 (13.5)	1850.0 (419.0)	2640.0 (599.0)	1640.0 (746.0)	2350.0 (1070.0)	116.0 (30.8)	165.0 (44.1)
12	-13.8 (1.7)	-19.6 (2.4)	2330.0 (342.0)	3330.0 (489.0)	1440.0 (434.0)	2060.0 (622.0)	123.0 (52.7)	176.0 (75.5)
13	-9.2 (2.7)	-13.1 (3.9)	2300.0 (344.0)	3290.0 (492.0)	2150.0 (561.0)	3070.0 (801.0)	139.0 (24.2)	199.0 (34.6)
14	24.2 (30.8)	34.5 (43.8)	2280.0 (434.0)	3250.0 (621.0)	1940.0 (298.0)	2770.0 (429.0)	147.0 (27.1)	210.0 (38.8)
15	12.9 (19.8)	18.3 (28.2)	2130.0 (480.0)	3050.0 (688.0)	2100.0 (260.0)	2990.0 (371.0)	135.0 (38.6)	194.0 (55.2)
16	1.2 (3.3)	1.7 (4.7)	1820.0 (347.0)	2610.0 (495.0)	2320.0 (342.0)	3320.0 (489.0)	114.0 (18.5)	163.0 (26.4)
17	2.3 (7.1)	3.3 (10.1)	2230.0 (249.0)	3190.0 (356.0)	3230.0 (1080.0)	4620.0 (1550.0)		
18	10.3 (10.1)	14.8 (14.4)	2150.0 (216.0)	3080.0 (309.0)	5190.0 (1430.0)	7440.0 (2060.0)	84.5 (21.4)	121.0 (30.7)
19	-18.6 (14.2)	-26.5 (20.2)	2260.0 (285.0)	3230.0 (410.0)	6850.0 (1160.0)	9810.0 (1660.0)	71.9 (20.9)	103.0 (30.0)
20	-2.9 (8.1)	-4.2 (11.5)	2130.0 (358.0)	3060.0 (511.0)	7010.0 (1920.0)	10000.0 (2740.0)	84.2 (25.2)	121.0 (36.2)
21	9.1 (25.1)	13.1 (35.9)	1950.0 (257.0)	2800.0 (369.0)	9980.0 (4690.0)	14300.0 (6740.0)	89.2 (17.8)	128.0 (25.6)
22	3.5 (21.2)	4.9 (30.3)	2240.0 (382.0)	3210.0 (548.0)	8820.0 (2910.0)	12600.0 (4160.0)	119.0 (35.0)	171.0 (50.3)
23	-5.2 (7.5)	-7.4 (10.7)	2380.0 (451.0)	3410.0 (647.0)	4850.0 (4160.0)	6950.0 (5950.0)	102.0 (19.6)	146.0 (28.2)
24	40.5 (20.3)	58.1 (29.1)	1870.0 (589.0)	2680.0 (845.0)	3000.0 (1160.0)	4310.0 (1670.0)	162.0 (38.3)	233.0 (55.2)
25	-0.2 (10.6)	-0.3 (15.2)	3730.0 (1760.0)	5350.0 (2510.0)	4950.0 (1530.0)	7090.0 (2180.0)	291.0 (100.0)	417.0 (143.0)
26								
27								
28								
29								
30								
Avg	-1.1	-1.7	2530.0	3630.0	3740.0	5350.0	112.0	160
n	25	25	25	25	25	25	24	24
SD	13.0	18.6	727.0	1040.0	2210.0	3170.0	49.4	70.8
Min	-19.2	-27.4	1330.0	1900.0	1440.0	2060.0	41.3	59.0
Max	40.5	58.1	4370.0	6250.0	9980.0	14300.0	291.0	417.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for May, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16	1.9 (6.7)	2.6 (9.5)	1790.0 (313.0)	2560.0 (447.0)	445.0 (204.0)	635.0 (291.0)	163.0 (47.8)	233.0 (68.3)
17	18.2 (6.0)	25.9 (8.5)	1920.0 (494.0)	2750.0 (709.0)	340.0 (79.8)	486.0 (114.0)	151.0 (29.6)	216.0 (42.2)
18	8.5 (4.1)	12.1 (5.9)	2210.0 (346.0)	3160.0 (496.0)	459.0 (106.0)	655.0 (152.0)	178.0 (26.0)	255.0 (37.0)
19	-1.4 (5.7)	-2.0 (8.2)	1930.0 (214.0)	2760.0 (305.0)	390.0 (95.9)	557.0 (137.0)	256.0 (52.5)	366.0 (75.0)
20	13.4 (11.1)	19.0 (15.8)	2200.0 (237.0)	3150.0 (337.0)	445.0 (149.0)	636.0 (214.0)	207.0 (36.0)	296.0 (51.2)
21	20.1 (8.8)	28.6 (12.5)	2400.0 (634.0)	3430.0 (909.0)	466.0 (220.0)	664.0 (314.0)	250.0 (78.7)	357.0 (112.0)
22	-8.0 (5.2)	-11.4 (7.4)	2310.0 (353.0)	3310.0 (506.0)	363.0 (89.5)	519.0 (128.0)	284.0 (40.9)	407.0 (58.3)
23	-15.7 (2.3)	-22.3 (3.3)			605.0 (159.0)	866.0 (228.0)		
24	-5.4 (15.6)	-7.7 (22.3)			636.0 (202.0)	910.0 (288.0)		
25	19.5 (7.6)	27.8 (11.1)	1430.0 (458.0)	2080.0 (660.0)	397.0 (161.0)	577.0 (235.0)	180.0 (103.0)	268.0 (148.0)
26	27.8 (10.5)		1600.0 (342.0)		462.0 (101.0)		165.0 (141.0)	
27	-5.4 (7.0)		2320.0 (277.0)		995.0 (320.0)		277.0 (44.5)	
28	-7.9 (8.9)		2070.0 (424.0)		914.0 (329.0)		405.0 (127.0)	
29	1.3 (7.9)	1.9 (11.4)	2440.0 (1360.0)	3510.0 (1960.0)	1110.0 (422.0)	1580.0 (605.0)	433.0 (234.0)	620.0 (336.0)
30	17.4 (8.5)	25.0 (12.1)	1270.0 (312.0)	1830.0 (450.0)	1050.0 (137.0)	1500.0 (196.0)	317.0 (201.0)	456.0 (289.0)
31	14.0 (9.3)	20.1 (13.3)	1040.0 (258.0)	1490.0 (370.0)	1250.0 (175.0)	1790.0 (250.0)	317.0 (226.0)	455.0 (324.0)
Avg	6.2	9.2	1920.0	2730.0	645.0	875.0	256.0	357
n	16	13	14	11	16	13	14	11
SD	12.4	16.2	428.0	644.0	297.0	430.0	86.3	116
Min	-15.7	-22.3	1040.0	1490.0	340.0	486.0	151.0	216.0
Max	27.8	28.6	2440.0	3510.0	1250.0	1790.0	433.0	620.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for June, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	24.6 (6.7)	35.2 (9.6)	897.0 (309.0)	1330.0 (435.0)	1270.0 (302.0)	1820.0 (431.0)	257.0 (243.0)	368.0 (349.0)
2	15.6 (11.2)	22.4 (16.0)	1000.0 (190.0)	1440.0 (272.0)	1210.0 (284.0)	1740.0 (404.0)		
3	9.4 (3.9)	13.5 (5.6)	979.0 (205.0)	1410.0 (294.0)	1280.0 (149.0)	1840.0 (213.0)		
4	20.6 (11.5)	29.6 (16.4)	1010.0 (214.0)	1450.0 (306.0)	1270.0 (275.0)	1830.0 (393.0)	192.0 (36.3)	277.0 (52.3)
5	36.2 (10.6)		728.0 (195.0)		1060.0 (332.0)		137.0 (56.1)	
6	14.3 (10.1)						148.0 (82.3)	
7	26.1 (6.1)		732.0 (303.0)		861.0 (383.0)		160.0 (77.2)	
8								
9								
10								
11								
12								
13								
14	6.3 (5.6)	9.0 (8.0)	1200.0 (453.0)		807.0 (156.0)		134.0 (120.0)	192.0 (171.0)
15	7.9 (9.5)	11.3 (13.6)	976.0 (258.0)		789.0 (112.0)		103.0 (70.4)	147.0 (101.0)
16	20.7 (6.4)	29.5 (9.2)	1320.0 (408.0)		961.0 (233.0)		175.0 (98.1)	251.0 (141.0)
17	8.2 (10.0)	12.3 (14.5)	1250.0 (545.0)		1190.0 (361.0)		155.0 (102.0)	227.0 (148.0)
18	40.0 (20.1)	57.2 (28.7)	988.0 (227.0)	1410.0 (326.0)	869.0 (342.0)		153.0 (88.3)	219.0 (127.0)
19	6.8 (11.4)	9.7 (16.3)	976.0 (136.0)	1400.0 (194.0)	910.0 (192.0)	1300.0 (275.0)	111.0 (85.0)	160.0 (122.0)
20	19.4 (9.9)	28.1 (14.2)						
21	30.7 (6.8)	43.9 (9.8)	765.0 (84.2)	1100.0 (121.0)	718.0 (97.5)	1030.0 (140.0)	118.0 (77.4)	170.0 (111.0)
22	43.7 (8.6)	62.4 (12.2)	840.0 (143.0)	1200.0 (206.0)	820.0 (194.0)	1170.0 (279.0)	145.0 (104.0)	208.0 (149.0)
23	42.6 (18.8)	61.0 (26.8)	846.0 (210.0)	1210.0 (300.0)	633.0 (215.0)	906.0 (308.0)	114.0 (87.5)	163.0 (125.0)
24	33.3 (7.4)	47.8 (10.7)	852.0 (91.7)	1220.0 (132.0)	471.0 (57.9)	676.0 (83.3)		
25	22.3 (4.8)	32.1 (6.8)	1140.0 (969.0)	1650.0 (1400.0)	445.0 (125.0)	641.0 (179.0)		
26	26.1 (5.3)	37.5 (7.6)	1060.0 (163.0)	1530.0 (234.0)	667.0 (54.6)	958.0 (78.2)	93.5 (16.7)	135.0 (24.0)
27	47.2 (11.0)	67.8 (15.7)	1100.0 (239.0)	1580.0 (344.0)	692.0 (99.0)	996.0 (142.0)	110.0 (22.5)	159.0 (32.4)
28	45.7 (7.2)	65.5 (10.3)	1360.0 (322.0)	1830.0 (363.0)	692.0 (97.8)	991.0 (141.0)	152.0 (21.9)	218.0 (31.5)
29	44.5 (3.6)	63.7 (5.1)	1210.0 (252.0)	1740.0 (363.0)	672.0 (152.0)	963.0 (219.0)	143.0 (56.4)	205.0 (81.0)
30	52.5 (6.6)	75.2 (9.4)	1180.0 (196.0)	1680.0 (281.0)	590.0 (126.0)	845.0 (181.0)	128.0 (57.3)	183.0 (82.3)
Avg	26.9	38.8	1020.0	1450.0	858.0	1180.0	144.0	205
n	24	21	22	16	22	15	19	16
SD	14.2	21.2	181.0	203.0	252.0	408.0	36.2	56.3
Min	6.3	9.0	728.0	1100.0	445.0	641.0	93.5	135.0
Max	52.5	75.2	1360.0	1830.0	1280.0	1840.0	257.0	368.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for July, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	39.2 (12.6)	56.1 (18.1)	1260.0 (187.0)		526.0 (81.1)	755.0 (116.0)	124.0 (61.8)	179.0 (88.7)
2	27.5 (7.2)	39.3 (10.3)	1450.0 (427.0)		475.0 (65.4)	685.0 (93.0)	149.0 (69.5)	215.0 (99.7)
3	20.6 (4.1)	29.5 (5.9)	1750.0 (243.0)		549.0 (77.9)	786.0 (111.0)	194.0 (75.0)	278.0 (108.0)
4	32.4 (13.0)	46.4 (18.6)	1770.0 (223.0)		591.0 (118.0)	847.0 (168.0)	191.0 (58.9)	274.0 (84.5)
5	56.9 (13.0)	81.5 (18.6)	1600.0 (202.0)		616.0 (137.0)	884.0 (196.0)	179.0 (70.5)	257.0 (101.0)
6	41.2 (15.6)	59.3 (22.3)	1300.0 (192.0)		372.0 (132.0)	535.0 (189.0)	110.0 (57.5)	159.0 (82.4)
7	24.6 (4.8)	35.5 (6.9)	1090.0 (96.3)		405.0 (160.0)	585.0 (231.0)	97.8 (28.6)	141.0 (41.2)
8	31.6 (7.0)	45.5 (10.2)	1210.0 (202.0)		538.0 (162.0)	775.0 (232.0)	198.0 (152.0)	285.0 (219.0)
9	48.6 (27.4)	69.9 (39.5)	1330.0 (140.0)	1920.0 (201.0)	752.0 (60.3)	1080.0 (86.8)	305.0 (214.0)	439.0 (308.0)
10	42.3 (26.5)	60.9 (38.1)	1250.0 (222.0)		839.0 (280.0)	1200.0 (397.0)	166.0 (94.9)	240.0 (136.0)
11	21.0 (9.1)	30.3 (13.1)	1160.0 (62.8)		814.0 (84.8)	1180.0 (122.0)	107.0 (28.3)	155.0 (40.9)
12	21.7 (4.0)	31.1 (5.7)	1600.0 (292.0)	2290.0 (417.0)	946.0 (120.0)	1360.0 (171.0)	349.0 (139.0)	502.0 (200.0)
13	24.6 (10.4)	35.2 (14.9)	1580.0 (230.0)	2260.0 (329.0)	921.0 (147.0)	1320.0 (211.0)	302.0 (107.0)	433.0 (153.0)
14	30.4 (6.8)	43.6 (9.8)	1360.0 (202.0)	1950.0 (288.0)	859.0 (147.0)	1230.0 (210.0)	244.0 (159.0)	351.0 (228.0)
15	31.2 (8.8)	45.0 (12.7)	1100.0 (190.0)	1580.0 (272.0)	724.0 (78.4)	1040.0 (111.0)	184.0 (95.3)	265.0 (137.0)
16	28.8 (8.0)	41.5 (11.6)	1070.0 (75.7)	1540.0 (109.0)	672.0 (52.9)	970.0 (76.3)	139.0 (107.0)	
17	12.7 (1.6)	18.3 (2.4)	1290.0 (112.0)	1860.0 (162.0)	621.0 (159.0)	939.0 (199.0)	85.4 (14.4)	124.0 (20.8)
18	28.5 (21.7)	41.1 (31.2)	1240.0 (164.0)	1790.0 (236.0)	699.0 (93.7)	1010.0 (135.0)	75.4 (21.4)	109.0 (30.8)
19	14.8 (2.9)	21.4 (4.2)	1210.0 (136.0)	1740.0 (197.0)	637.0 (94.6)		73.1 (14.6)	105.0 (21.0)
20	19.9 (16.0)	28.7 (23.0)	1060.0 (83.3)	1520.0 (119.0)	564.0 (51.1)		54.8 (21.7)	79.1 (31.3)
21	29.8 (13.1)	42.8 (18.8)	1220.0 (93.6)	1750.0 (134.0)	594.0 (51.7)		82.3 (26.9)	119.0 (38.7)
22	27.5 (11.5)	39.4 (17.0)	1290.0 (175.0)	1870.0 (248.0)	571.0 (81.6)		87.0 (51.3)	125.0 (73.8)
23	13.8 (3.2)		1480.0 (130.0)	2120.0 (187.0)	648.0 (112.0)	930.0 (160.0)	113.0 (61.4)	162.0 (88.3)
24	18.3 (9.0)		1530.0 (283.0)		502.0 (198.0)			
25	36.6 (11.3)		1140.0 (112.0)		417.0 (38.8)		61.3 (42.3)	
26	18.2 (6.9)		1390.0 (188.0)	1990.0 (270.0)	544.0 (74.9)	781.0 (107.0)	79.6 (55.9)	115.0 (80.3)
27	18.5 (5.7)		1200.0 (238.0)	1720.0 (339.0)	505.0 (146.0)	726.0 (209.0)	126.0 (63.5)	181.0 (91.1)
28	20.3 (4.5)		943.0 (117.0)	1360.0 (166.0)	566.0 (235.0)	815.0 (337.0)	80.4 (42.1)	116.0 (60.5)
29	35.0 (9.3)		1110.0 (328.0)	1610.0 (475.0)	746.0 (228.0)	1080.0 (330.0)	80.9 (13.7)	117.0 (19.9)
30	37.8 (3.9)		927.0 (172.0)	1340.0 (247.0)	652.0 (48.9)	940.0 (70.8)	140.0 (87.5)	202.0 (126.0)
31	29.1 (6.6)		879.0 (197.0)	1270.0 (284.0)	730.0 (171.0)	1050.0 (247.0)		
Avg	28.5	42.8	1280.0	1760.0	632.0	940.0	144.0	212
n	31	22	31	19	31	25	29	27
SD	10.2	14.9	224.0	285.0	143.0	213.0	76.0	111
Min	12.7	18.3	879.0	1270.0	372.0	535.0	54.8	79.1
Max	56.9	81.5	1770.0	2290.0	946.0	1360.0	349.0	502.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for August, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	24.0 (18.1)	34.7 (26.0)	928.0 (211.0)	1340.0 (303.0)	859.0 (217.0)	1240.0 (311.0)	413.0 (499.0)	594.0 (717.0)
2	17.3 (24.7)	24.8 (35.3)	1310.0 (260.0)	1890.0 (373.0)	947.0 (128.0)	1360.0 (183.0)	878.0 (656.0)	1260.0 (944.0)
3	17.4 (15.7)	25.3 (22.7)	686.0 (363.0)	990.0 (520.0)	573.0 (138.0)	827.0 (196.0)	503.0 (491.0)	726.0 (706.0)
4	43.4 (17.0)	63.8 (24.4)	738.0 (209.0)	1070.0 (307.0)	425.0 (107.0)	620.0 (156.0)	337.0 (102.0)	497.0 (142.0)
5	8.3 (19.2)	12.3 (29.6)	1210.0 (269.0)	1740.0 (385.0)	444.0 (130.0)	639.0 (187.0)	760.0 (637.0)	1100.0 (917.0)
6	108.0 (51.8)	155.0 (74.4)	1400.0 (393.0)	2010.0 (566.0)	529.0 (163.0)	759.0 (234.0)	1720.0 (822.0)	2480.0 (1180.0)
7	22.8 (7.4)							
8	30.2 (14.2)							
9	14.6 (12.0)	21.0 (17.2)	1140.0 (246.0)	1640.0 (352.0)	865.0 (166.0)	1240.0 (237.0)	635.0 (214.0)	914.0 (307.0)
10	-0.3 (8.0)	-0.4 (11.5)	1220.0 (240.0)	1760.0 (344.0)	804.0 (182.0)	1150.0 (261.0)	832.0 (215.0)	1200.0 (308.0)
11	12.7 (20.2)	18.1 (29.0)	1780.0 (186.0)	2560.0 (268.0)	770.0 (119.0)	1100.0 (170.0)	965.0 (222.0)	1390.0 (318.0)
12	28.9 (14.6)	41.4 (20.9)	1960.0 (417.0)	2810.0 (600.0)	864.0 (297.0)	1240.0 (427.0)	967.0 (106.0)	1390.0 (151.0)
13	19.9 (6.5)	28.6 (9.3)	2010.0 (544.0)	2890.0 (783.0)	578.0 (125.0)	831.0 (179.0)	806.0 (322.0)	1160.0 (463.0)
14	3.9 (12.3)	5.7 (17.7)	2220.0 (514.0)	3190.0 (738.0)	512.0 (127.0)	735.0 (182.0)	924.0 (481.0)	1330.0 (692.0)
15	3.3 (5.1)	4.7 (7.4)	2290.0 (521.0)	3290.0 (748.0)	662.0 (171.0)	950.0 (245.0)	1340.0 (163.0)	1930.0 (235.0)
16	17.4 (7.7)	24.9 (10.9)	2510.0 (688.0)	3600.0 (987.0)	644.0 (210.0)	924.0 (300.0)	1260.0 (422.0)	1810.0 (606.0)
17	5.9 (12.7)	8.4 (18.2)	2320.0 (654.0)	3320.0 (938.0)	624.0 (213.0)	895.0 (305.0)	1340.0 (498.0)	1920.0 (715.0)
18	0.3 (5.5)	0.4 (7.9)	2010.0 (707.0)	2880.0 (1010.0)	611.0 (192.0)	877.0 (274.0)	1460.0 (687.0)	2100.0 (986.0)
19	8.0 (9.5)	11.5 (13.6)	1830.0 (531.0)	2640.0 (762.0)	616.0 (102.0)	886.0 (146.0)	1330.0 (604.0)	1910.0 (868.0)
20	2.6 (7.2)	3.7 (10.3)	1680.0 (443.0)	2410.0 (639.0)	821.0 (239.0)	1180.0 (344.0)	1480.0 (813.0)	2120.0 (1170.0)
21	-3.4 (1.7)	-5.0 (2.5)	1420.0 (389.0)	2050.0 (561.0)	714.0 (122.0)	1030.0 (176.0)	2190.0 (658.0)	3150.0 (948.0)
22	2.0 (7.1)	3.0 (10.2)	1060.0 (183.0)	1540.0 (264.0)	740.0 (114.0)	1070.0 (164.0)	1020.0 (251.0)	1470.0 (360.0)
23	11.1 (6.4)	15.9 (9.2)	3010.0 (1270.0)	4320.0 (1820.0)	849.0 (131.0)	1220.0 (187.0)	1460.0 (556.0)	2100.0 (799.0)
24	-0.7 (4.0)	-1.0 (5.7)	3550.0 (513.0)	5090.0 (735.0)	1050.0 (193.0)	1500.0 (277.0)	1580.0 (485.0)	2280.0 (696.0)
25	-6.0 (1.7)	-8.5 (2.4)	4320.0 (862.0)	6200.0 (1240.0)	1010.0 (155.0)	1440.0 (222.0)	1360.0 (514.0)	1960.0 (738.0)
26	-8.2 (5.8)	-11.8 (8.2)	3710.0 (694.0)	5320.0 (997.0)	1070.0 (178.0)	1530.0 (254.0)	1490.0 (605.0)	2140.0 (869.0)
27	-4.8 (14.1)	-6.9 (20.2)	2620.0 (865.0)	3760.0 (1240.0)	1040.0 (265.0)	1500.0 (382.0)	2100.0 (1350.0)	
28	-4.8 (4.7)	-7.0 (6.8)	1760.0 (621.0)	2530.0 (890.0)	631.0 (87.4)	908.0 (125.0)	808.0 (566.0)	1160.0 (815.0)
29	7.7 (3.7)	11.1 (5.3)						
30	36.6 (16.8)	52.4 (24.0)	3360.0 (870.0)	4830.0 (1250.0)	777.0 (130.0)	1110.0 (186.0)	320.0 (93.1)	460.0 (134.0)
31	36.6 (22.9)	52.3 (32.8)	2840.0 (829.0)	4080.0 (1190.0)	709.0 (112.0)	1020.0 (160.0)	228.0 (143.0)	328.0 (205.0)
Avg	14.7	20.0	2030.0	2920.0	741.0	1060.0	1090.0	1510
n	31	29	28	28	28	28	28	27
SD	21.8	32.0	923.0	1320.0	178.0	255.0	504.0	679
Min	-8.2	-11.8	686.0	990.0	425.0	620.0	228.0	328.0
Max	108.0	155.0	4320.0	6200.0	1070.0	1530.0	2190.0	3150.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for September, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	23.9 (9.5)	34.5 (13.6)	1500.0 (648.0)	2170.0 (932.0)	493.0 (136.0)	710.0 (195.0)	249.0 (124.0)	359.0 (178.0)
2	1.1 (8.0)	1.7 (11.5)	1860.0 (845.0)	2670.0 (1210.0)	553.0 (138.0)	795.0 (196.0)	408.0 (334.0)	587.0 (479.0)
3	-0.3 (4.8)	-0.4 (6.8)	3940.0 (618.0)	5650.0 (884.0)	904.0 (123.0)	1290.0 (176.0)	792.0 (218.0)	1140.0 (312.0)
4	-0.6 (9.3)	-0.8 (13.3)	3680.0 (752.0)	5280.0 (1080.0)	614.0 (149.0)	880.0 (214.0)	973.0 (352.0)	1400.0 (507.0)
5	11.1 (4.8)	16.6 (6.8)	3850.0 (605.0)	5520.0 (869.0)	758.0 (216.0)	1050.0 (289.0)	918.0 (294.0)	1320.0 (414.0)
6	-1.8 (3.6)	-2.6 (5.2)	3610.0 (518.0)	5180.0 (745.0)	612.0 (176.0)	875.0 (252.0)	1350.0 (355.0)	1940.0 (510.0)
7	18.1 (19.0)	25.9 (27.2)	3410.0 (539.0)	4890.0 (774.0)	492.0 (65.8)	705.0 (94.3)	1610.0 (538.0)	2310.0 (772.0)
8	2.3 (5.0)	3.3 (7.1)	4100.0 (842.0)	5880.0 (1210.0)	789.0 (218.0)	1130.0 (313.0)	1900.0 (480.0)	2720.0 (690.0)
9	-0.5 (10.1)	0.8 (13.8)	4560.0 (1120.0)	6350.0 (1550.0)	944.0 (112.0)	1340.0 (155.0)	2290.0 (1260.0)	3380.0 (1850.0)
10	-5.7 (3.0)	-8.2 (4.2)	2850.0 (777.0)	4080.0 (1110.0)	830.0 (226.0)	1190.0 (323.0)	2480.0 (1240.0)	3560.0 (1780.0)
11	2.0 (4.7)	2.9 (6.7)	2130.0 (418.0)	3070.0 (605.0)	597.0 (155.0)	858.0 (222.0)	2430.0 (706.0)	3500.0 (1020.0)
12	9.3 (11.6)	18.4 (14.8)	2470.0 (793.0)	3560.0 (1140.0)	554.0 (66.6)	797.0 (95.8)	4500.0 (1450.0)	6480.0 (2090.0)
13	6.6 (12.5)		2750.0 (712.0)	3960.0 (1030.0)	526.0 (109.0)	757.0 (156.0)	3830.0 (727.0)	5530.0 (1050.0)
14	12.0 (8.1)		4380.0 (911.0)	6290.0 (1300.0)	1130.0 (572.0)	1610.0 (819.0)	2330.0 (734.0)	3340.0 (1060.0)
15	11.4 (11.2)		5780.0 (1210.0)	8280.0 (1740.0)	1340.0 (425.0)	1920.0 (610.0)	1900.0 (335.0)	2720.0 (479.0)
16	13.6 (18.0)		5200.0 (1170.0)	7450.0 (1680.0)	921.0 (119.0)	1320.0 (170.0)	1500.0 (347.0)	2140.0 (499.0)
17	2.1 (5.6)	3.0 (8.1)	5180.0 (943.0)	7430.0 (1350.0)	897.0 (121.0)	1290.0 (173.0)	1260.0 (526.0)	1810.0 (754.0)
18	45.7 (40.7)		5390.0 (772.0)		932.0 (257.0)		1390.0 (1110.0)	
19	36.4 (49.0)		6260.0 (746.0)		836.0 (189.0)		283.0 (159.0)	
20	57.9 (33.9)							
21	17.7 (10.7)		6310.0 (947.0)		840.0 (169.0)		124.0 (44.8)	
22	29.4 (8.3)		6000.0 (1430.0)		798.0 (211.0)		113.0 (26.6)	
23	17.3 (17.5)		4950.0 (413.0)		696.0 (76.6)		85.8 (21.8)	
24	11.4 (18.7)	16.3 (26.7)	6220.0 (1010.0)	8930.0 (1430.0)	724.0 (105.0)	1040.0 (150.0)	80.1 (25.5)	115.0 (36.6)
25	23.1 (23.8)	33.0 (34.1)	5760.0 (869.0)	8260.0 (1250.0)	845.0 (108.0)	1210.0 (155.0)	89.3 (40.0)	128.0 (57.5)
26	68.9 (17.3)	98.6 (24.7)	5450.0 (980.0)	7830.0 (1410.0)	830.0 (188.0)	1190.0 (270.0)	138.0 (61.9)	198.0 (88.9)
27	23.2 (22.6)	33.3 (32.3)	5540.0 (904.0)	7950.0 (1290.0)	914.0 (334.0)	1310.0 (479.0)	103.0 (62.7)	149.0 (90.0)
28	-0.6 (13.0)	-0.9 (18.7)	4380.0 (691.0)	6280.0 (993.0)	830.0 (274.0)	1190.0 (392.0)	223.0 (131.0)	320.0 (188.0)
29	-1.7 (8.3)	-2.4 (11.9)	4870.0 (872.0)	6980.0 (1250.0)	879.0 (214.0)	1260.0 (306.0)	187.0 (84.3)	269.0 (121.0)
30	7.9 (7.8)	11.2 (11.2)	8400.0 (1200.0)	12000.0 (1710.0)	1710.0 (896.0)	2450.0 (1280.0)	123.0 (31.0)	176.0 (44.3)
Avg	14.7	14.2	4510.0	6080.0	820.0	1170.0	1160.0	1900
n	30	20	29	24	29	24	29	24
SD	17.7	23.3	1540.0	2220.0	251.0	392.0	1160.0	1720
Min	-5.7	-8.2	1500.0	2170.0	492.0	705.0	80.1	115.0
Max	68.9	98.6	8400.0	12000.0	1710.0	2450.0	4500.0	6480.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for October, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	-6.9 (9.7)	-9.8 (13.9)	7820.0 (976.0)	11200.0 (1400.0)	1610.0 (551.0)	2310.0 (789.0)	135.0 (34.2)	193.0 (48.9)
2	1.3 (15.3)	1.8 (21.9)	5930.0 (1020.0)	8500.0 (1470.0)	1430.0 (663.0)	2050.0 (951.0)	205.0 (118.0)	294.0 (169.0)
3	-12.3 (6.0)	-17.5 (8.6)	5040.0 (1130.0)	7210.0 (1620.0)	1210.0 (369.0)	1720.0 (529.0)	610.0 (456.0)	874.0 (653.0)
4	-15.8 (3.1)	-22.5 (4.5)	4040.0 (980.0)	5780.0 (1400.0)	1320.0 (652.0)	1890.0 (934.0)	1420.0 (654.0)	2030.0 (936.0)
5	-5.6 (8.4)	-8.0 (12.3)	2970.0 (622.0)	4280.0 (892.0)			1560.0 (511.0)	2270.0 (719.0)
6	5.1 (6.8)	7.3 (9.7)	3610.0 (1050.0)	5170.0 (1510.0)	702.0 (95.8)	1010.0 (137.0)	2350.0 (1250.0)	3370.0 (1800.0)
7	-4.5 (7.0)	-6.4 (9.9)	4770.0 (1460.0)	6850.0 (2090.0)	1180.0 (493.0)	1700.0 (706.0)	2780.0 (1500.0)	3990.0 (2160.0)
8	4.4 (8.6)	6.3 (12.3)	4410.0 (598.0)	6320.0 (861.0)	1830.0 (806.0)	2620.0 (1160.0)	1190.0 (462.0)	1700.0 (661.0)
9	3.5 (17.2)	4.9 (24.5)	5010.0 (1430.0)	7160.0 (2050.0)	1740.0 (372.0)	2480.0 (535.0)	1110.0 (348.0)	1580.0 (498.0)
10	-7.8 (5.2)	-11.1 (7.6)	3960.0 (787.0)	5750.0 (1100.0)	1790.0 (634.0)	2560.0 (907.0)	1520.0 (956.0)	2260.0 (1380.0)
11	-1.4 (8.8)	-1.9 (12.6)	3850.0 (976.0)	5520.0 (1400.0)	1140.0 (370.0)	1630.0 (530.0)	1350.0 (692.0)	1940.0 (993.0)
12	-6.1 (7.8)	-8.7 (11.2)	3410.0 (500.0)	4910.0 (718.0)	825.0 (84.0)	1180.0 (121.0)	1320.0 (822.0)	1900.0 (1180.0)
13	-12.2 (4.2)	-17.4 (6.0)	4970.0 (1690.0)	7140.0 (2420.0)	1140.0 (386.0)	1630.0 (552.0)	1710.0 (683.0)	2460.0 (982.0)
14								
15								
16								
17	-14.5 (4.4)	-20.6 (6.3)	7590.0 (2370.0)	10900.0 (3390.0)	1830.0 (823.0)	2610.0 (1180.0)	413.0 (89.1)	592.0 (128.0)
18	-6.3 (7.7)	-9.0 (10.9)	12800.0 (4870.0)	18400.0 (6980.0)	1640.0 (385.0)	2350.0 (552.0)	363.0 (44.9)	520.0 (64.3)
19	-10.7 (3.8)	-15.2 (5.5)	3120.0 (3490.0)	4450.0 (4980.0)	3590.0 (4780.0)	5130.0 (6840.0)	468.0 (143.0)	671.0 (204.0)
20	-12.5 (3.9)	-17.8 (5.6)	1110.0 (602.0)	1590.0 (860.0)	7770.0 (7450.0)	11100.0 (10600.0)	617.0 (271.0)	884.0 (388.0)
21	-17.6 (2.7)	-25.0 (3.8)	1990.0 (1050.0)	2850.0 (1510.0)	9000.0 (16600.0)	12900.0 (23700.0)		
22	-18.5 (2.1)	-26.4 (3.0)	1110.0 (231.0)	1580.0 (330.0)	640.0 (245.0)	915.0 (351.0)	558.0 (86.8)	799.0 (124.0)
23	-19.0 (0.9)	-27.0 (1.2)	1370.0 (611.0)	1960.0 (875.0)	706.0 (318.0)	1010.0 (455.0)	526.0 (144.0)	753.0 (206.0)
24	-16.2 (2.1)	-22.9 (3.0)	938.0 (374.0)	1380.0 (522.0)	542.0 (153.0)	781.0 (226.0)	411.0 (48.4)	587.0 (71.6)
25	-11.8 (7.0)	-16.8 (10.0)	1100.0 (268.0)	1580.0 (384.0)	506.0 (293.0)	724.0 (420.0)	529.0 (233.0)	757.0 (333.0)
26	-9.5 (4.8)	-13.5 (6.8)	1140.0 (202.0)	1640.0 (289.0)	603.0 (185.0)	861.0 (265.0)	314.0 (49.4)	449.0 (70.9)
27	-15.9 (7.0)	-22.6 (10.0)	1280.0 (232.0)	1830.0 (332.0)	657.0 (171.0)	939.0 (245.0)	265.0 (29.0)	378.0 (41.5)
28	-17.5 (5.0)	-24.8 (7.1)	1240.0 (292.0)	1770.0 (419.0)	573.0 (293.0)	818.0 (419.0)	263.0 (32.5)	376.0 (46.4)
29	-2.1 (9.6)	-3.0 (13.6)	941.0 (242.0)	1340.0 (346.0)	464.0 (312.0)	663.0 (447.0)	310.0 (114.0)	442.0 (162.0)
30	-12.6 (4.8)	-17.9 (6.8)	772.0 (249.0)	1100.0 (356.0)	321.0 (201.0)	458.0 (287.0)	315.0 (114.0)	450.0 (163.0)
31	-5.6 (9.8)	-8.0 (14.0)	1160.0 (1120.0)	1640.0 (1600.0)	308.0 (153.0)	441.0 (218.0)		
Avg	-8.9	-12.6	3480.0	4990.0	1670.0	2390.0	870.0	1250
n	28	28	28	28	27	27	26	26
SD	7.0	10.0	2700.0	3870.0	2020.0	2890.0	688.0	992
Min	-19.0	-27.0	772.0	1100.0	308.0	441.0	135.0	193.0
Max	5.1	7.3	12800.0	18400.0	9000.0	12900.0	2780.0	3990.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for November, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	-4.2 (1.6)	-6.0 (2.3)	990.0 (242.0)	1420.0 (346.0)	362.0 (134.0)	517.0 (191.0)	530.0 (215.0)	759.0 (308.0)
2	4.8 (7.0)	6.8 (10.0)	927.0 (287.0)	1330.0 (411.0)	341.0 (152.0)	487.0 (217.0)	407.0 (98.7)	584.0 (142.0)
3	3.9 (4.2)	5.6 (6.0)	826.0 (220.0)	1180.0 (315.0)	412.0 (219.0)	590.0 (314.0)	413.0 (122.0)	593.0 (175.0)
4	9.6 (8.8)	13.7 (12.6)	1500.0 (748.0)	2150.0 (1070.0)	640.0 (388.0)	916.0 (555.0)	395.0 (108.0)	566.0 (154.0)
5	11.7 (10.6)	16.7 (15.2)	1160.0 (235.0)	1660.0 (337.0)	527.0 (318.0)	755.0 (454.0)	517.0 (715.0)	
6	6.1 (8.5)	8.6 (12.1)	2110.0 (598.0)	3020.0 (855.0)	790.0 (286.0)	1130.0 (410.0)	76.5 (17.9)	
7	-6.3 (2.4)	-9.0 (3.4)	3870.0 (833.0)	5540.0 (1200.0)	1870.0 (321.0)	2680.0 (462.0)	195.0 (158.0)	280.0 (226.0)
8	5.6 (6.4)	8.0 (9.1)	2760.0 (459.0)	3950.0 (658.0)	2350.0 (283.0)	3360.0 (406.0)	199.0 (158.0)	286.0 (226.0)
9	-0.2 (3.0)	-0.3 (4.3)	2580.0 (425.0)	3700.0 (610.0)	2240.0 (299.0)	3200.0 (429.0)	100.0 (47.9)	144.0 (68.7)
10	3.2 (5.6)	4.5 (7.9)	2390.0 (381.0)	3420.0 (545.0)	1690.0 (346.0)	2410.0 (495.0)	89.3 (17.3)	128.0 (24.8)
11	-1.1 (3.3)	-1.5 (4.7)	1950.0 (489.0)	2780.0 (700.0)	858.0 (415.0)	1230.0 (593.0)	87.1 (22.3)	125.0 (32.0)
12	-1.0 (1.8)	-1.5 (2.6)	1920.0 (190.0)	2750.0 (273.0)	1150.0 (346.0)	1650.0 (495.0)	67.0 (9.6)	96.0 (13.7)
13	4.3 (4.7)	6.2 (6.7)	1860.0 (627.0)	2670.0 (896.0)	645.0 (214.0)	923.0 (306.0)	69.8 (7.5)	100.0 (10.7)
14	6.6 (2.7)	9.2 (4.0)	1410.0 (172.0)	2010.0 (255.0)	937.0 (218.0)	1310.0 (303.0)	83.1 (11.9)	119.0 (17.7)
15	3.6 (4.4)	5.1 (6.2)	2160.0 (385.0)	3090.0 (551.0)	1270.0 (146.0)	1810.0 (209.0)	144.0 (14.1)	206.0 (20.1)
16	6.5 (7.4)	9.2 (10.5)	2330.0 (413.0)	3330.0 (588.0)	1080.0 (137.0)	1540.0 (197.0)	220.0 (30.7)	314.0 (44.0)
17	2.4 (2.1)	3.4 (3.0)	2220.0 (270.0)	3170.0 (386.0)	1430.0 (342.0)	2050.0 (488.0)	200.0 (38.6)	286.0 (55.3)
18	7.3 (4.8)	10.4 (6.8)	2600.0 (399.0)	3710.0 (569.0)	1340.0 (203.0)	1920.0 (290.0)	224.0 (35.4)	321.0 (50.6)
19	4.2 (5.9)	6.0 (8.4)	2290.0 (445.0)	3280.0 (634.0)	1420.0 (405.0)	2030.0 (579.0)	220.0 (30.3)	315.0 (43.3)
20	5.0 (5.2)	7.1 (7.4)	2450.0 (261.0)	3490.0 (373.0)	2280.0 (537.0)	3250.0 (770.0)	236.0 (15.2)	338.0 (21.7)
21	6.5 (6.4)	8.6 (9.8)	2640.0 (260.0)		2070.0 (230.0)	2870.0 (334.0)	236.0 (30.2)	354.0 (35.4)
22	12.7 (5.8)	18.1 (8.3)	2470.0 (311.0)	3520.0 (443.0)	1910.0 (193.0)	2730.0 (275.0)	224.0 (21.1)	320.0 (30.3)
23	14.5 (6.6)	20.6 (9.4)	1940.0 (617.0)	2770.0 (880.0)	1550.0 (511.0)	2220.0 (729.0)	255.0 (20.0)	365.0 (28.7)
24	15.5 (8.7)	22.1 (12.3)	2000.0 (298.0)	2860.0 (426.0)	2090.0 (518.0)	2990.0 (741.0)	316.0 (168.0)	452.0 (240.0)
25	26.3 (16.8)	37.4 (23.8)	2300.0 (362.0)	3280.0 (518.0)	2540.0 (384.0)	3630.0 (549.0)	348.0 (39.4)	498.0 (56.4)
26	9.4 (8.0)	13.3 (11.4)	2020.0 (419.0)	2890.0 (597.0)	2100.0 (469.0)	3000.0 (671.0)	419.0 (63.2)	600.0 (90.5)
27	5.9 (2.3)	8.4 (3.3)	2080.0 (252.0)	2970.0 (360.0)	2280.0 (635.0)	3260.0 (908.0)	392.0 (223.0)	560.0 (319.0)
28	4.2 (3.0)	6.0 (4.3)	2090.0 (352.0)	2990.0 (503.0)	2140.0 (616.0)	3060.0 (882.0)	207.0 (61.5)	296.0 (88.3)
29	8.4 (10.5)	11.9 (14.9)	2290.0 (537.0)	3280.0 (767.0)	2370.0 (446.0)	3380.0 (638.0)	141.0 (89.3)	
30	1.8 (1.7)	2.5 (2.4)	2190.0 (181.0)	3130.0 (260.0)	2520.0 (476.0)	3600.0 (682.0)	68.6 (18.2)	98.2 (26.1)
Avg	5.9	8.4	2080.0	2940.0	1510.0	2150.0	236.0	337
n	30	30	30	29	30	30	30	27
SD	6.2	8.8	605.0	865.0	707.0	1010.0	135.0	182
Min	-6.3	-9.0	826.0	1180.0	341.0	487.0	67.0	96.0
Max	26.3	37.4	3870.0	5540.0	2540.0	3630.0	530.0	759.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for December, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	0.8 (0.4)	1.1 (0.5)	2550.0 (248.0)	3650.0 (356.0)	2880.0 (694.0)	4110.0 (995.0)	91.5 (29.5)	131.0 (42.3)
2	5.3 (5.6)	7.5 (7.9)	3120.0 (1110.0)	4450.0 (1580.0)	2980.0 (863.0)	4250.0 (1230.0)	84.2 (32.9)	120.0 (47.0)
3	9.3 (5.1)	13.2 (7.2)	3370.0 (768.0)	4810.0 (1100.0)	2550.0 (416.0)	3640.0 (596.0)	137.0 (11.0)	197.0 (15.7)
4	3.5 (2.0)	5.0 (2.8)	3470.0 (368.0)	4960.0 (525.0)	2780.0 (470.0)	3970.0 (672.0)	145.0 (30.0)	207.0 (43.0)
5	8.5 (5.7)	12.1 (8.1)	4040.0 (483.0)	5780.0 (692.0)	2260.0 (496.0)	3220.0 (709.0)	126.0 (53.7)	180.0 (77.0)
6	9.1 (3.1)	12.8 (4.4)	3660.0 (361.0)	5230.0 (516.0)	2480.0 (549.0)	3540.0 (786.0)	68.3 (18.3)	97.4 (26.2)
7	12.0 (5.8)	17.0 (8.2)	3990.0 (337.0)	5690.0 (479.0)	2230.0 (181.0)	3180.0 (259.0)	64.6 (11.3)	92.2 (16.1)
8	5.4 (3.9)	7.6 (5.6)	3630.0 (351.0)	5180.0 (500.0)	2050.0 (209.0)	2930.0 (299.0)	66.8 (13.5)	95.4 (19.4)
9	3.1 (0.8)	4.4 (1.1)	3780.0 (543.0)	5400.0 (776.0)	1700.0 (219.0)	2420.0 (313.0)	79.6 (27.6)	114.0 (39.5)
10	8.4 (3.6)	12.0 (5.0)	4550.0 (319.0)	6500.0 (456.0)	1600.0 (157.0)	2290.0 (223.0)	76.8 (11.1)	109.0 (15.9)
11	12.7 (5.5)	18.0 (7.8)	3970.0 (559.0)	5670.0 (797.0)	1680.0 (301.0)	2390.0 (431.0)	97.1 (33.3)	139.0 (47.8)
12	4.4 (3.8)	6.2 (5.4)	4100.0 (389.0)	5850.0 (555.0)	1690.0 (254.0)	2410.0 (364.0)	208.0 (45.0)	297.0 (64.6)
13	16.5 (7.7)	23.5 (11.0)	3080.0 (640.0)	4410.0 (912.0)	1270.0 (223.0)	1810.0 (318.0)	223.0 (18.5)	320.0 (26.5)
14	10.8 (9.1)	15.4 (13.0)	3560.0 (1310.0)	5090.0 (1870.0)	2430.0 (1390.0)	3470.0 (1980.0)	240.0 (66.9)	343.0 (95.7)
15	15.0 (4.8)	21.2 (6.7)	4210.0 (565.0)	6000.0 (801.0)	3590.0 (948.0)	5120.0 (1350.0)	253.0 (143.0)	362.0 (204.0)
16	4.3 (4.1)	6.1 (5.8)	3200.0 (557.0)	4570.0 (794.0)	1830.0 (326.0)	2610.0 (465.0)	295.0 (44.4)	423.0 (63.7)
17	7.7 (4.6)	10.9 (6.5)	3070.0 (413.0)	4390.0 (590.0)	1840.0 (196.0)	2620.0 (279.0)	339.0 (33.3)	485.0 (47.8)
18	0.8 (0.3)	1.1 (0.4)	2590.0 (460.0)	3700.0 (654.0)	1580.0 (205.0)	2250.0 (292.0)	301.0 (34.8)	431.0 (49.7)
19	4.0 (4.2)	5.6 (5.9)	2390.0 (395.0)	3410.0 (563.0)	1430.0 (281.0)	2040.0 (401.0)	341.0 (36.9)	489.0 (53.0)
20	2.4 (2.0)	3.5 (2.8)	2650.0 (316.0)	3780.0 (448.0)	1690.0 (463.0)	2410.0 (663.0)	294.0 (26.9)	421.0 (38.4)
21	2.0 (3.4)	2.8 (4.9)	3210.0 (420.0)	4580.0 (599.0)	2740.0 (595.0)	3910.0 (850.0)	365.0 (106.0)	522.0 (151.0)
22	5.9 (3.4)	8.4 (4.8)	2420.0 (386.0)	3450.0 (551.0)	1660.0 (439.0)	2360.0 (625.0)	197.0 (71.4)	281.0 (102.0)
23	1.6 (3.8)	2.3 (5.4)	1890.0 (384.0)	2700.0 (547.0)	1010.0 (438.0)	1450.0 (624.0)	379.0 (144.0)	
24	12.4 (5.5)	17.5 (7.9)	2460.0 (230.0)	3510.0 (329.0)	1900.0 (528.0)	2710.0 (754.0)	497.0 (84.4)	712.0 (121.0)
25	5.9 (2.7)	8.4 (3.9)	2250.0 (364.0)	3210.0 (519.0)	1480.0 (217.0)	2110.0 (310.0)	462.0 (56.6)	663.0 (81.1)
26	5.8 (1.8)	8.2 (2.6)	2010.0 (1320.0)	2880.0 (1890.0)	737.0 (403.0)	1050.0 (575.0)	279.0 (68.0)	401.0 (97.7)
27	6.4 (1.5)	9.1 (2.2)	2130.0 (577.0)	3040.0 (824.0)	1410.0 (394.0)	2020.0 (563.0)	218.0 (18.8)	312.0 (26.9)
28	7.4 (2.0)	10.5 (2.8)	2800.0 (612.0)	4000.0 (873.0)	1480.0 (346.0)	2120.0 (493.0)	198.0 (29.7)	284.0 (42.5)
29	5.8 (0.4)	8.2 (0.6)	2560.0 (423.0)	3660.0 (605.0)	1360.0 (153.0)	1940.0 (218.0)	178.0 (17.9)	255.0 (25.6)
30	5.1 (0.9)	7.3 (1.3)	2640.0 (668.0)	3770.0 (953.0)	1500.0 (267.0)	2140.0 (381.0)	187.0 (47.1)	267.0 (67.6)
31	8.1 (3.7)	11.5 (5.2)	2910.0 (507.0)	4150.0 (721.0)	1530.0 (192.0)	2190.0 (274.0)	191.0 (15.5)	274.0 (22.1)
Avg	6.8	9.6	3110.0	4440.0	1910.0	2730.0	216.0	301
n	31	31	31	31	31	31	31	30
SD	4.0	5.6	703.0	1000.0	626.0	893.0	116.0	164
Min	0.8	1.1	1890.0	2700.0	737.0	1050.0	64.6	92.2
Max	16.5	23.5	4550.0	6500.0	3590.0	5120.0	497.0	712.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for January, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	8.4 (2.9)	11.9 (4.2)	3180.0 (747.0)	4540.0 (1060.0)	1750.0 (217.0)	2490.0 (309.0)	157.0 (18.7)	225.0 (26.7)
2	2.1 (2.5)	3.0 (3.5)	3350.0 (1070.0)	4790.0 (1530.0)	1960.0 (341.0)	2790.0 (486.0)	156.0 (25.8)	224.0 (37.1)
3	-0.5 (0.3)	-0.6 (0.5)	3090.0 (386.0)	4420.0 (550.0)	2120.0 (320.0)	3030.0 (455.0)	164.0 (29.2)	235.0 (41.8)
4	0.2 (0.9)	0.3 (1.2)	3260.0 (143.0)	4650.0 (205.0)	2460.0 (197.0)	3510.0 (282.0)	168.0 (17.4)	240.0 (24.9)
5	1.3 (1.4)	1.9 (2.0)	3820.0 (805.0)	5460.0 (1150.0)	1770.0 (584.0)	2520.0 (833.0)	149.0 (50.4)	213.0 (72.4)
6	9.8 (7.6)	14.0 (10.8)	3170.0 (579.0)	4530.0 (826.0)	1610.0 (243.0)	2290.0 (346.0)	120.0 (41.2)	171.0 (59.1)
7	1.5 (2.2)	2.2 (3.1)	2970.0 (256.0)	4240.0 (365.0)	1840.0 (370.0)	2630.0 (528.0)	287.0 (221.0)	411.0 (317.0)
8	4.4 (5.7)	6.2 (8.1)	2710.0 (636.0)	3870.0 (906.0)	1740.0 (301.0)	2480.0 (429.0)	155.0 (57.8)	221.0 (83.1)
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19								
20	11.6 (7.0)	16.5 (9.9)	1850.0 (625.0)		931.0 (159.0)	1330.0 (226.0)	118.0 (23.1)	169.0 (33.2)
21	6.1 (5.6)	8.7 (8.0)	2210.0 (418.0)	3160.0 (595.0)	1250.0 (314.0)	1790.0 (448.0)	149.0 (25.6)	213.0 (36.6)
22	16.5 (12.4)	23.4 (17.7)	2120.0 (502.0)	3030.0 (716.0)	1110.0 (77.3)	1590.0 (111.0)	221.0 (73.7)	316.0 (106.0)
23	9.4 (4.4)	13.3 (6.2)	2320.0 (485.0)	3310.0 (695.0)	1220.0 (164.0)	1740.0 (236.0)	481.0 (167.0)	688.0 (238.0)
24	13.6 (5.0)	19.3 (7.0)	2620.0 (247.0)	3740.0 (352.0)	1370.0 (271.0)	1960.0 (386.0)	526.0 (115.0)	753.0 (165.0)
25	24.4 (8.5)	34.6 (12.1)	2410.0 (205.0)	3450.0 (293.0)	1380.0 (250.0)	1980.0 (357.0)	409.0 (52.0)	585.0 (74.6)
26	16.1 (6.0)	22.8 (8.5)	2260.0 (332.0)	3220.0 (468.0)	1150.0 (132.0)	1650.0 (189.0)	324.0 (28.1)	464.0 (40.4)
27	16.3 (10.9)	23.2 (15.5)	2470.0 (295.0)	3520.0 (422.0)	1230.0 (245.0)	1760.0 (350.0)	380.0 (69.7)	545.0 (100.0)
28	18.3 (9.2)	26.0 (13.0)	3230.0 (2060.0)	4620.0 (2940.0)	1060.0 (163.0)	1510.0 (232.0)	600.0 (111.0)	859.0 (158.0)
29	10.5 (7.2)	14.9 (10.2)	2080.0 (201.0)	2980.0 (286.0)	1240.0 (140.0)	1780.0 (198.0)	710.0 (197.0)	1020.0 (282.0)
30	4.9 (1.4)	7.0 (2.0)	2360.0 (429.0)	3380.0 (612.0)	1540.0 (237.0)	2200.0 (339.0)	558.0 (51.5)	800.0 (73.6)
31	16.8 (6.3)	23.9 (8.9)	2370.0 (349.0)	3390.0 (499.0)	1120.0 (266.0)	1600.0 (379.0)	516.0 (118.0)	739.0 (170.0)
Avg	9.6	13.6	2690.0	3910.0	1490.0	2130.0	317.0	454
n	20	20	20	19	20	20	20	20
SD	6.9	9.8	516.0	702.0	392.0	559.0	185.0	265
Min	-0.5	-0.6	1850.0	2980.0	931.0	1330.0	118.0	169.0
Max	24.4	34.6	3820.0	5460.0	2460.0	3510.0	710.0	1020.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for February, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	28.1 (15.8)	39.9 (22.4)	2500.0 (392.0)	3580.0 (560.0)	1570.0 (280.0)	2240.0 (398.0)	434.0 (66.4)	621.0 (95.0)
2	17.2 (11.3)	24.4 (16.1)	2640.0 (325.0)	3770.0 (464.0)	1580.0 (382.0)	2250.0 (546.0)	472.0 (83.7)	676.0 (120.0)
3	11.1 (8.6)	15.7 (12.2)	2250.0 (740.0)	3220.0 (1050.0)	1630.0 (276.0)	2320.0 (395.0)	490.0 (57.7)	701.0 (82.5)
4	6.6 (4.3)	9.3 (6.1)	3260.0 (2060.0)	4650.0 (2940.0)	1760.0 (343.0)	2510.0 (491.0)	472.0 (92.3)	676.0 (132.0)
5	8.6 (4.5)	12.3 (6.4)	2430.0 (853.0)	3480.0 (1220.0)	1160.0 (176.0)	1660.0 (249.0)	332.0 (96.1)	475.0 (138.0)
6	18.9 (15.0)	26.9 (21.4)	2530.0 (300.0)	3620.0 (431.0)	1090.0 (464.0)	1560.0 (662.0)	251.0 (39.4)	360.0 (56.4)
7	8.9 (5.1)	12.7 (7.3)	2350.0 (418.0)	3370.0 (599.0)	963.0 (260.0)	1380.0 (372.0)	135.0 (20.6)	192.0 (29.6)
8	1.1 (1.3)	1.5 (1.8)	2420.0 (349.0)	3460.0 (497.0)	1360.0 (297.0)	1950.0 (425.0)	170.0 (44.4)	243.0 (63.7)
9	3.1 (2.5)	4.4 (3.5)	2640.0 (280.0)	3770.0 (398.0)	1190.0 (744.0)	1700.0 (1060.0)	145.0 (86.7)	
10	4.3 (3.3)	6.1 (4.7)	2660.0 (391.0)	3830.0 (561.0)	775.0 (409.0)	1110.0 (585.0)	54.8 (14.7)	78.5 (21.0)
11	6.2 (6.5)	8.8 (9.3)	2970.0 (592.0)		1580.0 (412.0)	2260.0 (591.0)	50.9 (12.5)	72.9 (18.0)
12	8.1 (7.2)	11.6 (10.3)	3620.0 (330.0)	5180.0 (472.0)	1940.0 (331.0)	2780.0 (474.0)	51.1 (55.2)	73.3 (79.2)
13	21.4 (10.2)	30.4 (14.5)	3830.0 (958.0)	5480.0 (1370.0)	1620.0 (389.0)	2310.0 (555.0)	39.4 (10.7)	56.4 (15.3)
14	14.0 (9.1)	19.9 (12.9)	3390.0 (437.0)	4850.0 (623.0)	1570.0 (175.0)	2240.0 (251.0)	34.5 (8.0)	49.4 (11.4)
15	12.0 (8.9)	17.0 (12.7)	3340.0 (551.0)	4770.0 (784.0)	1550.0 (120.0)	2210.0 (172.0)	35.6 (9.7)	51.0 (13.9)
16	13.7 (7.7)	19.4 (10.9)	4170.0 (643.0)	5950.0 (917.0)	1690.0 (305.0)	2410.0 (436.0)	42.2 (6.6)	60.5 (9.4)
17	10.9 (7.7)	15.5 (10.9)	3870.0 (1770.0)		1740.0 (718.0)	2480.0 (1030.0)	51.9 (13.0)	74.4 (18.6)
18	2.9 (0.7)	4.2 (1.0)	4160.0 (543.0)		1990.0 (353.0)	2840.0 (505.0)	107.0 (88.6)	153.0 (127.0)
19	19.1 (7.7)	27.1 (10.9)	4150.0 (682.0)		2460.0 (697.0)	3510.0 (996.0)	97.0 (41.1)	139.0 (58.8)
20	11.3 (9.2)	16.0 (13.0)	4620.0 (433.0)	6600.0 (617.0)	1630.0 (185.0)	2330.0 (264.0)	108.0 (21.7)	155.0 (31.1)
21	0.8 (0.4)	1.2 (0.5)	3740.0 (531.0)	5340.0 (756.0)	2200.0 (443.0)	3150.0 (632.0)	354.0 (435.0)	507.0 (623.0)
22	1.8 (1.2)	2.5 (1.7)	3680.0 (628.0)	5260.0 (896.0)	1980.0 (685.0)	2830.0 (976.0)	141.0 (39.9)	202.0 (57.1)
23	12.1 (7.1)	17.2 (10.0)	3860.0 (627.0)	5510.0 (892.0)	1650.0 (424.0)	2360.0 (606.0)	141.0 (17.5)	201.0 (25.1)
24	5.8 (5.8)	8.2 (8.2)	5460.0 (1600.0)		1780.0 (494.0)	2540.0 (705.0)	160.0 (30.9)	228.0 (44.2)
25	14.6 (6.2)	20.7 (8.8)	3650.0 (1220.0)		1380.0 (394.0)	1980.0 (563.0)	183.0 (21.7)	262.0 (31.0)
26	5.4 (6.2)	7.6 (8.7)	3700.0 (500.0)		1850.0 (401.0)	2650.0 (572.0)		
27	2.8 (1.0)	3.9 (1.5)	3280.0 (500.0)	4690.0 (712.0)	1990.0 (408.0)	2850.0 (583.0)	267.0 (38.7)	382.0 (55.1)
28	3.3 (1.1)	4.7 (1.6)	3300.0 (548.0)	4720.0 (783.0)	2360.0 (410.0)	3370.0 (583.0)	270.0 (22.9)	386.0 (32.8)
Avg	9.8	13.9	3370.0	4530.0	1640.0	2350.0	188.0	272
n	28	28	28	21	28	28	27	26
SD	6.7	9.5	762.0	944.0	385.0	550.0	146.0	212
Min	0.8	1.2	2250.0	3220.0	775.0	1110.0	34.5	49.4
Max	28.1	39.9	5460.0	6600.0	2460.0	3510.0	490.0	701.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for March, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	4.0 (3.0)	5.6 (4.2)	2940.0 (494.0)	4200.0 (704.0)	2260.0 (272.0)	3230.0 (389.0)	278.0 (28.6)	398.0 (40.9)
2	3.7 (1.7)	5.3 (2.3)	3010.0 (513.0)	4300.0 (733.0)	2600.0 (549.0)	3710.0 (783.0)	369.0 (98.1)	528.0 (140.0)
3	0.5 (2.2)	0.7 (3.1)	4890.0 (1980.0)	6980.0 (2830.0)	3140.0 (925.0)	4480.0 (1320.0)	419.0 (73.2)	599.0 (105.0)
4	8.4 (4.9)	11.9 (7.0)	3570.0 (663.0)	5100.0 (948.0)	1630.0 (895.0)	2330.0 (1280.0)	366.0 (276.0)	
5	-4.7 (6.4)	-6.8 (9.1)	2870.0 (1260.0)	4100.0 (1800.0)	1350.0 (483.0)	1930.0 (690.0)	92.7 (27.7)	133.0 (39.7)
6	-8.1 (13.9)	-11.5 (19.8)	3470.0 (844.0)	4960.0 (1210.0)	1710.0 (320.0)	2440.0 (458.0)	70.3 (18.1)	101.0 (25.9)
7	-3.2 (8.9)	-4.5 (12.7)	3900.0 (1060.0)	5580.0 (1520.0)	1780.0 (424.0)	2550.0 (606.0)	101.0 (17.0)	144.0 (24.3)
8	-12.9 (4.7)	-18.4 (6.6)	3690.0 (1080.0)	5280.0 (1550.0)	2590.0 (652.0)	3700.0 (931.0)	55.5 (15.0)	79.6 (21.5)
9	-20.3 (0.9)	-28.8 (1.4)	3830.0 (552.0)	5480.0 (788.0)	2480.0 (502.0)	3550.0 (716.0)	48.3 (27.3)	69.2 (39.2)
10	-21.0 (3.8)	-29.3 (5.0)	4860.0 (1670.0)	6880.0 (2430.0)	2360.0 (498.0)	3380.0 (715.0)	85.0 (111.0)	122.0 (160.0)
11	-12.4 (4.7)	-17.6 (6.7)	3800.0 (768.0)	5420.0 (1090.0)	3460.0 (810.0)	4940.0 (1160.0)	171.0 (130.0)	245.0 (186.0)
12	-18.3 (4.0)	-26.0 (5.7)	3550.0 (509.0)	5070.0 (725.0)	2380.0 (468.0)	3410.0 (668.0)	94.5 (17.4)	135.0 (25.0)
13	-11.6 (7.7)	-16.5 (10.9)	3970.0 (618.0)	5680.0 (881.0)	2320.0 (470.0)	3310.0 (671.0)	75.5 (16.1)	108.0 (23.0)
14	-1.9 (9.8)	-2.7 (13.9)	3830.0 (898.0)	5480.0 (1280.0)	1970.0 (404.0)	2820.0 (577.0)	93.4 (15.8)	134.0 (22.6)
15	24.0 (29.3)	34.2 (41.7)	3240.0 (679.0)	4630.0 (970.0)	1590.0 (477.0)	2270.0 (681.0)	93.4 (26.5)	134.0 (37.8)
16	20.6 (47.2)	29.3 (67.2)	2750.0 (661.0)	3930.0 (947.0)	1290.0 (485.0)	1840.0 (693.0)	72.7 (29.7)	104.0 (42.5)
17	-14.0 (7.8)	-20.0 (11.2)	2600.0 (570.0)	3730.0 (814.0)	1510.0 (719.0)	2160.0 (1030.0)	100.0 (68.3)	143.0 (97.8)
18	-4.4 (7.7)	-6.2 (11.0)	3160.0 (293.0)	4520.0 (418.0)	1890.0 (334.0)	2700.0 (479.0)	169.0 (59.5)	242.0 (84.9)
19	-6.9 (15.0)	-9.8 (21.3)	3410.0 (659.0)	4870.0 (943.0)	2070.0 (465.0)	2950.0 (664.0)	314.0 (84.4)	449.0 (120.0)
20	-19.6 (2.5)	-27.8 (3.5)	3520.0 (700.0)	5040.0 (999.0)	2100.0 (400.0)	3000.0 (571.0)	317.0 (64.1)	453.0 (91.7)
21	-13.8 (6.9)	-19.6 (9.8)	3250.0 (824.0)	4650.0 (1180.0)	1600.0 (631.0)	2290.0 (903.0)	459.0 (254.0)	656.0 (362.0)
22	-23.8 (0.4)	-33.9 (0.6)	2960.0 (731.0)	4230.0 (1050.0)	1510.0 (315.0)	2170.0 (450.0)	349.0 (99.9)	500.0 (143.0)
23	-9.8 (12.7)	-14.0 (18.1)	2780.0 (442.0)	3990.0 (633.0)	1600.0 (166.0)	2300.0 (237.0)	610.0 (173.0)	874.0 (248.0)
24	-17.6 (5.5)	-25.0 (7.9)	4130.0 (1100.0)	5920.0 (1580.0)	3120.0 (1910.0)	4470.0 (2740.0)	800.0 (173.0)	1150.0 (247.0)
25	-14.2 (10.4)	-20.3 (14.9)	4110.0 (516.0)	5880.0 (737.0)	3040.0 (599.0)	4350.0 (856.0)	1280.0 (323.0)	1830.0 (463.0)
26	-6.9 (10.6)	-9.8 (15.1)	3660.0 (698.0)	5230.0 (1000.0)	2550.0 (427.0)	3650.0 (610.0)	1230.0 (182.0)	1760.0 (261.0)
27	-10.5 (7.4)	-15.0 (10.5)	4370.0 (568.0)	6250.0 (810.0)	2840.0 (423.0)	4050.0 (603.0)	1330.0 (103.0)	1900.0 (148.0)
28	-20.8 (8.2)	-29.6 (11.6)	4290.0 (556.0)	6130.0 (796.0)	2470.0 (532.0)	3530.0 (758.0)	1510.0 (186.0)	2160.0 (267.0)
29	-22.5 (2.5)	-32.0 (3.5)	4440.0 (734.0)	6350.0 (1050.0)	3150.0 (506.0)	4500.0 (723.0)	922.0 (608.0)	1320.0 (873.0)
30	-25.1 (1.3)	-35.7 (1.8)	4140.0 (1020.0)	5920.0 (1460.0)	2090.0 (1340.0)	2990.0 (1920.0)	1610.0 (3660.0)	
31	-19.3 (10.1)	-27.4 (14.3)	4630.0 (1580.0)	6620.0 (2250.0)	1600.0 (1060.0)	2290.0 (1510.0)	165.0 (93.6)	236.0 (134.0)
Avg	-9.1	-12.9	3660.0	5240.0	2200.0	3140.0	440.0	576
n	31	31	31	31	31	31	31	29
SD	11.9	16.9	616.0	877.0	592.0	846.0	470.0	619
Min	-25.1	-35.7	2600.0	3730.0	1290.0	1840.0	48.3	69.2
Max	24.0	34.2	4890.0	6980.0	3460.0	4940.0	1610.0	2160.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for April, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	-22.5 (3.3)	-31.9 (4.7)	4410.0 (1120.0)	6310.0 (1600.0)	2550.0 (1230.0)	3640.0 (1760.0)	384.0 (322.0)	549.0 (461.0)
2	-14.8 (10.8)	-21.2 (15.5)	4650.0 (1200.0)	6570.0 (1650.0)	1950.0 (816.0)	2810.0 (1160.0)	80.8 (11.3)	116.0 (16.3)
3	-23.0 (2.6)	-32.7 (3.8)	3520.0 (505.0)	5030.0 (725.0)	1940.0 (928.0)	2770.0 (1320.0)	76.6 (25.0)	110.0 (35.8)
4	-22.0 (1.1)	-31.3 (1.6)	3590.0 (284.0)	5130.0 (408.0)	1710.0 (672.0)	2440.0 (959.0)	41.0 (15.0)	58.7 (21.5)
5	-9.0 (6.4)	-12.8 (9.1)	4110.0 (749.0)	5880.0 (1070.0)	2180.0 (628.0)	3110.0 (897.0)	65.6 (19.5)	93.9 (28.0)
6	-12.0 (3.6)	-17.1 (5.1)	4230.0 (614.0)	6050.0 (876.0)	2500.0 (569.0)	3580.0 (812.0)	105.0 (70.7)	151.0 (101.0)
7	-11.9 (4.2)	-17.0 (6.0)	5300.0 (1800.0)	7590.0 (2580.0)	3050.0 (999.0)	4360.0 (1430.0)	97.6 (23.2)	140.0 (33.2)
8	-3.1 (9.6)	-4.5 (13.7)	4340.0 (844.0)	6220.0 (1200.0)	2390.0 (917.0)	3410.0 (1310.0)	117.0 (18.4)	167.0 (26.2)
9	-2.1 (2.2)	-3.0 (3.2)						
10	4.6 (14.1)	6.5 (20.1)	4260.0 (1120.0)	6090.0 (1600.0)	1650.0 (349.0)	2350.0 (499.0)	161.0 (49.3)	230.0 (70.3)
11	-5.5 (8.1)	-7.9 (11.6)	6700.0 (6050.0)	9570.0 (8640.0)	1740.0 (561.0)	2490.0 (802.0)	243.0 (115.0)	347.0 (165.0)
12	-3.5 (6.9)	-4.9 (9.9)	4430.0 (4600.0)	6320.0 (6570.0)	1800.0 (654.0)	2580.0 (934.0)	235.0 (63.9)	336.0 (91.1)
13	-9.3 (1.7)	-13.3 (2.4)	1960.0 (453.0)	2800.0 (648.0)	1730.0 (284.0)	2470.0 (405.0)	316.0 (173.0)	453.0 (247.0)
14	-3.3 (8.3)	-4.7 (11.8)	1710.0 (1130.0)	2440.0 (1610.0)	1280.0 (647.0)	1840.0 (925.0)	382.0 (143.0)	546.0 (204.0)
15	13.4 (34.2)	19.1 (48.6)	2040.0 (444.0)	2910.0 (635.0)	1390.0 (404.0)	1980.0 (578.0)	428.0 (153.0)	612.0 (218.0)
16	-9.8 (3.8)	-14.0 (5.4)	2740.0 (1380.0)	3910.0 (1970.0)	1390.0 (477.0)	1980.0 (680.0)	372.0 (107.0)	533.0 (153.0)
17	-4.9 (5.5)	-7.0 (7.8)	1680.0 (621.0)	2400.0 (887.0)	1430.0 (453.0)	2050.0 (647.0)	537.0 (264.0)	769.0 (378.0)
18	2.6 (9.9)	3.6 (14.1)	1630.0 (201.0)	2340.0 (287.0)	1220.0 (335.0)	1750.0 (478.0)	739.0 (139.0)	1060.0 (200.0)
19	10.2 (11.9)	14.6 (17.0)	2120.0 (383.0)	3040.0 (546.0)	1920.0 (466.0)	2750.0 (669.0)	1290.0 (388.0)	1840.0 (555.0)
20	9.6 (5.6)	13.6 (7.9)	2530.0 (368.0)	3620.0 (528.0)	2670.0 (448.0)	3820.0 (641.0)	1970.0 (185.0)	2810.0 (267.0)
21	-4.0 (6.3)	-5.6 (9.0)	4300.0 (2760.0)	6140.0 (3940.0)	3060.0 (1230.0)	4380.0 (1760.0)		
22	-1.3 (6.0)	-1.8 (8.6)	1830.0 (546.0)	2620.0 (781.0)	1340.0 (567.0)	1920.0 (810.0)	811.0 (1290.0)	1160.0 (1850.0)
23	7.1 (18.6)	10.2 (26.6)	1170.0 (754.0)	1670.0 (1080.0)	1500.0 (665.0)	2150.0 (953.0)	313.0 (79.6)	449.0 (114.0)
24	24.1 (29.3)	34.5 (41.9)	1290.0 (375.0)	1850.0 (538.0)	1750.0 (744.0)	2510.0 (1070.0)	282.0 (227.0)	405.0 (327.0)
25	2.8 (8.2)	4.0 (11.6)	2830.0 (592.0)	4050.0 (850.0)	2760.0 (666.0)	3950.0 (955.0)	226.0 (39.3)	324.0 (56.3)
26	3.8 (11.2)	5.4 (16.1)	1530.0 (297.0)	2200.0 (424.0)	2150.0 (1010.0)	3080.0 (1440.0)	208.0 (61.0)	299.0 (87.6)
27	0.6 (3.7)	0.9 (5.3)	2550.0 (1010.0)	3660.0 (1440.0)	3130.0 (545.0)	4490.0 (780.0)	226.0 (138.0)	324.0 (198.0)
28	4.4 (5.9)	6.3 (8.4)	2220.0 (572.0)	3180.0 (822.0)	3090.0 (692.0)	4430.0 (993.0)	194.0 (149.0)	276.0 (213.0)
29	-1.6 (4.2)	-2.4 (5.9)	1760.0 (296.0)	2530.0 (424.0)	2800.0 (415.0)	4020.0 (593.0)	193.0 (45.8)	277.0 (65.8)
30	-1.4 (4.8)	-2.1 (6.9)						
Avg	-2.7	-3.9	3050.0	4360.0	2070.0	2970.0	374.0	535
n	30	30	28	28	28	28	27	27
SD	10.4	14.8	1400.0	1990.0	607.0	870.0	410.0	588
Min	-23.0	-32.7	1170.0	1670.0	1220.0	1750.0	41.0	58.7
Max	24.1	34.5	6700.0	9570.0	3130.0	4490.0	1970.0	2810.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for May, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	0.8 (6.8)	1.2 (9.7)	2750.0 (911.0)	3930.0 (1310.0)	2440.0 (390.0)	3500.0 (558.0)	644.0 (370.0)	923.0 (529.0)
2	0.4 (5.0)	0.5 (7.0)	2040.0 (327.0)	2910.0 (470.0)	2280.0 (464.0)	3260.0 (667.0)	449.0 (169.0)	642.0 (242.0)
3	0.7 (7.2)	1.0 (10.3)	2100.0 (220.0)	3010.0 (315.0)	1800.0 (585.0)	2560.0 (837.0)	427.0 (157.0)	610.0 (225.0)
4	12.7 (15.9)	18.1 (22.7)	2850.0 (1560.0)	4080.0 (2230.0)	1990.0 (483.0)	2840.0 (690.0)	382.0 (192.0)	546.0 (275.0)
5	20.2 (28.4)	28.9 (40.5)	1670.0 (241.0)	2390.0 (347.0)	1540.0 (698.0)	2200.0 (998.0)	568.0 (198.0)	813.0 (283.0)
6	-5.4 (6.0)	-7.8 (8.5)	1660.0 (153.0)	2380.0 (219.0)	1230.0 (202.0)	1760.0 (289.0)	523.0 (122.0)	751.0 (175.0)
7	43.3 (21.9)	61.9 (31.3)	1680.0 (188.0)	2410.0 (269.0)	1900.0 (426.0)	2720.0 (610.0)	565.0 (118.0)	810.0 (169.0)
8	3.2 (14.1)	4.6 (20.2)	1550.0 (238.0)	2220.0 (341.0)	1690.0 (598.0)	2430.0 (857.0)	686.0 (364.0)	984.0 (522.0)
9	5.3 (19.1)	7.6 (27.2)	2370.0 (504.0)	3400.0 (724.0)	2470.0 (419.0)	3540.0 (601.0)	518.0 (157.0)	742.0 (225.0)
10	0.1 (8.4)	0.2 (12.0)	1900.0 (317.0)	2710.0 (455.0)	2500.0 (336.0)	3580.0 (483.0)	492.0 (108.0)	704.0 (154.0)
11	1.9 (4.0)	2.8 (5.7)	1700.0 (168.0)	2440.0 (241.0)	1870.0 (370.0)	2670.0 (531.0)	479.0 (87.9)	685.0 (125.0)
12	0.4 (5.4)	0.6 (7.7)	1470.0 (277.0)	2100.0 (396.0)	1980.0 (330.0)	2840.0 (470.0)	473.0 (80.1)	677.0 (115.0)
13	14.8 (6.6)	21.2 (9.4)	1730.0 (841.0)	2490.0 (1210.0)	1750.0 (791.0)	2520.0 (1140.0)	378.0 (162.0)	
14	4.4 (6.6)	6.2 (9.4)	1660.0 (444.0)	2380.0 (636.0)	1590.0 (631.0)	2270.0 (904.0)	297.0 (49.1)	426.0 (70.4)
15	-2.3 (5.7)	-3.2 (8.2)	2090.0 (1750.0)	3060.0 (2510.0)	1040.0 (313.0)	1500.0 (449.0)		
16	-4.0 (5.9)	-5.7 (8.4)	1930.0 (326.0)	2760.0 (470.0)	1530.0 (237.0)	2200.0 (340.0)	199.0 (30.0)	285.0 (43.0)
17	2.4 (6.6)	3.4 (9.4)	1580.0 (301.0)	2260.0 (431.0)	1470.0 (177.0)	2100.0 (253.0)	186.0 (32.9)	267.0 (47.1)
18	-2.0 (4.8)	-2.5 (7.2)					292.0 (89.1)	426.0 (133.0)
19	-3.0 (7.1)	-4.3 (10.2)						
20	10.4 (5.1)	14.9 (7.3)						
21	23.3 (16.2)	33.3 (23.1)	1080.0 (236.0)	1550.0 (337.0)	960.0 (298.0)	1370.0 (426.0)	377.0 (311.0)	541.0 (446.0)
22	8.9 (11.5)	12.8 (16.4)	1100.0 (249.0)	1580.0 (355.0)	1070.0 (426.0)	1530.0 (609.0)	451.0 (320.0)	647.0 (459.0)
23	16.9 (15.3)	24.2 (21.9)	1130.0 (213.0)	1620.0 (305.0)	889.0 (230.0)	1280.0 (329.0)	499.0 (470.0)	717.0 (675.0)
24	4.8 (3.4)	6.8 (4.8)	1070.0 (212.0)	1530.0 (306.0)	957.0 (247.0)	1370.0 (354.0)	769.0 (695.0)	1100.0 (995.0)
25	5.4 (2.6)	7.7 (3.8)	1330.0 (229.0)	1910.0 (328.0)	1080.0 (266.0)	1540.0 (381.0)	1040.0 (414.0)	1490.0 (594.0)
26	-1.1 (8.2)	-1.5 (11.8)	1090.0 (190.0)	1570.0 (272.0)	952.0 (130.0)	1370.0 (186.0)	566.0 (347.0)	814.0 (498.0)
27	2.5 (3.6)	3.5 (5.1)	1410.0 (194.0)	2030.0 (277.0)	1390.0 (278.0)	1990.0 (398.0)	431.0 (79.3)	618.0 (114.0)
28	6.0 (4.3)	8.6 (6.2)	1730.0 (544.0)	2470.0 (781.0)	1410.0 (517.0)	2010.0 (741.0)	612.0 (351.0)	878.0 (503.0)
29	5.3 (5.1)	7.5 (7.3)	1200.0 (234.0)	1720.0 (337.0)	1170.0 (429.0)	1680.0 (616.0)	1380.0 (1160.0)	1980.0 (1660.0)
30	11.4 (7.6)	16.3 (10.8)	1130.0 (197.0)	1620.0 (281.0)	1080.0 (490.0)	1540.0 (700.0)	1320.0 (1170.0)	1880.0 (1670.0)
31	6.9 (8.0)	9.8 (11.4)	1230.0 (390.0)	1750.0 (555.0)	1040.0 (619.0)	1490.0 (885.0)	1510.0 (1450.0)	2170.0 (2070.0)
Avg	6.3	9.0	1650.0	2370.0	1540.0	2200.0	590.0	856
n	31	31	28	28	28	28	28	27
SD	9.7	13.8	473.0	678.0	493.0	705.0	329.0	475
Min	-5.4	-7.8	1070.0	1530.0	889.0	1280.0	186.0	267.0
Max	43.3	61.9	2850.0	4080.0	2500.0	3580.0	1510.0	2170.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for June, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	14.4 (8.9)	20.6 (12.7)	816.0 (63.3)	1170.0 (90.8)	707.0 (116.0)	1020.0 (166.0)	393.0 (431.0)	565.0 (619.0)
2	22.1 (19.9)	31.6 (28.5)	967.0 (140.0)	1390.0 (201.0)	1110.0 (230.0)	1590.0 (330.0)	1010.0 (561.0)	1440.0 (805.0)
3	21.4 (12.2)	30.5 (17.4)						
4	22.8 (25.1)	32.6 (35.8)						
5	2.7 (1.8)	3.9 (2.5)	1070.0 (266.0)	1530.0 (381.0)	915.0 (318.0)	1310.0 (455.0)	1270.0 (519.0)	1810.0 (744.0)
6	23.7 (17.2)	34.1 (24.6)	771.0 (111.0)	1110.0 (160.0)	822.0 (277.0)	1180.0 (395.0)	1360.0 (251.0)	1950.0 (359.0)
7	21.5 (10.0)	30.9 (14.4)	609.0 (109.0)	877.0 (158.0)	607.0 (66.2)	873.0 (94.7)	1380.0 (253.0)	1990.0 (364.0)
8	13.7 (9.9)	19.7 (14.2)	656.0 (122.0)	943.0 (175.0)	1020.0 (301.0)	1460.0 (430.0)	1160.0 (109.0)	1660.0 (156.0)
9	42.1 (29.4)	60.2 (42.0)	941.0 (259.0)	1350.0 (371.0)	1040.0 (276.0)	1490.0 (395.0)	1380.0 (372.0)	1980.0 (533.0)
10	7.9 (6.0)	11.3 (8.6)	819.0 (202.0)	1180.0 (289.0)	905.0 (292.0)	1300.0 (418.0)	2360.0 (1430.0)	
11								
12								
13								
14								
15								
16								
17	54.0 (17.5)	77.8 (25.3)	733.0 (195.0)	1060.0 (279.0)	470.0 (194.0)	676.0 (278.0)	296.0 (32.2)	427.0 (46.6)
18	55.9 (7.0)	80.0 (10.4)						
19	59.4 (8.3)	85.5 (12.0)	876.0 (260.0)	1260.0 (376.0)	546.0 (88.0)	787.0 (126.0)	143.0 (43.6)	207.0 (62.7)
20	40.5 (7.4)	58.2 (10.6)	1010.0 (97.5)	1450.0 (140.0)	624.0 (94.4)	898.0 (135.0)	134.0 (65.0)	193.0 (93.6)
21	80.0 (16.1)	115.0 (23.4)	823.0 (160.0)	1190.0 (228.0)	482.0 (122.0)	696.0 (175.0)	130.0 (26.6)	188.0 (38.2)
22	89.7 (19.8)	129.0 (28.6)	729.0 (156.0)	1050.0 (225.0)	424.0 (68.8)	613.0 (99.0)	131.0 (21.3)	189.0 (30.7)
23	98.9 (23.4)	143.0 (33.9)	633.0 (219.0)	915.0 (314.0)	544.0 (177.0)	785.0 (254.0)	292.0 (226.0)	422.0 (324.0)
24	82.9 (22.1)	119.0 (32.0)	596.0 (272.0)	860.0 (390.0)	491.0 (184.0)	708.0 (263.0)	320.0 (233.0)	462.0 (335.0)
25	92.1 (12.8)	133.0 (18.4)	552.0 (131.0)	799.0 (190.0)	425.0 (66.9)	614.0 (96.1)	209.0 (161.0)	302.0 (233.0)
26	69.4 (18.1)	99.8 (26.1)	796.0 (81.8)	1150.0 (117.0)	563.0 (60.4)	811.0 (86.6)	818.0 (875.0)	1180.0 (1260.0)
27	72.1 (16.4)	104.0 (23.7)	771.0 (127.0)	1110.0 (181.0)	593.0 (199.0)	854.0 (285.0)	1670.0 (1060.0)	2410.0 (1530.0)
28	39.6 (13.4)	56.6 (19.2)	1350.0 (172.0)	1930.0 (246.0)	1030.0 (416.0)	1470.0 (597.0)	1370.0 (578.0)	1960.0 (830.0)
29	40.2 (10.1)	57.6 (14.4)	1340.0 (423.0)	1920.0 (607.0)	1020.0 (507.0)	1460.0 (727.0)	1610.0 (458.0)	2310.0 (659.0)
30	40.3 (18.1)	57.7 (26.0)	1680.0 (682.0)	2410.0 (976.0)	1140.0 (572.0)	1630.0 (821.0)	2020.0 (601.0)	2910.0 (864.0)
Avg	46.1	66.3	882.0	1270.0	737.0	1060.0	926.0	1230
n	24	24	21	21	21	21	21	20
SD	28.3	40.9	275.0	392.0	244.0	347.0	681.0	884
Min	2.7	3.9	552.0	799.0	424.0	613.0	130.0	188.0
Max	98.9	143.0	1680.0	2410.0	1140.0	1630.0	2360.0	2910.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for July, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	37.5 (20.1)	53.7 (28.7)	1140.0 (169.0)	1640.0 (242.0)	741.0 (155.0)	1060.0 (222.0)	1870.0 (278.0)	2690.0 (400.0)
2	50.3 (15.0)	72.1 (21.5)	1220.0 (373.0)	1750.0 (535.0)	614.0 (181.0)	881.0 (259.0)	1290.0 (723.0)	1850.0 (1040.0)
3	61.4 (9.9)	88.2 (14.2)	976.0 (239.0)	1400.0 (343.0)	520.0 (158.0)	746.0 (227.0)	918.0 (595.0)	1320.0 (854.0)
4	27.0 (8.9)	38.8 (12.7)	993.0 (152.0)	1430.0 (219.0)	556.0 (155.0)	799.0 (222.0)	1760.0 (240.0)	2530.0 (345.0)
5	51.9 (10.5)	74.3 (15.1)	957.0 (272.0)	1380.0 (390.0)	533.0 (177.0)	765.0 (254.0)	1020.0 (584.0)	1470.0 (840.0)
6	98.1 (19.1)	141.0 (29.0)	899.0 (167.0)	1310.0 (250.0)	411.0 (46.1)	596.0 (67.0)	1050.0 (578.0)	1570.0 (855.0)
7	46.7 (14.4)	67.0 (20.7)	742.0 (113.0)	1070.0 (161.0)	364.0 (42.9)	524.0 (61.1)	1760.0 (992.0)	2530.0 (1430.0)
8	31.2 (10.6)	44.7 (15.2)	677.0 (181.0)	973.0 (259.0)	412.0 (122.0)	592.0 (175.0)	1890.0 (893.0)	2720.0 (1280.0)
9	31.7 (16.3)	45.5 (23.4)	819.0 (303.0)	1180.0 (434.0)	573.0 (293.0)	823.0 (419.0)	1680.0 (834.0)	2410.0 (1200.0)
10	56.3 (9.5)	81.1 (13.7)	384.0 (113.0)	554.0 (162.0)	369.0 (84.4)	531.0 (121.0)	835.0 (319.0)	1200.0 (457.0)
11	38.2 (12.2)	54.8 (17.5)	618.0 (132.0)	889.0 (189.0)	554.0 (166.0)	797.0 (238.0)	1480.0 (485.0)	2130.0 (698.0)
12	50.7 (7.0)	72.7 (10.1)	739.0 (357.0)	1060.0 (513.0)	688.0 (297.0)	988.0 (425.0)	1310.0 (488.0)	1880.0 (701.0)
13	55.2 (9.4)	79.2 (13.5)	647.0 (187.0)	932.0 (269.0)	776.0 (450.0)	1120.0 (645.0)	929.0 (466.0)	1340.0 (669.0)
14	62.3 (10.6)	89.6 (15.4)	550.0 (214.0)	793.0 (308.0)	555.0 (194.0)	799.0 (278.0)	785.0 (342.0)	1130.0 (492.0)
15	64.9 (9.6)							
16	26.4 (11.6)							
17	11.1 (3.9)	15.8 (5.6)	1320.0 (354.0)	1890.0 (507.0)	1360.0 (296.0)	1940.0 (426.0)	935.0 (156.0)	1340.0 (224.0)
18	32.2 (13.3)	46.1 (19.0)	1210.0 (284.0)	1740.0 (406.0)	1030.0 (482.0)	1470.0 (692.0)	779.0 (68.3)	1120.0 (97.7)
19	16.7 (9.8)	23.8 (14.0)	1390.0 (309.0)	1990.0 (443.0)	987.0 (419.0)	1410.0 (600.0)	737.0 (145.0)	1060.0 (207.0)
20	17.4 (8.2)	24.9 (11.8)	1090.0 (431.0)	1560.0 (617.0)	842.0 (382.0)	1210.0 (547.0)	666.0 (219.0)	956.0 (315.0)
21	25.1 (8.9)	35.9 (12.8)	1040.0 (196.0)	1500.0 (281.0)	741.0 (368.0)	1060.0 (529.0)	1060.0 (1250.0)	
22	26.8 (9.2)	38.4 (13.2)	1080.0 (228.0)	1550.0 (327.0)	695.0 (245.0)	998.0 (351.0)	232.0 (126.0)	333.0 (181.0)
23	35.8 (9.1)	51.4 (13.1)	955.0 (171.0)	1370.0 (246.0)	670.0 (383.0)	963.0 (549.0)	188.0 (54.6)	270.0 (78.7)
24	51.0 (12.2)	73.3 (17.6)	899.0 (365.0)	1300.0 (523.0)	696.0 (440.0)	1000.0 (631.0)	111.0 (26.3)	160.0 (37.6)
25	19.4 (8.6)	27.7 (12.3)	1340.0 (294.0)	1920.0 (422.0)	1010.0 (393.0)	1440.0 (565.0)	119.0 (28.5)	171.0 (41.0)
26	30.2 (9.5)	43.3 (13.6)	1230.0 (355.0)	1760.0 (508.0)	1020.0 (638.0)	1470.0 (915.0)	111.0 (32.9)	160.0 (47.4)
27	40.5 (11.6)	58.3 (16.8)	962.0 (432.0)	1380.0 (619.0)	760.0 (453.0)	1090.0 (649.0)	122.0 (38.2)	175.0 (55.2)
28	38.7 (6.3)	55.4 (9.1)	1070.0 (272.0)	1530.0 (389.0)	902.0 (192.0)	1290.0 (274.0)	122.0 (4.9)	176.0 (6.9)
29	32.0 (7.2)	45.8 (10.2)	1540.0 (275.0)	2210.0 (394.0)	1430.0 (878.0)	2050.0 (1260.0)	118.0 (17.2)	170.0 (24.8)
30	31.7 (7.7)	45.4 (11.0)	1620.0 (322.0)	2330.0 (462.0)	1290.0 (816.0)	1850.0 (1170.0)	116.0 (17.7)	167.0 (25.5)
31	35.5 (7.9)	50.8 (11.3)	1870.0 (616.0)	2680.0 (882.0)	1390.0 (700.0)	2000.0 (1000.0)	103.0 (23.4)	148.0 (33.6)
Avg	39.8	56.5	1030.0	1490.0	775.0	1110.0	830.0	1180
n	31	29	29	29	29	29	29	28
SD	17.5	24.9	327.0	468.0	301.0	430.0	604.0	882
Min	11.1	15.8	384.0	554.0	364.0	524.0	103.0	148.0
Max	98.1	141.0	1870.0	2680.0	1430.0	2050.0	1890.0	2720.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for August, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	36.0 (7.9)	51.5 (11.3)	1750.0 (461.0)	2510.0 (660.0)	872.0 (441.0)	1250.0 (632.0)	130.0 (13.8)	187.0 (19.8)
2	42.4 (10.7)	60.7 (15.4)	1460.0 (761.0)	2090.0 (1090.0)	983.0 (901.0)	1410.0 (1290.0)	126.0 (18.6)	181.0 (26.7)
3	58.7 (9.3)	84.3 (13.5)	723.0 (197.0)	1040.0 (283.0)	490.0 (86.4)	705.0 (124.0)	163.0 (39.7)	234.0 (57.1)
4	30.1 (11.6)	43.4 (16.8)	952.0 (364.0)	1380.0 (519.0)	770.0 (329.0)	1120.0 (473.0)	282.0 (148.0)	410.0 (212.0)
5	44.8 (18.9)	64.1 (27.1)	1690.0 (380.0)	2430.0 (545.0)	1070.0 (500.0)	1540.0 (717.0)	461.0 (126.0)	662.0 (181.0)
6	26.9 (17.3)	39.1 (24.9)	1300.0 (596.0)	1890.0 (855.0)				
7	62.1 (19.3)	89.5 (28.0)	941.0 (333.0)	1350.0 (477.0)	721.0 (844.0)	1040.0 (1210.0)	704.0 (474.0)	1010.0 (679.0)
8	74.2 (4.6)	107.0 (6.6)	563.0 (102.0)	816.0 (147.0)	297.0 (56.2)	429.0 (81.3)	377.0 (126.0)	546.0 (183.0)
9	65.9 (8.8)	94.9 (12.8)	773.0 (169.0)	1120.0 (243.0)	1100.0 (997.0)	1580.0 (1430.0)	1650.0 (2090.0)	2370.0 (3020.0)
10	81.2 (9.0)	117.0 (13.1)	804.0 (260.0)	1160.0 (374.0)	796.0 (915.0)	1150.0 (1320.0)	2190.0 (1780.0)	3150.0 (2560.0)
11	91.5 (15.6)	131.0 (22.3)	880.0 (178.0)	1270.0 (256.0)	555.0 (112.0)	798.0 (161.0)	2150.0 (1440.0)	3100.0 (2070.0)
12	83.1 (13.9)	119.0 (19.9)	776.0 (273.0)	1120.0 (391.0)	481.0 (104.0)	692.0 (149.0)	1320.0 (1320.0)	1910.0 (1890.0)
13	47.9 (2.2)	69.0 (3.2)						
14	74.1 (16.7)	107.0 (24.1)	541.0 (75.5)	782.0 (108.0)	753.0 (316.0)	1090.0 (456.0)	728.0 (201.0)	1050.0 (291.0)
15	85.4 (12.9)	123.0 (18.6)	609.0 (147.0)	879.0 (211.0)	909.0 (264.0)	1310.0 (381.0)	1090.0 (424.0)	1570.0 (609.0)
16	81.8 (8.8)	118.0 (12.7)	556.0 (106.0)	801.0 (152.0)	1410.0 (873.0)	2030.0 (1260.0)	1470.0 (958.0)	2120.0 (1380.0)
17	89.5 (15.7)	129.0 (22.6)	693.0 (111.0)	998.0 (159.0)	1310.0 (336.0)	1880.0 (483.0)	2180.0 (1110.0)	3140.0 (1600.0)
18	70.8 (15.3)	101.0 (21.9)	1110.0 (249.0)	1600.0 (358.0)	1850.0 (1130.0)	2660.0 (1630.0)	1550.0 (787.0)	2230.0 (1130.0)
19	82.6 (18.4)	119.0 (26.4)	708.0 (123.0)	1020.0 (177.0)	2210.0 (652.0)	3180.0 (937.0)	1180.0 (418.0)	1700.0 (602.0)
20	51.0 (4.9)	73.0 (7.1)	1100.0 (321.0)	1580.0 (463.0)	2670.0 (1480.0)	3830.0 (2130.0)	1770.0 (384.0)	2540.0 (552.0)
21	51.0 (6.5)	73.1 (9.3)	1180.0 (216.0)	1690.0 (309.0)	1970.0 (635.0)	2830.0 (911.0)	1780.0 (439.0)	2560.0 (632.0)
22	35.8 (12.0)	51.2 (17.1)	1430.0 (366.0)	2050.0 (525.0)	3460.0 (1920.0)	4960.0 (2760.0)	1110.0 (268.0)	1600.0 (385.0)
23	34.4 (11.7)	49.2 (16.8)	1210.0 (211.0)	1730.0 (302.0)	3330.0 (1780.0)	4780.0 (2550.0)	960.0 (332.0)	1380.0 (477.0)
24	52.9 (5.6)	75.9 (8.1)	903.0 (252.0)	1300.0 (362.0)	3370.0 (797.0)	4830.0 (1150.0)	682.0 (366.0)	980.0 (526.0)
25	109.0 (29.9)	157.0 (43.3)	614.0 (473.0)	884.0 (679.0)	2430.0 (636.0)	3500.0 (914.0)	929.0 (765.0)	1340.0 (1100.0)
26	94.4 (12.0)	136.0 (17.3)	693.0 (321.0)	999.0 (462.0)	3320.0 (958.0)	4780.0 (1380.0)	676.0 (510.0)	973.0 (734.0)
27	46.0 (6.0)	65.9 (8.6)	872.0 (179.0)	1250.0 (258.0)	1990.0 (972.0)	2860.0 (1400.0)	1520.0 (433.0)	2190.0 (623.0)
28	69.8 (6.2)	100.0 (8.9)	1030.0 (362.0)	1490.0 (522.0)	1830.0 (1330.0)	2620.0 (1910.0)	2440.0 (4090.0)	
29	35.7 (17.9)	51.0 (25.6)	1980.0 (1070.0)	2840.0 (1530.0)	3290.0 (1560.0)	4710.0 (2230.0)	227.0 (76.7)	326.0 (110.0)
30	37.8 (14.0)	54.0 (20.0)	1840.0 (280.0)	2630.0 (401.0)				
31	16.5 (5.7)	23.6 (8.1)	2040.0 (637.0)	2920.0 (913.0)	5520.0 (4030.0)	7900.0 (5770.0)	116.0 (28.0)	167.0 (40.4)
Avg	60.1	86.4	1060.0	1520.0	1780.0	2550.0	1070.0	1470
n	31	31	30	30	28	28	28	27
SD	23.2	33.4	435.0	623.0	1230.0	1770.0	703.0	955
Min	16.5	23.6	541.0	782.0	297.0	429.0	116.0	167.0
Max	109.0	157.0	2040.0	2920.0	5520.0	7900.0	2440.0	3150.0

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Table E8. Daily mean (SD) of H2S concentrations at site IA4B for September, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}	ppb	µg·dsm^{-3}
1	14.0 (4.2)	19.9 (5.9)	2280.0 (677.0)	3280.0 (979.0)	8580.0 (6130.0)	12400.0 (8880.0)		
2	15.4 (2.9)	22.1 (4.1)	2540.0 (1020.0)	3640.0 (1460.0)	6590.0 (2350.0)	9450.0 (3370.0)	139.0 (13.6)	199.0 (19.6)
3	13.8 (3.6)	19.7 (5.2)	2340.0 (600.0)	3360.0 (861.0)	2620.0 (1560.0)	3760.0 (2230.0)	129.0 (22.8)	186.0 (32.7)
4	29.0 (14.9)	41.6 (21.3)	2160.0 (305.0)	3100.0 (435.0)	1400.0 (272.0)	2010.0 (389.0)	130.0 (18.5)	187.0 (26.6)
5								
6								
7								
8								
9								
10								
11								
12								
13								
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Avg	18.1	25.8	2330.0	3350.0	4800.0	6890.0	133.0	191
n	4	4	4	4	4	4	3	3
SD	6.4	9.2	137.0	194.0	2910.0	4190.0	4.2	6.05
Min	13.8	19.7	2160.0	3100.0	1400.0	2010.0	129.0	186.0
Max	29.0	41.6	2540.0	3640.0	8580.0	12400.0	139.0	199.0

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Table E9. PM Concentrations

Table E9. Daily mean (SD) of H2S emissions at site IA4B for July, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21	3.8 (0.8)	1.8 (0.4)	3.7 (0.8)	7.5 (1.5)	4.1 (2.3)	1.9 (1.1)	3.7 (2.0)	7.4 (4.1)	117.0 (64.2)	848 (464)		
22												
23												
24												
25												
26												
27	6.0 (0.9)	2.8 (0.4)	5.9 (0.9)	11.9 (1.8)	4.1 (0.6)	1.9 (0.3)	3.7 (0.6)	7.4 (1.1)				
28	5.6 (1.0)	2.6 (0.4)	5.6 (0.9)	11.1 (1.9)	4.8 (1.6)	2.2 (0.7)	4.3 (1.4)	8.7 (2.9)				
29	5.7 (1.1)	2.7 (0.5)	5.7 (1.0)	11.3 (2.1)	4.8 (1.0)	2.2 (0.5)	4.3 (0.9)	8.6 (1.9)				
30	6.8 (1.3)	3.2 (0.6)	6.7 (1.3)	13.3 (2.6)	4.2 (1.0)	2.0 (0.5)	3.8 (0.9)	7.6 (1.7)				
31	7.0 (0.9)	3.2 (0.4)	6.9 (0.9)	13.7 (1.7)	4.5 (1.1)	2.1 (0.5)	4.0 (1.0)	8.0 (1.9)				
Avg	5.8	2.7	5.74	11.5	4.4	2.1	3.96	7.9				
n	6.0	6	6	6.0	6.0	6	6	6.0	1.0	1	0	0
SD	1.0	0.5	1.01	2.0	0.3	0.1	0.26	0.5				
Min	3.8	1.8	3.74	7.5	4.1	1.9	3.69	7.4				
Max	7.0	3	6.85	13.7	4.8	2.2	4.33	8.7				

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for August, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	6.2 (0.9)	2.9 (0.4)	6.1 (0.9)	12.3 (1.8)	4.1 (0.6)	1.9 (0.3)	3.6 (0.5)	7.3 (1.0)				
2												
3	7.0 (0.9)	3.3 (0.4)	6.9 (0.9)	13.8 (1.7)	5.5 (1.3)	2.6 (0.6)	4.9 (1.2)	9.9 (2.3)				
4	7.0 (0.9)	3.3 (0.4)	6.9 (0.9)	13.8 (1.8)	5.1 (1.0)	2.4 (0.5)	4.6 (0.9)	9.1 (1.8)				
5												
6	6.0 (0.8)	2.8 (0.4)	5.9 (0.8)	11.7 (1.5)	7.7 (2.1)	3.6 (1.0)	6.9 (1.9)	13.8 (3.8)				
7	5.1 (0.6)	2.4 (0.3)	5.0 (0.6)	10.0 (1.3)	10.0 (1.7)	4.7 (0.8)	8.9 (1.5)	17.9 (3.0)	31.8 (18.8)	230 (136)	1320 (785)	2290 (1350)
8									43.3 (9.9)	313 (71)	1810 (410)	3090 (701)
9	3.8 (0.5)	1.8 (0.2)	3.7 (0.5)	7.5 (0.9)	12.9 (2.7)	6.0 (1.3)	11.5 (2.4)	23.0 (4.8)	42.5 (39.1)	307 (282)	1770 (1630)	3010 (2770)
10	4.3 (0.3)	2.0 (0.2)	4.2 (0.3)	8.4 (0.6)					36.6 (46.6)	265 (336)	1530 (1940)	2580 (3280)
11					14.3 (2.9)	6.6 (1.4)	12.7 (2.6)	25.4 (5.2)	38.9 (23.5)	281 (170)	1620 (980)	2710 (1640)
12					8.5 (2.1)	4.0 (1.0)	7.6 (1.9)	15.2 (3.8)	25.8 (10.4)	186 (76)	1070 (435)	1790 (724)
13					7.1 (1.5)	3.3 (0.7)	6.3 (1.3)	12.6 (2.7)	62.7 (33.6)	453 (242)	2610 (1400)	4310 (2310)
14					6.9 (1.7)	3.2 (0.8)	6.1 (1.5)	12.3 (3.0)	76.4 (68.1)	552 (492)		
15					11.0 (4.2)	5.1 (2.0)	9.7 (3.7)	19.5 (7.5)	16.3 (5.4)	117 (39)		
16					11.4 (1.0)	5.3 (0.5)	10.1 (0.9)	20.3 (1.8)				
17	10.1 (1.4)	4.7 (0.7)	9.8 (1.4)	19.7 (2.8)	11.3 (1.4)	5.3 (0.7)	10.0 (1.3)	20.0 (2.5)	14.9 (8.1)	108 (58)	621 (336)	1210 (653)
18	9.5 (2.0)	4.4 (0.9)	9.2 (1.9)	18.5 (3.8)	7.7 (0.6)	3.6 (0.3)	6.8 (0.5)	13.7 (1.0)	29.6 (12.1)	214 (87)	1230 (504)	2380 (972)
19	9.4 (1.9)	4.4 (0.9)	9.2 (1.8)	18.4 (3.7)	8.2 (1.0)	3.8 (0.5)	7.2 (0.9)	14.4 (1.7)	48.8 (32.3)	352 (233)	2030 (1340)	3880 (2570)
20	8.9 (1.2)	4.1 (0.6)	8.6 (1.1)	17.3 (2.3)	7.6 (0.9)	3.5 (0.4)	6.7 (0.8)	13.4 (1.6)	48.8 (38.2)	353 (276)	2030 (1590)	3850 (3010)
21	10.7 (1.9)	5.0 (0.9)	10.4 (1.8)	20.8 (3.6)	7.7 (1.0)	3.6 (0.5)	6.8 (0.9)	13.7 (1.8)	61.0 (40.3)	441 (291)	2540 (1680)	4770 (3150)
22	10.3 (2.2)	4.8 (1.0)	9.9 (2.1)	19.9 (4.3)	5.7 (0.5)	2.7 (0.2)	5.0 (0.5)	10.1 (0.9)	29.6 (20.7)	214 (149)	1230 (861)	2290 (1600)
23									28.1 (30.4)	203 (219)	1170 (1260)	2160 (2330)
24					4.5 (0.9)	2.1 (0.4)	4.0 (0.8)	8.0 (1.6)	31.6 (28.1)	228 (203)	1310 (1170)	2400 (2150)
25									51.3 (36.5)	370 (263)	2140 (1520)	3880 (2760)
26	7.6 (1.8)	3.5 (0.9)	7.3 (1.8)	14.7 (3.5)	3.9 (0.5)	1.8 (0.3)	3.4 (0.5)	6.8 (1.0)	32.1 (30.3)	232 (219)	1340 (1260)	2410 (2270)
27	11.4 (2.5)	5.3 (1.2)	11.0 (2.4)	22.1 (4.9)	4.7 (1.0)	2.2 (0.5)	4.1 (0.9)	8.3 (1.7)	39.3 (32.6)	284 (235)	1640 (1360)	2920 (2420)
28	7.4 (0.8)	3.4 (0.4)	7.1 (0.7)	14.3 (1.5)	5.9 (1.1)	2.8 (0.5)	5.2 (1.0)	10.4 (2.0)	11.8 (3.9)	85 (28)	491 (162)	869 (287)
29	7.9 (1.2)	3.7 (0.6)	7.6 (1.2)	15.2 (2.4)	5.7 (1.1)	2.7 (0.5)	5.0 (1.0)	10.1 (2.0)	18.1 (20.9)	131 (151)	753 (870)	1320 (1530)
30					8.5 (1.7)	4.0 (0.8)	7.5 (1.4)	14.9 (2.9)	22.9 (25.1)	166 (181)	956 (1050)	1670 (1830)
31												
Avg	7.8	3.6	7.58	15.2	7.8	3.6	6.86	13.7	36.6	264	1490	2660
n	17.0	17	17	17.0	24.0	24	24	24.0	23.0	23	21	21
SD	2.2	1.0	2.11	4.2	2.8	1.3	2.47	5.0	16.0	115.0	563.0	1010.0
Min	3.8	1.8	3.72	7.5	3.9	1.8	3.39	6.8	11.8	85	491	869
Max	11.4	5	11.00	22.1	14.3	6.6	12.70	25.4	76.4	552	2610	4770

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for September, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	5.9 (1.5)	2.7 (0.7)	5.6 (1.4)	11.3 (2.8)	9.6 (1.0)	4.5 (0.5)	8.4 (0.9)	16.8 (1.7)	22.1 (17.7)	160 (128)	921 (737)	1590 (1270)
2	6.0 (0.7)	2.8 (0.3)	5.8 (0.7)	11.6 (1.3)	9.6 (1.0)	4.5 (0.5)	8.4 (0.9)	16.9 (1.8)	21.8 (19.8)	158 (143)	909 (827)	1560 (1420)
3	5.2 (0.5)	2.4 (0.3)	5.0 (0.5)	10.0 (1.0)	9.8 (1.1)	4.5 (0.5)	8.5 (0.9)	17.1 (1.9)	24.5 (22.0)	177 (159)	1020 (915)	1740 (1560)
4	4.7 (1.1)	2.2 (0.5)	4.5 (1.0)	9.0 (2.1)	9.7 (2.5)	4.5 (1.1)	8.5 (2.1)	16.9 (4.3)	16.5 (17.8)	119 (128)	687 (740)	1160 (1250)
5	3.9 (0.8)	1.8 (0.4)	3.7 (0.8)	7.4 (1.5)	10.7 (1.6)	5.0 (0.8)	9.3 (1.4)	18.6 (2.8)				
6	3.5 (0.5)	1.6 (0.2)	3.4 (0.4)	6.7 (0.9)	8.6 (1.3)	4.0 (0.6)	7.5 (1.1)	15.0 (2.2)				
7												
8									40.0 (25.2)	289 (182)	1670 (1050)	3260 (2050)
9									30.8 (28.6)	223 (207)	1280 (1190)	2480 (2300)
10												
11									13.7 (13.6)	99 (98)	570 (565)	1080 (1070)
12									9.3 (9.4)	67 (68)	387 (391)	727 (734)
13									8.9 (8.3)	64 (60)	372 (347)	692 (645)
14												
15									9.6 (10.0)	69 (72)	399 (417)	730 (764)
16									14.0 (10.0)	101 (72)	583 (415)	1060 (754)
17									12.2 (5.6)	88 (41)	508 (235)	914 (423)
18												
19									25.5 (15.9)	184 (115)	1060 (662)	1880 (1170)
20												
21									17.8 (13.1)	129 (95)	742 (547)	1290 (956)
22									33.2 (24.2)	240 (175)	1380 (1010)	2400 (1750)
23									23.5 (16.9)	170 (122)	981 (705)	1690 (1210)
24									14.3 (3.0)	103 (21)	596 (123)	1020 (210)
25									29.3 (15.8)	212 (114)	1220 (658)	2070 (1120)
26									31.1 (12.8)	224 (93)	1290 (534)	2390 (985)
27												
28	9.6 (1.2)	4.4 (0.6)	9.2 (1.2)	18.4 (2.4)	6.8 (1.3)	3.2 (0.6)	6.0 (1.2)	12.0 (2.4)				
29	9.5 (1.7)	4.4 (0.8)	9.1 (1.6)	18.3 (3.2)	10.2 (2.3)	4.7 (1.1)	9.0 (2.0)	17.9 (4.0)	23.2 (13.3)	168 (96)	968 (553)	1900 (1090)
30	8.2 (2.0)	3.8 (0.9)	8.0 (1.9)	15.9 (3.8)	9.6 (1.0)	4.5 (0.4)	8.4 (0.8)	16.8 (1.7)	17.7 (10.4)	128 (75)	740 (434)	1430 (837)
Avg	6.3	2.9	6.02	12.1	9.4	4.4	8.21	16.5	20.9	151	871	1570
n	9.0	9	9	9.0	9.0	9	9	9.0	21.0	21	21	21
SD	2.2	1.0	2.10	4.2	1.0	0.5	0.91	1.8	8.5	61.1	353.0	663.0
Min	3.5	1.6	3.36	6.7	6.8	3.2	6.00	12.0	8.9	64	372	692
Max	9.6	4	9.20	18.4	10.7	5.0	9.30	18.6	40.0	289	1670	3260

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for October, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	8.5 (1.4)	4.0 (0.7)	8.2 (1.4)	16.4 (2.7)	9.4 (1.6)	4.4 (0.7)	8.3 (1.4)	16.6 (2.8)	16.3 (8.7)	118 (63)	679 (362)	1420 (758)
2	10.8 (3.6)	5.0 (1.7)	10.4 (3.5)	20.9 (7.0)	10.1 (2.5)	4.7 (1.1)	8.9 (2.2)	17.8 (4.3)	29.6 (20.1)	213 (145)	1230 (836)	2550 (1730)
3	15.4 (2.3)	7.2 (1.1)	14.9 (2.2)	29.8 (4.5)	9.2 (2.0)	4.3 (0.9)	8.1 (1.7)	16.3 (3.4)	13.4 (8.2)	97 (60)	558 (343)	1140 (705)
4	13.4 (2.6)	6.2 (1.2)	12.9 (2.5)	25.9 (5.0)	11.1 (1.6)	5.2 (0.7)	9.8 (1.4)	19.7 (2.8)	11.9 (7.7)	86 (56)	495 (321)	1010 (654)
5	11.2 (1.6)	5.2 (0.8)	10.8 (1.6)	21.7 (3.2)	7.7 (1.3)	3.6 (0.6)	6.7 (1.1)	13.5 (2.3)	19.4 (9.0)	140 (65)	809 (375)	1630 (756)
6	10.3 (0.9)	4.8 (0.4)	10.0 (0.9)	20.0 (1.7)	8.0 (1.9)	3.7 (0.9)	7.1 (1.7)	14.1 (3.4)	15.6 (8.1)	113 (58)	649 (337)	1300 (673)
7	10.1 (1.1)	4.7 (0.5)	9.7 (1.1)	19.5 (2.1)	7.9 (2.1)	3.7 (1.0)	7.0 (1.9)	13.9 (3.7)	16.3 (7.2)	118 (52)	681 (298)	1350 (591)
8	14.4 (1.8)	6.7 (0.9)	14.0 (1.8)	28.0 (3.6)	7.2 (0.7)	3.3 (0.4)	6.3 (0.7)	12.7 (1.3)	18.7 (8.0)	135 (58)	778 (333)	1530 (654)
9	17.5 (2.6)	8.1 (1.2)	16.9 (2.5)	33.9 (5.1)					12.0 (6.6)	86 (47)	498 (273)	969 (531)
10	17.3 (1.5)	8.1 (0.7)	16.8 (1.5)	33.6 (3.0)					8.9 (7.3)	64 (53)	370 (303)	714 (584)
11	15.1 (1.1)	7.0 (0.5)	14.6 (1.1)	29.3 (2.2)					12.8 (10.3)	93 (75)	535 (430)	1020 (821)
12	11.4 (3.7)	5.3 (1.7)	11.1 (3.6)	22.2 (7.2)	4.1 (0.7)	1.9 (0.3)	3.6 (0.6)	7.3 (1.3)	14.8 (9.9)	107 (72)	617 (413)	1170 (782)
13	3.3 (0.7)	1.6 (0.3)	3.2 (0.7)	6.5 (1.4)	3.3 (0.3)	1.5 (0.2)	2.9 (0.3)	5.8 (0.6)	15.0 (10.2)	108 (74)	623 (426)	1170 (800)
14	3.2 (0.6)	1.5 (0.3)	3.1 (0.6)	6.1 (1.2)	2.6 (0.5)	1.2 (0.2)	2.3 (0.4)	4.6 (0.8)	14.8 (10.1)	107 (73)	617 (420)	1150 (784)
15	3.3 (0.6)	1.5 (0.3)	3.2 (0.6)	6.3 (1.2)	5.5 (1.9)	2.6 (0.9)	4.8 (1.7)	9.7 (3.4)	35.5 (26.1)	257 (189)	1480 (1090)	2740 (2010)
16	5.0 (1.3)	2.3 (0.6)	4.8 (1.2)	9.7 (2.5)	7.6 (0.9)	3.5 (0.4)	6.7 (0.8)	13.5 (1.6)	16.4 (13.1)	119 (94)	685 (545)	1260 (999)
17	4.7 (1.3)	2.2 (0.6)	4.5 (1.3)	9.0 (2.5)	7.7 (0.9)	3.6 (0.4)	6.8 (0.8)	13.6 (1.7)	34.5 (21.2)	249 (153)	1440 (884)	2610 (1610)
18									32.0 (18.8)	231 (136)	1330 (783)	2410 (1410)
19					6.5 (1.2)	3.0 (0.5)	5.8 (1.0)	11.5 (2.1)	10.3 (16.6)	75 (120)	431 (691)	842 (1410)
20					5.4 (1.5)	2.5 (0.7)	4.7 (1.3)	9.5 (2.6)	21.0 (32.5)	152 (235)		
21					4.5 (0.6)	2.1 (0.3)	4.0 (0.5)	8.0 (1.1)	10.2 (11.9)	74 (86)		
22					6.5 (0.9)	3.0 (0.4)	5.7 (0.8)	11.4 (1.6)	14.3 (19.6)	103 (142)	595 (818)	1160 (1600)
23					5.7 (2.2)	2.7 (1.0)	5.0 (1.9)	10.1 (3.9)	12.4 (16.8)	89 (121)	516 (698)	995 (1350)
24					6.1 (0.9)	2.8 (0.4)	5.3 (0.8)	10.7 (1.6)	9.1 (10.7)	66 (77)	381 (445)	728 (850)
25												
26					3.8 (0.6)	1.8 (0.3)	3.4 (0.5)	6.8 (1.1)	7.7 (6.9)	56 (50)	322 (288)	604 (540)
27												
28												
29					3.6 (1.5)	1.7 (0.7)	3.1 (1.3)	6.3 (2.7)	20.8 (19.9)	150 (144)	865 (830)	1580 (1520)
30					2.1 (0.8)	1.0 (0.4)	1.9 (0.7)	3.7 (1.5)	16.5 (10.9)	119 (79)	687 (455)	1250 (826)
31					3.4 (1.1)	1.6 (0.5)	3.0 (0.9)	6.1 (1.9)	6.0 (4.1)	44 (30)	252 (170)	453 (307)
Avg	10.3	4.8	9.94	19.9	6.2	2.9	5.47	11.0	16.7	120	697	1340
n	17.0	17	17	17.0	24.0	24	24	24.0	28.0	28	26	26
SD	4.8	2.2	4.64	9.3	2.4	1.1	2.12	4.3	7.6	54.9	323.0	601.0
Min	3.2	1.5	3.06	6.1	2.1	1.0	1.85	3.7	6.0	44	252	453
Max	17.5	8	16.90	33.9	11.1	5.2	9.80	19.7	35.5	257	1480	2740

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for November, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1												
2					5.7 (0.8)	2.6 (0.4)	5.0 (0.7)	10.0 (1.5)	10.2 (8.6)	74 (62)	426 (358)	758 (636)
3					6.3 (1.6)	2.9 (0.7)	5.6 (1.4)	11.1 (2.8)	11.8 (9.8)	86 (71)	493 (410)	870 (722)
4					5.1 (1.1)	2.4 (0.5)	4.5 (1.0)	9.0 (2.0)	12.4 (8.6)	90 (62)	518 (360)	906 (630)
5									17.6 (17.8)	127 (128)	734 (740)	1270 (1280)
6					5.9 (0.5)	2.8 (0.2)	5.2 (0.4)	10.4 (0.9)	13.3 (13.7)	96 (99)	553 (570)	953 (982)
7					33.5 (23.1)	15.6 (10.7)	29.5 (20.3)	59.1 (40.7)	83.4 (118.0)	602 (852)	3470 (4910)	5940 (8400)
8					42.5 (29.9)	19.8 (13.9)	37.4 (26.3)	75.0 (52.7)	89.7 (140.0)	648 (1010)	3740 (5820)	6340 (9870)
9					6.1 (0.9)	2.9 (0.4)	5.4 (0.8)	10.8 (1.5)	8.6 (10.8)	62 (78)	360 (449)	605 (755)
10					3.9 (1.2)	1.8 (0.6)	3.4 (1.1)	6.9 (2.1)	6.4 (7.3)	46 (53)	266 (303)	444 (506)
11					2.0 (0.4)	1.0 (0.2)	1.8 (0.3)	3.6 (0.7)	9.1 (6.5)	66 (47)	380 (269)	634 (449)
12					4.0 (1.0)	1.9 (0.5)	3.5 (0.8)	7.1 (1.7)				
13					4.2 (0.8)	1.9 (0.4)	3.7 (0.7)	7.3 (1.5)	6.4 (7.4)	46 (54)		
14					5.1 (0.9)	2.4 (0.4)	4.5 (0.8)	8.9 (1.6)	6.9 (7.6)	50 (55)		
15					5.8 (1.3)	2.7 (0.6)	5.1 (1.2)	10.3 (2.3)	6.3 (7.8)	46 (56)	264 (323)	518 (635)
16					4.7 (0.9)	2.2 (0.4)	4.2 (0.7)	8.3 (1.5)	6.9 (7.6)	50 (55)	286 (315)	551 (608)
17					5.2 (1.1)	2.4 (0.5)	4.6 (0.9)	9.2 (1.9)	8.3 (9.7)	60 (70)	344 (403)	658 (770)
18					4.5 (0.6)	2.1 (0.3)	4.0 (0.6)	8.0 (1.1)	8.6 (10.6)	62 (77)	358 (443)	677 (839)
19					3.9 (1.0)	1.8 (0.4)	3.4 (0.8)	6.8 (1.7)	13.6 (12.0)	99 (87)	568 (501)	1070 (940)
20					4.5 (0.6)	2.1 (0.3)	3.9 (0.5)	7.8 (1.0)	12.2 (11.7)	88 (85)	510 (487)	948 (906)
21					5.4 (1.6)	2.5 (0.7)	4.7 (1.4)	9.5 (2.8)	10.0 (11.4)	73 (83)	418 (477)	771 (880)
22												
23					6.4 (0.8)	3.0 (0.4)	5.6 (0.7)	11.2 (1.5)	8.9 (11.6)	64 (84)	369 (485)	670 (881)
24					6.0 (0.8)	2.8 (0.4)	5.2 (0.7)	10.5 (1.4)	8.9 (10.8)	64 (78)	372 (449)	669 (809)
25					5.6 (0.4)	2.6 (0.2)	5.0 (0.4)	9.9 (0.7)	8.7 (11.0)	63 (79)	362 (458)	647 (818)
26					6.9 (1.2)	3.2 (0.6)	6.0 (1.1)	12.1 (2.2)	10.4 (13.6)	75 (98)	435 (565)	770 (1000)
27					7.0 (0.7)	3.3 (0.3)	6.1 (0.6)	12.3 (1.2)	9.5 (12.2)	69 (89)	396 (510)	697 (897)
28					6.7 (1.0)	3.1 (0.4)	5.9 (0.8)	11.8 (1.7)	11.5 (12.8)	83 (92)	478 (532)	835 (930)
29												
30					9.1 (1.4)	4.2 (0.7)	8.0 (1.2)	16.0 (2.4)	10.5 (14.0)	76 (101)	437 (581)	753 (1000)
Avg					7.9	3.7	6.96	14.0	15.8	114	689	1210
n	0.0	0	0	0.0	26.0	26	26	26.0	26.0	26	24	24
SD					8.9	4.1	7.81	15.7	20.6	149.0	886.0	1500.0
Min					2.0	1.0	1.80	3.6	6.3	46	264	444
Max					42.5	19.8	37.40	75.0	89.7	648	3740	6340

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for December, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	7.1 (5.7)	3.3 (2.7)	6.8 (5.5)	13.7 (11.1)	12.2 (15.4)	5.7 (7.1)	10.7 (13.5)	21.4 (27.0)	13.3 (14.7)	96 (106)	555 (611)	927 (1020)
2	4.4 (0.6)	2.0 (0.3)	4.2 (0.6)	8.4 (1.1)	4.4 (1.3)	2.0 (0.6)	3.8 (1.1)	7.6 (2.2)	11.2 (11.3)	81 (82)	465 (472)	776 (788)
3	4.8 (0.7)	2.2 (0.3)	4.6 (0.7)	9.2 (1.4)	3.4 (1.1)	1.6 (0.5)	3.0 (1.0)	5.9 (2.0)	11.1 (13.8)	80 (100)	462 (575)	840 (1040)
4	3.7 (0.6)	1.7 (0.3)	3.6 (0.6)	7.1 (1.1)	2.7 (0.7)	1.2 (0.3)	2.3 (0.6)	4.7 (1.3)				
5	2.8 (0.4)	1.3 (0.2)	2.7 (0.4)	5.3 (0.8)	3.9 (0.6)	1.8 (0.3)	3.4 (0.5)	6.8 (1.1)				
6					4.2 (0.9)	2.0 (0.4)	3.7 (0.8)	7.4 (1.6)				
7	2.3 (0.2)	1.1 (0.1)	2.2 (0.2)	4.4 (0.4)	3.1 (0.2)	1.5 (0.1)	2.7 (0.2)	5.5 (0.4)	15.0 (17.7)	109 (128)	627 (739)	1210 (1420)
8												
9												
10	2.6 (0.5)	1.2 (0.3)	2.5 (0.5)	5.0 (1.0)	3.4 (0.5)	1.6 (0.3)	3.0 (0.5)	6.0 (0.9)	33.2 (60.9)	240 (440)	1380 (2540)	2600 (4770)
11	2.1 (0.7)	1.0 (0.3)	2.0 (0.7)	4.1 (1.3)	2.7 (0.8)	1.3 (0.4)	2.4 (0.7)	4.8 (1.5)	10.6 (14.8)	76 (107)	440 (616)	820 (1150)
12	2.1 (0.8)	1.0 (0.4)	2.0 (0.8)	4.1 (1.5)					6.6 (9.7)	48 (70)	276 (403)	510 (744)
13	2.9 (1.2)	1.4 (0.6)	2.8 (1.2)	5.6 (2.3)	3.3 (1.0)	1.5 (0.5)	2.9 (0.9)	5.8 (1.7)	9.9 (16.3)	72 (118)	413 (681)	756 (1250)
14					5.1 (1.3)	2.4 (0.6)	4.6 (1.2)	9.1 (2.4)				
15	3.5 (1.0)	1.6 (0.5)	3.4 (1.0)	6.8 (1.9)	5.6 (1.6)	2.6 (0.7)	4.9 (1.4)	9.9 (2.8)	6.0 (8.8)	44 (64)	251 (367)	452 (661)
16	3.4 (1.0)	1.6 (0.5)	3.3 (0.9)	6.6 (1.9)	6.5 (1.7)	3.0 (0.8)	5.8 (1.5)	11.6 (3.1)	6.3 (8.8)	46 (64)	263 (368)	471 (658)
17					6.5 (1.5)	3.0 (0.7)	5.8 (1.3)	11.6 (2.6)	7.3 (9.8)	53 (71)	303 (406)	538 (721)
18	3.9 (1.3)	1.8 (0.6)	3.9 (1.3)	7.7 (2.6)	6.7 (1.4)	3.1 (0.7)	6.0 (1.3)	11.9 (2.5)	8.6 (11.4)	62 (82)	358 (473)	630 (833)
19	3.3 (1.0)	1.6 (0.5)	3.3 (1.0)	6.6 (2.0)	7.9 (1.8)	3.7 (0.8)	7.1 (1.6)	14.1 (3.2)	7.3 (10.0)	53 (72)	304 (418)	530 (729)
20												
21	3.4 (1.0)	1.6 (0.5)	3.4 (1.0)	6.8 (1.9)	7.3 (1.5)	3.4 (0.7)	6.6 (1.4)	13.1 (2.8)	11.3 (13.2)	82 (95)	470 (551)	808 (947)
22									11.2 (13.1)	81 (95)	465 (547)	793 (933)
23									14.8 (14.8)	107 (107)	619 (618)	1050 (1050)
24	2.9 (0.9)	1.4 (0.4)	2.9 (0.9)	5.9 (1.8)					21.7 (50.1)	156 (362)	903 (2090)	1520 (3510)
25	3.1 (0.6)	1.5 (0.3)	3.1 (0.6)	6.3 (1.1)	6.8 (1.3)	3.2 (0.6)	6.2 (1.2)	12.4 (2.4)	10.8 (13.9)	78 (100)	451 (578)	825 (1060)
26	2.5 (0.9)	1.1 (0.4)	2.5 (0.9)	4.9 (1.8)	6.9 (2.0)	3.2 (0.9)	6.3 (1.9)	12.7 (3.7)	4.1 (7.7)	30 (56)		
27												
28												
29					5.6 (1.6)	2.6 (0.7)	5.2 (1.4)	10.4 (2.9)	3.1 (4.5)	22 (32)	129 (187)	249 (360)
30	3.6 (1.0)	1.7 (0.5)	3.7 (1.0)	7.3 (2.1)	6.4 (2.0)	3.0 (0.9)	5.9 (1.8)	11.8 (3.7)	2.4 (1.0)	18 (7)	101 (41)	193 (79)
31	3.2 (0.7)	1.5 (0.3)	3.3 (0.7)	6.5 (1.3)					4.3 (5.9)	31 (43)	181 (246)	343 (467)
Avg	3.4	1.6	3.30	6.6	5.4	2.5	4.86	9.7	10.5	76	449	802
n	20.0	20	20	20.0	21.0	21	21	21.0	22.0	22	21	21
SD	1.1	0.5	1.05	2.1	2.2	1.0	1.97	4.0	6.6	47.9	276.0	506.0
Min	2.1	1.0	2.04	4.1	2.7	1.2	2.34	4.7	2.4	18	101	193
Max	7.1	3	6.81	13.7	12.2	5.7	10.70	21.4	33.2	240	1380	2600

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for January, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	2.7 (0.4)	1.3 (0.2)	2.7 (0.4)	5.5 (0.9)					6.2 (8.6)	45 (62)	257 (357)	487 (676)
2	3.0 (0.5)	1.4 (0.2)	3.0 (0.5)	6.1 (1.1)	5.1 (0.8)	2.4 (0.4)	4.8 (0.8)	9.6 (1.5)	2.2 (2.3)	16 (17)	92 (96)	172 (180)
3					4.7 (0.8)	2.2 (0.4)	4.4 (0.7)	8.7 (1.5)	2.3 (1.7)	17 (12)	97 (69)	181 (129)
4												
5	3.5 (0.7)	1.6 (0.3)	3.6 (0.7)	7.2 (1.3)	3.5 (0.7)	1.6 (0.3)	3.3 (0.7)	6.6 (1.3)	4.8 (6.5)	35 (47)	201 (273)	369 (499)
6	3.0 (0.7)	1.4 (0.3)	3.1 (0.7)	6.2 (1.4)	3.0 (0.9)	1.4 (0.4)	2.8 (0.9)	5.6 (1.7)	5.5 (6.7)	40 (49)	228 (280)	415 (510)
7	2.7 (0.5)	1.3 (0.2)	2.8 (0.5)	5.6 (1.1)	3.6 (1.0)	1.7 (0.5)	3.4 (1.0)	6.9 (1.9)	7.3 (8.9)	53 (64)	304 (370)	548 (667)
8	2.7 (0.8)	1.3 (0.4)	2.8 (0.8)	5.6 (1.6)	4.8 (1.5)	2.2 (0.7)	4.5 (1.4)	9.0 (2.8)	6.7 (8.6)	48 (62)	279 (358)	499 (640)
9	3.1 (0.8)	1.5 (0.4)	3.2 (0.9)	6.5 (1.7)	4.7 (1.9)	2.2 (0.9)	4.5 (1.8)	9.0 (3.6)	7.3 (10.3)	53 (74)	304 (429)	540 (760)
10												
11	2.7 (0.8)	1.3 (0.4)	2.8 (0.8)	5.7 (1.7)	6.2 (1.3)	2.9 (0.6)	5.9 (1.2)	11.8 (2.4)	11.7 (15.6)	84 (113)	487 (650)	850 (1130)
12	3.1 (1.0)	1.5 (0.5)	3.3 (1.0)	6.5 (2.1)	6.4 (1.7)	3.0 (0.8)	6.1 (1.6)	12.3 (3.2)	15.0 (18.6)	108 (135)	624 (777)	1080 (1350)
13	2.9 (0.8)	1.4 (0.4)	3.1 (0.8)	6.1 (1.6)	7.2 (1.7)	3.4 (0.8)	6.9 (1.6)	13.7 (3.2)	14.9 (18.3)	107 (132)	619 (762)	1070 (1310)
14												
15					6.0 (1.6)	2.8 (0.8)	5.8 (1.6)	11.5 (3.1)	17.1 (23.7)	123 (171)	711 (987)	1210 (1670)
16					5.5 (1.0)	2.5 (0.5)	5.2 (1.0)	10.5 (1.9)	16.2 (23.5)	117 (170)	674 (981)	1220 (1770)
17	2.5 (0.4)	1.2 (0.2)	2.6 (0.4)	5.3 (0.9)					9.4 (14.7)	68 (106)		
18	3.0 (0.6)	1.4 (0.3)	3.2 (0.6)	6.4 (1.2)								
19	3.0 (0.5)	1.4 (0.2)	3.2 (0.5)	6.3 (1.0)								
20	3.0 (0.3)	1.4 (0.1)	3.2 (0.3)	6.4 (0.7)	5.1 (2.0)	2.4 (0.9)	4.9 (1.9)	9.9 (3.8)				
21	2.9 (0.4)	1.4 (0.2)	3.1 (0.4)	6.2 (0.8)	4.3 (1.5)	2.0 (0.7)	4.1 (1.5)	8.2 (3.0)				
22	2.5 (0.5)	1.1 (0.3)	2.6 (0.6)	5.2 (1.1)					4.6 (11.4)	33 (82)	190 (474)	361 (899)
23	2.9 (0.5)	1.4 (0.2)	3.1 (0.5)	6.2 (1.0)					3.7 (6.8)	27 (49)	155 (284)	292 (534)
24									3.4 (6.0)	25 (43)	142 (249)	266 (464)
25									3.1 (5.3)	23 (38)	130 (219)	240 (405)
26	3.1 (0.9)	1.5 (0.4)	3.3 (0.9)	6.7 (1.9)	3.5 (2.0)	1.6 (0.9)	3.4 (1.9)	6.8 (3.9)	6.1 (10.4)	44 (75)	255 (434)	468 (797)
27	3.2 (0.7)	1.5 (0.3)	3.4 (0.8)	6.8 (1.6)	2.6 (0.7)	1.2 (0.3)	2.5 (0.7)	5.0 (1.4)	4.8 (7.0)	35 (51)	201 (292)	366 (532)
28	3.5 (1.4)	1.7 (0.6)	3.8 (1.5)	7.6 (3.0)	1.4 (0.3)	0.6 (0.1)	1.3 (0.3)	2.7 (0.6)	7.2 (7.7)	52 (55)	300 (319)	542 (575)
29												
30	3.5 (0.4)	1.6 (0.2)	3.8 (0.5)	7.6 (0.9)					7.8 (14.8)	56 (107)	325 (615)	577 (1090)
31	3.0 (0.4)	1.4 (0.2)	3.2 (0.5)	6.4 (0.9)	4.5 (1.1)	2.1 (0.5)	4.4 (1.0)	8.9 (2.1)	4.8 (16.0)	35 (116)	199 (668)	351 (1180)
Avg	3.0	1.4	3.13	6.3	4.6	2.1	4.34	8.7	7.5	54	308	550
n	22.0	22	22	22.0	18.0	18	18	18.0	23.0	23	22	22
SD	0.3	0.1	0.32	0.6	1.4	0.7	1.35	2.7	4.4	31.6	186.0	317.0
Min	2.5	1.1	2.61	5.2	1.4	0.6	1.34	2.7	2.2	16	92	172
Max	3.5	2	3.81	7.6	7.2	3.4	6.86	13.7	17.1	123	711	1220

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for February, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	3.2 (0.6)	1.5 (0.3)	3.5 (0.6)	7.0 (1.2)	3.9 (1.7)	1.8 (0.8)	3.9 (1.7)	7.7 (3.4)	5.1 (8.3)	37 (60)	212 (347)	373 (611)
2	3.4 (0.8)	1.6 (0.4)	3.7 (0.9)	7.4 (1.8)	3.2 (0.6)	1.5 (0.3)	3.2 (0.6)	6.4 (1.1)	6.7 (11.5)	49 (83)	280 (479)	495 (847)
3	3.5 (0.7)	1.6 (0.3)	3.8 (0.8)	7.7 (1.6)	4.0 (0.8)	1.9 (0.4)	3.9 (0.8)	7.9 (1.5)	5.7 (10.1)	41 (73)	237 (421)	425 (755)
4	3.1 (0.5)	1.4 (0.2)	3.4 (0.6)	6.7 (1.1)	4.5 (1.9)	2.1 (0.9)	4.5 (1.9)	8.9 (3.8)	7.9 (14.2)	57 (102)	330 (591)	601 (1080)
5	3.3 (0.6)	1.6 (0.3)	3.6 (0.6)	7.3 (1.3)					10.4 (15.8)	75 (114)	432 (659)	790 (1210)
6	2.8 (0.7)	1.3 (0.3)	3.1 (0.8)	6.2 (1.6)					10.7 (18.6)	78 (135)	447 (777)	820 (1420)
7	2.8 (0.7)	1.3 (0.3)	3.1 (0.7)	6.2 (1.5)	5.5 (1.5)	2.6 (0.7)	5.5 (1.5)	11.1 (2.9)	6.9 (2.0)	50 (14)		
8	3.2 (0.8)	1.5 (0.4)	3.5 (0.9)	7.0 (1.7)	4.6 (1.4)	2.1 (0.6)	4.6 (1.4)	9.1 (2.8)	3.8 (1.6)	28 (12)		
9									5.3 (7.3)	38 (53)		
10	3.3 (0.3)	1.5 (0.2)	3.6 (0.4)	7.3 (0.7)					6.0 (6.5)	44 (47)	252 (270)	495 (531)
11	3.5 (0.3)	1.6 (0.2)	3.8 (0.4)	7.6 (0.7)	4.4 (1.4)	2.1 (0.6)	4.4 (1.4)	8.8 (2.8)	4.5 (2.9)	32 (21)	186 (121)	359 (234)
12	3.4 (0.5)	1.6 (0.2)	3.7 (0.6)	7.5 (1.1)					3.6 (5.5)	26 (40)	150 (228)	286 (436)
13	3.7 (0.6)	1.7 (0.3)	4.0 (0.6)	8.1 (1.2)	3.7 (1.2)	1.7 (0.6)	3.7 (1.2)	7.4 (2.4)	3.8 (5.8)	27 (42)	156 (240)	297 (455)
14												
15	3.5 (0.6)	1.6 (0.3)	3.8 (0.7)	7.5 (1.4)					4.4 (7.8)	32 (57)	183 (326)	342 (608)
16	3.7 (0.7)	1.7 (0.3)	4.0 (0.8)	8.1 (1.6)	4.0 (1.3)	1.9 (0.6)	3.9 (1.3)	7.9 (2.7)	5.1 (7.3)	37 (53)	210 (304)	390 (564)
17	3.5 (0.8)	1.6 (0.4)	3.8 (0.9)	7.7 (1.8)					8.5 (10.6)	61 (77)	353 (444)	649 (815)
18									34.5 (52.6)	249 (380)	1440 (2190)	2620 (4000)
19									4.2 (7.6)	30 (55)	174 (318)	314 (576)
20									2.1 (3.3)	15 (24)	87 (136)	155 (243)
21									2.2 (3.3)	16 (24)	91 (138)	161 (245)
22					5.9 (1.0)	2.7 (0.5)	5.7 (1.0)	11.5 (1.9)	4.3 (6.7)	31 (48)	180 (279)	318 (493)
23												
24												
25												
26												
27												
28												
29												
Avg	3.3	1.6	3.63	7.3	4.4	2.0	4.33	8.7	6.9	50	300	550
n	15.0	15	15	15.0	10.0	10	10	10.0	21.0	21	18	18
SD	0.3	0.1	0.28	0.6	0.8	0.4	0.76	1.5	6.6	47.5	294.0	535.0
Min	2.8	1.3	3.08	6.2	3.2	1.5	3.18	6.4	2.1	15	87	155
Max	3.7	2	4.03	8.1	5.9	2.7	5.74	11.5	34.5	249	1440	2620

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for March, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1					4.3 (0.9)	2.0 (0.4)	4.1 (0.9)	8.2 (1.8)				
2					3.5 (1.3)	1.6 (0.6)	3.4 (1.3)	6.7 (2.5)				
3												
4					5.8 (1.4)	2.7 (0.6)	5.6 (1.3)	11.2 (2.6)				
5									10.6 (14.7)	77 (106)	442 (614)	832 (1150)
6									9.7 (15.2)	70 (109)	405 (631)	755 (1180)
7									5.4 (8.9)	39 (64)	225 (372)	416 (687)
8					5.0 (1.2)	2.3 (0.6)	4.8 (1.2)	9.6 (2.3)	6.0 (8.6)	43 (62)	249 (357)	456 (654)
9					4.6 (1.3)	2.2 (0.6)	4.4 (1.3)	8.8 (2.5)	7.8 (9.9)	56 (72)	323 (414)	586 (751)
10					5.2 (1.0)	2.4 (0.5)	5.0 (0.9)	9.9 (1.9)	6.7 (8.6)	49 (62)	281 (358)	506 (644)
11					5.4 (1.8)	2.5 (0.8)	5.1 (1.7)	10.3 (3.4)	7.5 (8.1)	54 (59)	312 (339)	557 (604)
12					7.4 (5.8)	3.4 (2.7)	7.0 (5.5)	14.1 (11.0)	9.9 (10.8)	72 (78)	413 (451)	730 (797)
13					8.1 (2.0)	3.8 (0.9)	7.7 (1.9)	15.4 (3.8)	10.3 (9.7)	74 (70)	427 (404)	749 (709)
14									12.5 (11.9)	90 (86)	520 (494)	906 (860)
15									12.9 (13.6)	94 (98)	539 (567)	933 (982)
16									13.8 (15.0)	100 (109)	577 (626)	992 (1080)
17									16.4 (18.7)	119 (135)	684 (779)	1170 (1330)
18					10.3 (2.0)	4.8 (0.9)	9.7 (1.9)	19.5 (3.8)	17.7 (16.2)	128 (117)	738 (676)	1250 (1150)
19					12.0 (5.4)	5.6 (2.5)	11.4 (5.1)	22.9 (10.2)	22.1 (18.3)	160 (132)	921 (761)	1550 (1280)
20									24.6 (18.0)	178 (130)	1020 (751)	1890 (1390)
21					5.2 (3.5)	2.4 (1.6)	4.9 (3.3)	9.9 (6.6)				
22					4.5 (1.1)	2.1 (0.5)	4.3 (1.1)	8.6 (2.1)	3.2 (5.1)	23 (37)		
23									3.9 (5.8)	28 (42)	163 (241)	318 (470)
24					3.6 (1.1)	1.7 (0.5)	3.4 (1.1)	6.8 (2.1)	4.7 (5.4)	34 (39)	194 (226)	372 (434)
25					4.4 (1.1)	2.0 (0.5)	4.2 (1.1)	8.4 (2.1)	4.0 (4.5)	29 (33)	165 (188)	314 (358)
26					4.5 (1.6)	2.1 (0.8)	4.3 (1.6)	8.6 (3.1)	5.8 (6.3)	42 (46)	243 (262)	457 (494)
27					3.9 (1.2)	1.8 (0.5)	3.7 (1.1)	7.4 (2.2)	5.0 (5.4)	36 (39)	206 (225)	385 (420)
28					3.4 (1.1)	1.6 (0.5)	3.3 (1.1)	6.6 (2.1)	5.4 (6.8)	39 (49)	227 (284)	419 (526)
29					2.9 (0.6)	1.4 (0.3)	2.8 (0.6)	5.6 (1.2)	6.8 (6.7)	49 (48)	283 (278)	518 (510)
30	7.8 (3.9)	3.6 (1.8)	8.2 (4.1)	16.4 (8.1)	4.1 (1.0)	1.9 (0.5)	3.9 (0.9)	7.7 (1.8)	8.2 (6.5)	59 (47)	340 (273)	617 (495)
31	5.2 (1.6)	2.4 (0.7)	5.4 (1.6)	10.8 (3.3)	4.0 (0.9)	1.9 (0.4)	3.8 (0.8)	7.6 (1.6)	8.3 (6.8)	60 (49)	347 (285)	625 (512)
Avg	6.5	3.0	6.78	13.6	5.3	2.5	5.08	10.2	9.6	69	410	732
n	2.0	2	2	2.0	21.0	21	21	21.0	26.0	26	25	25
SD	1.3	0.6	1.40	2.8	2.3	1.1	2.14	4.3	5.5	39.4	225.0	386.0
Min	5.2	2.4	5.38	10.8	2.9	1.4	2.77	5.6	3.2	23	163	314
Max	7.8	4	8.18	16.4	12.0	5.6	11.40	22.9	24.6	178	1020	1890

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for April, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	6.6 (1.1)	3.1 (0.5)	6.9 (1.1)	13.7 (2.3)					11.9 (13.7)	86 (99)	494 (569)	880 (1010)
2	8.8 (3.4)	4.1 (1.6)	9.1 (3.6)	18.3 (7.2)					6.4 (6.7)	47 (48)	268 (278)	474 (491)
3	8.3 (2.7)	3.9 (1.2)	8.7 (2.8)	17.5 (5.6)					5.9 (6.3)	42 (45)	245 (262)	429 (458)
4	14.3 (7.0)	6.7 (3.3)	15.0 (7.4)	30.0 (14.7)					16.0 (31.7)	116 (229)	668 (1320)	1160 (2300)
5	15.6 (6.8)	7.3 (3.2)	16.3 (7.1)	32.8 (14.2)					5.2 (5.2)	38 (37)	218 (215)	376 (371)
6	14.6 (4.5)	6.8 (2.1)	15.3 (4.7)	30.7 (9.4)	3.9 (0.8)	1.8 (0.4)	3.7 (0.7)	7.4 (1.4)	9.7 (6.3)	70 (46)	405 (264)	695 (454)
7									15.0 (18.8)	109 (136)	627 (782)	1070 (1330)
8	7.6 (1.4)	3.5 (0.6)	7.9 (1.5)	15.9 (2.9)	4.3 (1.1)	2.0 (0.5)	4.1 (1.1)	8.2 (2.1)	5.7 (5.6)	41 (40)	238 (232)	402 (392)
9	8.0 (2.9)	3.7 (1.3)	8.3 (3.0)	16.7 (6.0)	4.8 (1.0)	2.2 (0.5)	4.6 (1.0)	9.1 (2.0)	8.8 (7.2)	63 (52)	366 (298)	613 (499)
10					2.4 (2.1)	1.1 (1.0)	2.3 (2.0)	4.6 (3.9)	12.5 (10.6)	90 (77)	520 (443)	865 (736)
11	7.8 (2.9)	3.6 (1.3)	8.2 (3.0)	16.3 (6.0)					11.7 (8.8)	85 (64)	489 (366)	807 (605)
12	6.6 (1.2)	3.1 (0.6)	6.9 (1.3)	13.8 (2.6)					11.0 (10.7)	80 (77)	460 (446)	755 (731)
13					4.9 (1.0)	2.3 (0.4)	4.6 (0.9)	9.3 (1.8)	11.4 (11.1)	82 (81)	475 (464)	774 (756)
14					5.0 (0.7)	2.3 (0.3)	4.8 (0.7)	9.6 (1.4)	14.1 (12.0)	102 (87)	587 (499)	950 (807)
15					4.1 (1.7)	1.9 (0.8)	3.9 (1.6)	7.9 (3.2)	13.3 (10.6)	96 (77)	553 (442)	888 (709)
16	14.5 (3.2)	6.8 (1.5)	15.2 (3.4)	30.4 (6.7)	5.1 (1.2)	2.4 (0.6)	4.9 (1.1)	9.8 (2.3)	9.3 (8.7)	67 (63)	386 (361)	688 (641)
17	12.7 (2.7)	5.9 (1.3)	13.2 (2.8)	26.4 (5.6)	7.8 (1.4)	3.6 (0.7)	7.4 (1.3)	14.9 (2.7)				
18	13.7 (2.2)	6.4 (1.0)	14.3 (2.3)	28.6 (4.7)	9.1 (1.3)	4.2 (0.6)	8.6 (1.2)	17.3 (2.5)				
19	14.2 (3.5)	6.6 (1.6)	14.8 (3.6)	29.6 (7.2)	11.6 (2.0)	5.4 (0.9)	11.0 (1.9)	22.1 (3.8)	7.0 (6.9)	51 (50)	292 (288)	560 (552)
20	14.9 (2.6)	6.9 (1.2)	15.4 (2.7)	30.9 (5.5)	13.2 (3.7)	6.1 (1.7)	12.5 (3.5)	25.0 (6.9)	10.8 (8.8)	78 (63)	450 (365)	866 (701)
21	13.4 (2.3)	6.2 (1.1)	13.9 (2.4)	27.9 (4.8)	13.3 (4.6)	6.2 (2.2)	12.6 (4.4)	25.2 (8.8)	12.3 (7.0)	89 (51)	513 (291)	977 (554)
22	16.5 (3.1)	7.7 (1.4)	17.2 (3.2)	34.4 (6.4)					15.5 (11.8)	112 (85)	646 (493)	1220 (930)
23	17.3 (5.4)	8.0 (2.5)	17.9 (5.6)	35.9 (11.2)					18.1 (10.6)	131 (77)	755 (441)	1410 (825)
24	18.1 (6.0)	8.4 (2.8)	18.8 (6.2)	37.6 (12.4)	4.0 (0.7)	1.9 (0.3)	3.8 (0.7)	7.6 (1.3)	26.5 (15.1)	191 (109)	1100 (630)	2040 (1170)
25									29.0 (19.8)	210 (143)	1210 (826)	2220 (1520)
26												
27												
28												
29												
30												
Avg	12.3	5.7	12.80	25.7	6.7	3.1	6.33	12.7	12.5	90	520	918
n	19.0	19	19	19.0	14.0	14	14	14.0	23.0	23	23	23
SD	3.8	1.8	3.91	7.8	3.5	1.6	3.34	6.7	5.8	42.1	243.0	456.0
Min	6.6	3.1	6.85	13.7	2.4	1.1	2.28	4.6	5.2	38	218	376
Max	18.1	8	18.80	37.6	13.3	6.2	12.60	25.2	29.0	210	1210	2220

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for May, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16	17.7 (9.6)	8.2 (4.5)	18.1 (9.8)	36.2 (19.6)	3.0 (1.1)	1.4 (0.5)	2.8 (1.0)	5.6 (2.0)	32.9 (26.7)	238 (193)	1370 (1110)	2650 (2150)
17	22.5 (4.2)	10.5 (2.0)	22.9 (4.3)	45.9 (8.6)	3.3 (2.0)	1.6 (0.9)	3.1 (1.8)	6.2 (3.6)	29.3 (20.8)	211 (150)	1220 (865)	2330 (1650)
18	16.8 (6.7)	7.8 (3.1)	17.1 (6.8)	34.3 (13.7)	2.8 (1.3)	1.3 (0.6)	2.6 (1.2)	5.1 (2.5)	24.2 (20.9)	175 (151)	1010 (870)	1910 (1650)
19	16.7 (8.0)	7.8 (3.7)	17.0 (8.2)	34.1 (16.3)	2.5 (1.2)	1.2 (0.6)	2.3 (1.2)	4.6 (2.3)				
20	15.8 (6.8)	7.3 (3.2)	16.0 (6.9)	32.1 (13.8)	3.0 (1.4)	1.4 (0.7)	2.8 (1.3)	5.6 (2.6)	26.0 (22.7)	188 (164)	1080 (945)	2020 (1760)
21	18.7 (6.4)	8.7 (3.0)	19.0 (6.5)	38.1 (13.1)	2.7 (0.8)	1.2 (0.4)	2.5 (0.8)	4.9 (1.6)	52.2 (51.7)	377 (373)	2170 (2150)	4020 (3980)
22	16.1 (4.1)	7.5 (1.9)	16.3 (4.2)	32.6 (8.3)								
23												
24												
25	20.6 (4.8)	9.6 (2.3)	20.8 (4.9)	41.7 (9.8)	4.4 (1.3)	2.0 (0.6)	4.0 (1.2)	8.0 (2.3)	46.0 (39.6)	333 (286)	1920 (1650)	3430 (2950)
26												
27												
28												
29	14.8 (4.4)	6.9 (2.1)	14.9 (4.5)	29.8 (9.0)								
30	15.2 (3.6)	7.1 (1.7)	15.2 (3.7)	30.5 (7.3)	11.3 (1.6)	5.3 (0.7)	10.3 (1.5)	20.7 (2.9)				
31	13.6 (2.0)	6.3 (0.9)	13.7 (2.0)	27.4 (3.9)	11.6 (2.7)	5.4 (1.2)	10.6 (2.4)	21.3 (4.9)				
Avg	17.1	8.0	17.40	34.8	5.0	2.3	4.55	9.1	35.1	254	1460	2730
n	11.0	11	11	11.0	9.0	9	9	9.0	6.0	6	6	6
SD	2.5	1.2	2.59	5.2	3.5	1.6	3.21	6.4	10.4	75.2	434.0	761.0
Min	13.6	6.3	13.70	27.4	2.5	1.2	2.29	4.6	24.2	175	1010	1910
Max	22.5	11	22.90	45.9	11.6	5.4	10.60	21.3	52.2	377	2170	4020

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for June, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	12.4 (2.2)	5.8 (1.0)	12.4 (2.2)	24.8 (4.4)	12.8 (1.8)	6.0 (0.8)	11.7 (1.6)	23.5 (3.2)				
2	11.0 (1.6)	5.1 (0.7)	11.0 (1.6)	22.0 (3.2)	9.5 (1.5)	4.4 (0.7)	8.6 (1.4)	17.3 (2.7)				
3	11.1 (2.5)	5.2 (1.2)	11.2 (2.5)	22.4 (5.0)	9.5 (2.7)	4.4 (1.3)	8.7 (2.5)	17.3 (4.9)				
4	12.0 (1.6)	5.6 (0.7)	12.0 (1.6)	24.0 (3.1)	10.9 (4.0)	5.1 (1.9)	9.9 (3.7)	19.9 (7.4)				
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
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25												
26												
27												
28												
29												
30												
Avg	11.6	5.4	11.60	23.3	10.7	5.0	9.73	19.5				
n	4.0	4	4	4.0	4.0	4	4	4.0	0.0	0	0	0
SD	0.6	0.3	0.58	1.2	1.4	0.6	1.26	2.5				
Min	11.0	5.1	11.00	22.0	9.5	4.4	8.62	17.3				
Max	12.4	6	12.40	24.8	12.8	6.0	11.70	23.5				

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for July, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	kg·d^{-1}	g·d^{-1}m^{-2}	g·d^{-1}hd^{-1}	g·d^{-1}AU^{-1}	kg·d^{-1}	g·d^{-1}m^{-2}	g·d^{-1}hd^{-1}	g·d^{-1}AU^{-1}	g·d^{-1}	mg·d^{-1}m^{-2}	mg·d^{-1}hd^{-1}	mg·d^{-1}AU^{-1}
1												
2												
3												
4					4.2 (0.7)	1.9 (0.4)	3.7 (0.7)	7.4 (1.3)				
5					3.4 (0.4)	1.6 (0.2)	3.0 (0.4)	6.0 (0.8)				
6					2.3 (0.6)	1.1 (0.3)	2.1 (0.6)	4.2 (1.1)				
7					2.4 (0.4)	1.1 (0.2)	2.1 (0.4)	4.3 (0.8)				
8					4.9 (1.6)	2.3 (0.8)	4.4 (1.4)	8.8 (2.9)				
9					8.4 (1.0)	3.9 (0.5)	7.5 (0.9)	15.0 (1.8)				
10												
11	13.5 (1.5)	6.3 (0.7)	13.2 (1.5)	26.4 (3.0)	11.5 (1.4)	5.3 (0.7)	10.2 (1.3)	20.4 (2.5)	36.0 (16.9)	260 (122)	1500 (703)	2600 (1220)
12	18.4 (3.7)	8.6 (1.7)	18.0 (3.6)	36.1 (7.2)	10.2 (2.5)	4.8 (1.2)	9.1 (2.3)	18.3 (4.5)	117.0 (48.2)	842 (348)	4860 (2010)	8370 (3460)
13	15.5 (3.1)	7.2 (1.4)	15.1 (3.0)	30.2 (6.0)	9.2 (3.7)	4.3 (1.7)	8.1 (3.3)	16.3 (6.6)	98.2 (52.8)	709 (382)	4090 (2200)	7000 (3770)
14	13.5 (1.8)	6.3 (0.8)	13.1 (1.7)	26.3 (3.4)	9.2 (1.8)	4.3 (0.9)	8.2 (1.6)	16.4 (3.3)	83.6 (61.1)	604 (441)	3480 (2550)	5920 (4320)
15	12.0 (1.9)	5.6 (0.9)	11.7 (1.8)	23.5 (3.6)	9.2 (0.9)	4.3 (0.4)	8.2 (0.8)	16.4 (1.6)	80.6 (64.4)	582 (465)	3360 (2680)	5660 (4530)
16	11.8 (1.5)	5.5 (0.7)	11.5 (1.5)	23.0 (3.0)	8.5 (1.0)	4.0 (0.5)	7.6 (0.9)	15.2 (1.9)	50.3 (50.2)	363 (362)	2090 (2090)	3700 (3640)
17	15.2 (2.4)	7.1 (1.1)	14.8 (2.4)	29.7 (4.8)	7.7 (0.8)	3.6 (0.4)	6.8 (0.7)	13.6 (1.5)	21.7 (8.8)	157 (64)		
18	14.7 (2.3)	6.9 (1.1)	14.3 (2.2)	28.7 (4.5)	8.4 (1.9)	3.9 (0.9)	7.5 (1.6)	14.9 (3.3)	12.7 (8.7)	92 (63)		
19	15.4 (2.3)	7.2 (1.1)	15.0 (2.2)	30.1 (4.4)	7.9 (1.2)	3.7 (0.5)	7.0 (1.0)	14.0 (2.1)	16.2 (4.9)	117 (36)	676 (205)	1100 (334)
20	12.9 (2.3)	6.0 (1.1)	12.5 (2.3)	25.0 (4.5)	8.3 (1.3)	3.9 (0.6)	7.4 (1.1)	14.8 (2.3)	9.1 (7.4)	66 (53)	378 (308)	671 (547)
21	14.7 (2.1)	6.9 (1.0)	14.3 (2.1)	28.7 (4.2)	6.7 (1.5)	3.1 (0.7)	6.0 (1.3)	12.0 (2.6)	15.7 (9.1)	113 (66)	655 (379)	1250 (726)
22	14.4 (2.2)	6.7 (1.0)	14.0 (2.1)	28.0 (4.2)	6.5 (0.8)	3.0 (0.4)	5.8 (0.7)	11.5 (1.4)	18.2 (18.2)	131 (131)	758 (756)	1440 (1440)
23	14.5 (1.6)	6.7 (0.8)	14.0 (1.6)	28.1 (3.2)	5.6 (0.8)	2.6 (0.4)	4.9 (0.7)	9.9 (1.4)	28.1 (18.1)	203 (131)	1170 (754)	2210 (1420)
24												
25												
26	16.7 (1.6)	7.8 (0.8)	16.2 (1.6)	32.4 (3.1)	6.8 (1.1)	3.2 (0.5)	6.0 (1.0)	12.0 (1.9)	22.2 (15.7)	160 (114)	925 (656)	1700 (1210)
27	13.8 (2.2)	6.4 (1.0)	13.4 (2.1)	26.8 (4.2)	5.5 (1.0)	2.5 (0.5)	4.8 (0.9)	9.7 (1.8)	30.8 (18.0)	223 (130)	1280 (752)	2340 (1370)
28	13.6 (1.4)	6.3 (0.6)	13.1 (1.3)	26.3 (2.7)	6.4 (0.9)	3.0 (0.4)	5.7 (0.8)	11.4 (1.5)	20.0 (13.3)	145 (96)	835 (554)	1510 (1000)
29									13.5 (3.9)	98 (28)	563 (161)	1010 (289)
30	11.3 (1.0)	5.3 (0.5)	10.9 (1.0)	21.9 (2.0)	9.6 (1.6)	4.5 (0.7)	8.5 (1.4)	17.0 (2.8)	40.9 (34.9)	295 (252)	1700 (1460)	3030 (2590)
31					11.8 (4.1)	5.5 (1.9)	10.4 (3.6)	20.9 (7.3)				
Avg	14.2	6.6	13.80	27.7	7.3	3.4	6.45	12.9	39.7	287	1770	3100
n	17.0	17	17	17.0	24.0	24	24	24.0	18.0	18	16	16
SD	1.7	0.8	1.70	3.4	2.6	1.2	2.26	4.5	31.8	230.0	1360.0	2300.0
Min	11.3	5.3	10.90	21.9	2.3	1.1	2.08	4.2	9.1	66	378	671
Max	18.4	9	18.00	36.1	11.8	5.5	10.40	20.9	117.0	842	4860	8370

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for August, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	8.9 (1.5)	4.1 (0.7)	8.6 (1.5)	17.2 (2.9)	13.8 (3.1)	6.4 (1.5)	12.2 (2.8)	24.4 (5.5)	160.0 (173.0)	1150 (1250)	6650 (7230)	11700 (12700)
2	9.7 (1.6)	4.5 (0.7)	9.4 (1.5)	18.9 (3.0)	13.3 (2.4)	6.2 (1.1)	11.7 (2.1)	23.4 (4.2)	284.0 (224.0)	2050 (1620)	11800 (9320)	20600 (16200)
3	7.1 (2.6)	3.3 (1.2)	6.8 (2.5)	13.7 (5.0)	8.9 (1.2)	4.2 (0.6)	7.9 (1.1)	15.8 (2.1)	188.0 (209.0)	1360 (1510)	7820 (8700)	13500 (15000)
4	7.3 (0.9)	3.4 (0.4)	7.0 (0.9)	14.1 (1.8)	6.6 (1.4)	3.1 (0.7)	5.9 (1.3)	11.7 (2.5)	116.0 (50.1)	839 (362)	4840 (2090)	8310 (3580)
5	8.8 (1.4)	4.1 (0.7)	8.5 (1.4)	16.9 (2.8)	5.5 (0.8)	2.6 (0.4)	4.8 (0.7)	9.7 (1.4)				
6	9.1 (1.6)	4.2 (0.8)	8.8 (1.6)	17.6 (3.2)	5.8 (2.3)	2.7 (1.1)	5.1 (2.0)	10.2 (4.0)				
7												
8												
9	12.8 (1.2)	5.9 (0.6)	12.3 (1.2)	24.6 (2.3)	13.8 (2.6)	6.4 (1.2)	12.1 (2.3)	24.3 (4.6)	145.0 (56.8)	1050 (410)	6050 (2370)	11800 (4560)
10	12.1 (1.8)	5.6 (0.8)	11.6 (1.7)	23.3 (3.5)	10.3 (2.3)	4.8 (1.1)	9.0 (2.0)	18.1 (4.0)	164.0 (91.2)	1180 (658)	6830 (3800)	13200 (7320)
11	15.6 (4.0)	7.2 (1.9)	15.0 (3.9)	30.0 (7.8)	8.9 (3.3)	4.1 (1.5)	7.8 (2.9)	15.6 (5.7)	165.0 (97.5)	1190 (704)	6870 (4060)	13100 (7760)
12									167.0 (97.0)	1200 (700)	6940 (4040)	13100 (7650)
13	23.0 (5.3)	10.7 (2.4)	22.2 (5.1)	44.5 (10.1)	8.2 (3.3)	3.8 (1.5)	7.2 (2.9)	14.4 (5.8)	197.0 (102.0)	1420 (736)	8220 (4250)	15400 (7970)
14	25.7 (4.1)	12.0 (1.9)	24.8 (4.0)	49.8 (8.0)	6.4 (1.2)	3.0 (0.6)	5.7 (1.1)	11.3 (2.1)	222.0 (123.0)	1600 (891)	9240 (5140)	17200 (9560)
15	24.9 (4.0)	11.6 (1.9)	24.0 (3.9)	48.1 (7.8)	7.3 (2.1)	3.4 (1.0)	6.4 (1.9)	12.8 (3.7)	277.0 (148.0)	2000 (1070)	11500 (6160)	21200 (11300)
16	24.0 (3.3)	11.2 (1.5)	23.2 (3.2)	46.5 (6.4)	5.9 (1.8)	2.8 (0.9)	5.2 (1.6)	10.4 (3.2)	268.0 (129.0)	1940 (934)	11200 (5390)	20400 (9850)
17	22.7 (2.6)	10.6 (1.2)	22.0 (2.5)	44.0 (5.1)	6.0 (1.5)	2.8 (0.7)	5.3 (1.3)	10.6 (2.6)	333.0 (132.0)	2400 (954)	13900 (5510)	25100 (9980)
18	20.1 (1.8)	9.4 (0.8)	19.4 (1.7)	38.9 (3.4)	6.3 (1.1)	2.9 (0.5)	5.6 (0.9)	11.2 (1.9)	399.0 (145.0)	2880 (1040)	16600 (6030)	29800 (10800)
19	17.8 (3.0)	8.3 (1.4)	17.2 (2.9)	34.5 (5.8)	7.1 (0.7)	3.3 (0.3)	6.2 (0.6)	12.5 (1.2)	414.0 (181.0)	2990 (1310)	17200 (7530)	30700 (13400)
20	16.3 (2.7)	7.6 (1.2)	15.7 (2.6)	31.5 (5.1)	9.6 (2.1)	4.4 (1.0)	8.4 (1.8)	16.9 (3.7)	487.0 (240.0)	3520 (1740)	20300 (10000)	35900 (17700)
21												
22												
23												
24	17.9 (2.1)	8.3 (1.0)	17.3 (2.1)	34.7 (4.1)	10.7 (3.8)	5.0 (1.8)	9.5 (3.3)	19.0 (6.7)	412.0 (225.0)	2980 (1630)	17200 (9390)	29400 (16100)
25	18.7 (3.2)	8.7 (1.5)	18.1 (3.1)	36.2 (6.3)	9.8 (3.0)	4.5 (1.4)	8.6 (2.6)	17.2 (5.3)	325.0 (196.0)	2350 (1420)	13500 (8170)	23000 (13900)
26	16.7 (2.9)	7.8 (1.4)	16.2 (2.8)	32.5 (5.7)	11.3 (4.3)	5.3 (2.0)	10.0 (3.8)	20.0 (7.6)	380.0 (225.0)	2740 (1620)	15800 (9370)	26700 (15800)
27									486.0 (902.0)	3510 (6520)	20200 (37600)	35600 (66600)
28	15.7 (2.0)	7.3 (0.9)	15.2 (1.9)	30.4 (3.9)	9.8 (1.3)	4.6 (0.6)	8.7 (1.1)	17.4 (2.2)	80.8 (99.5)	583 (719)		
29												
30	21.5 (3.5)	10.0 (1.6)	20.9 (3.4)	41.8 (6.8)	9.9 (1.1)	4.6 (0.5)	8.8 (0.9)	17.6 (1.9)	103.0 (55.9)	742 (404)	4280 (2330)	8260 (4500)
31	18.2 (2.8)	8.5 (1.3)	17.7 (2.7)	35.4 (5.5)	9.1 (1.3)	4.3 (0.6)	8.1 (1.1)	16.2 (2.3)	54.1 (50.4)	391 (364)	2250 (2100)	4310 (4020)
Avg	16.3	7.6	15.70	31.5	8.9	4.1	7.82	15.7	253.0	1830	10900	19500
n	23.0	23	23	23.0	23.0	23	23	23.0	23.0	23	22	22
SD	5.8	2.7	5.59	11.2	2.5	1.2	2.21	4.4	127.0	920.0	5200.0	8900.0
Min	7.1	3.3	6.81	13.7	5.5	2.6	4.84	9.7	54.1	391	2250	4310
Max	25.7	12	24.80	49.8	13.8	6.4	12.20	24.4	487.0	3520	20300	35900

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for September, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	14.3 (3.6)	6.6 (1.7)	13.8 (3.5)	27.7 (7.0)	6.8 (1.0)	3.2 (0.5)	6.0 (0.9)	12.1 (1.7)	103.0 (41.9)	744 (303)	4290 (1750)	8140 (3320)
2	14.8 (2.5)	6.9 (1.2)	14.4 (2.5)	28.8 (4.9)	7.0 (1.8)	3.2 (0.9)	6.2 (1.6)	12.3 (3.2)	123.0 (90.6)	885 (654)	5110 (3780)	9610 (7100)
3					5.8 (2.0)	2.7 (0.9)	5.1 (1.8)	10.3 (3.6)	127.0 (125.0)	915 (906)	5280 (5230)	9850 (9750)
4					3.1 (1.5)	1.5 (0.7)	2.8 (1.3)	5.6 (2.7)	116.0 (136.0)	838 (984)	4840 (5680)	8950 (10500)
5									99.0 (123.0)	715 (885)	4130 (5110)	7580 (9380)
6	26.1 (3.1)	12.2 (1.5)	25.4 (3.0)	50.9 (6.1)	3.2 (1.1)	1.5 (0.5)	2.9 (1.0)	5.8 (1.9)	209.0 (212.0)	1510 (1530)	8710 (8840)	15900 (16100)
7	27.1 (5.2)	12.6 (2.4)	26.3 (5.0)	52.7 (10.1)	3.0 (1.0)	1.4 (0.5)	2.6 (0.9)	5.3 (1.7)	309.0 (279.0)	2230 (2020)	12900 (11600)	23300 (21000)
8					3.1 (1.7)	1.4 (0.8)	2.7 (1.5)	5.5 (3.0)	186.0 (207.0)	1340 (1490)	7750 (8600)	13900 (15400)
9												
10					6.4 (2.4)	3.0 (1.1)	5.7 (2.1)	11.5 (4.3)	298.0 (263.0)	2150 (1900)	12400 (11000)	21900 (19300)
11	19.4 (4.4)	9.0 (2.1)	18.9 (4.3)	37.8 (8.7)	7.4 (1.0)	3.4 (0.5)	6.6 (0.9)	13.1 (1.8)	351.0 (149.0)	2540 (1070)	14600 (6190)	25600 (10900)
12	18.2 (2.9)	8.5 (1.4)	17.8 (2.9)	35.6 (5.7)	8.0 (0.7)	3.7 (0.3)	7.2 (0.6)	14.4 (1.2)	1180.0 (519.0)	8550 (3750)	49300 (21600)	85800 (37600)
13	19.5 (3.7)	9.1 (1.7)	19.1 (3.6)	38.2 (7.2)	8.1 (1.0)	3.8 (0.5)	7.2 (0.9)	14.4 (1.8)	809.0 (309.0)	5850 (2230)	33700 (12900)	58300 (22200)
14									338.0 (263.0)	2440 (1900)	14100 (11000)	24200 (18800)
15									290.0 (220.0)	2090 (1590)	12100 (9150)	20600 (15600)
16									253.0 (182.0)	1830 (1310)	10600 (7580)	19900 (14900)
17	22.5 (4.3)	10.5 (2.0)	22.0 (4.2)	44.2 (8.4)	11.3 (3.7)	5.2 (1.7)	10.1 (3.3)	20.3 (6.7)	242.0 (157.0)	1740 (1140)		
18												
19												
20												
21												
22												
23												
24	26.9 (14.0)	12.5 (6.5)	26.5 (13.8)	53.1 (27.7)	8.8 (1.3)	4.1 (0.6)	8.0 (1.2)	16.0 (2.4)	15.5 (7.5)	112 (54)	646 (313)	1200 (578)
25	26.2 (4.8)	12.2 (2.3)	25.8 (4.8)	51.7 (9.6)	8.1 (2.5)	3.8 (1.1)	7.3 (2.2)	14.7 (4.5)	15.0 (12.4)	108 (90)	624 (518)	1140 (949)
26					9.6 (1.6)	4.5 (0.8)	8.7 (1.5)	17.4 (2.9)	19.6 (17.0)	142 (122)	819 (707)	1490 (1280)
27	26.4 (4.4)	12.3 (2.1)	26.0 (4.4)	52.2 (8.7)	9.6 (2.4)	4.5 (1.1)	8.7 (2.2)	17.5 (4.4)	15.0 (16.4)	108 (119)	625 (684)	1120 (1230)
28	18.7 (4.0)	8.7 (1.9)	18.5 (4.0)	37.0 (7.9)	6.5 (3.2)	3.0 (1.5)	5.9 (2.9)	11.8 (5.8)	48.4 (49.8)	349 (359)	2010 (2070)	3600 (3700)
29					6.5 (2.8)	3.0 (1.3)	5.9 (2.6)	11.9 (5.1)	38.7 (32.5)	279 (234)	1610 (1350)	2850 (2390)
30									16.2 (16.0)	117 (116)	676 (667)	1190 (1180)
Avg	21.7	10.1	21.20	42.5	6.8	3.2	6.09	12.2	226.0	1630	9400	16600
n	12.0	12	12	12.0	18.0	18	18	18.0	23.0	23	22	22
SD	4.6	2.1	4.54	9.1	2.4	1.1	2.15	4.3	268.0	1940.0	11400.0	19800.0
Min	14.3	6.6	13.80	27.7	3.0	1.4	2.62	5.3	15.0	108	624	1120
Max	27.1	13	26.50	53.1	11.3	5.2	10.10	20.3	1180.0	8550	49300	85800

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for October, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	16.2 (3.2)	7.6 (1.5)	16.1 (3.2)	32.2 (6.3)	5.7 (2.1)	2.6 (1.0)	5.2 (2.0)	10.4 (3.9)	19.0 (18.3)	138 (132)	793 (764)	1390 (1340)
2	15.0 (4.7)	7.0 (2.2)	14.8 (4.7)	29.7 (9.3)	7.0 (2.6)	3.2 (1.2)	6.4 (2.4)	12.8 (4.8)	40.0 (48.7)	289 (352)	1670 (2030)	2910 (3540)
3	13.9 (2.8)	6.5 (1.3)	13.8 (2.8)	27.6 (5.7)	6.8 (1.9)	3.2 (0.9)	6.3 (1.8)	12.6 (3.5)	143.0 (165.0)	1030 (1190)	5940 (6870)	10300 (11900)
4	12.4 (2.9)	5.8 (1.3)	12.3 (2.9)	24.6 (5.7)	6.9 (3.2)	3.2 (1.5)	6.4 (2.9)	12.8 (5.8)	348.0 (316.0)	2510 (2280)	14500 (13200)	24900 (22600)
5	14.0 (2.8)	6.5 (1.3)	13.9 (2.8)	27.9 (5.6)					433.0 (261.0)	3130 (1890)	18000 (10900)	30700 (18500)
6	14.4 (3.2)	6.7 (1.5)	14.3 (3.2)	28.7 (6.4)	8.0 (1.6)	3.7 (0.7)	7.4 (1.4)	14.8 (2.9)	782.0 (513.0)	5650 (3710)	32600 (21400)	55100 (36100)
7					6.7 (1.6)	3.1 (0.7)	6.2 (1.5)	12.3 (2.9)	758.0 (686.0)	5470 (4960)	31600 (28600)	52900 (48000)
8					11.5 (5.4)	5.4 (2.5)	10.7 (5.0)	21.4 (10.0)	207.0 (229.0)	1500 (1660)	8640 (9560)	14400 (15900)
9					10.0 (3.8)	4.6 (1.8)	9.2 (3.5)	18.5 (7.0)	184.0 (172.0)	1330 (1240)	7690 (7180)	12700 (11900)
10	10.0 (2.1)	4.7 (1.0)	10.0 (2.1)	20.0 (4.2)								
11	11.5 (3.0)	5.3 (1.4)	11.4 (3.0)	22.9 (6.1)	11.0 (2.2)	5.1 (1.0)	10.2 (2.0)	20.5 (4.0)	364.0 (311.0)	2630 (2240)	15200 (12900)	24700 (21000)
12	11.9 (2.1)	5.6 (1.0)	11.9 (2.1)	23.9 (4.2)	10.8 (1.9)	5.0 (0.9)	10.0 (1.8)	20.1 (3.6)	404.0 (335.0)	2920 (2420)	16800 (14000)	27200 (22500)
13					8.6 (2.2)	4.0 (1.0)	8.0 (2.0)	16.0 (4.1)	481.0 (334.0)	3470 (2410)	20000 (13900)	34800 (23000)
14												
15												
16												
17									30.8 (42.9)	223 (310)	1290 (1790)	2470 (3440)
18					5.6 (1.6)	2.6 (0.7)	5.3 (1.5)	10.6 (2.9)	31.1 (35.0)	225 (253)	1300 (1460)	2470 (2780)
19					12.3 (15.7)	5.7 (7.3)	11.5 (14.8)	23.1 (29.6)	62.4 (63.3)	451 (457)	2600 (2640)	4910 (4980)
20	6.4 (2.6)	3.0 (1.2)	6.5 (2.6)	13.0 (5.1)					78.4 (96.4)	566 (696)	3260 (4020)	6100 (7510)
21												
22	4.3 (2.4)	2.0 (1.1)	4.3 (2.4)	8.7 (4.9)	1.8 (0.9)	0.8 (0.4)	1.7 (0.9)	3.4 (1.8)				
23	5.2 (3.9)	2.4 (1.8)	5.2 (3.9)	10.4 (7.8)	2.1 (1.1)	1.0 (0.5)	1.9 (1.1)	3.9 (2.1)	38.0 (52.2)	274 (377)	1580 (2170)	2880 (3960)
24									35.5 (39.3)	256 (284)	1480 (1640)	2670 (2960)
25	5.3 (2.3)	2.5 (1.1)	5.3 (2.3)	10.6 (4.6)	2.1 (0.8)	1.0 (0.4)	2.0 (0.8)	3.9 (1.6)	68.4 (77.4)	494 (559)	2850 (3220)	5110 (5780)
26									22.0 (23.2)	159 (168)	917 (967)	1630 (1720)
27					1.6 (0.7)	0.8 (0.3)	1.5 (0.7)	3.1 (1.4)	15.5 (17.0)	112 (122)	645 (706)	1140 (1250)
28	3.2 (0.6)	1.5 (0.3)	3.2 (0.6)	6.5 (1.2)	1.4 (0.7)	0.6 (0.3)	1.3 (0.6)	2.5 (1.3)	15.2 (19.6)	110 (142)	633 (817)	1110 (1430)
29	4.2 (1.7)	2.0 (0.8)	4.2 (1.7)	8.4 (3.3)	1.5 (0.6)	0.7 (0.3)	1.4 (0.6)	2.8 (1.2)	40.2 (56.2)	290 (406)	1670 (2340)	2920 (4080)
30	5.7 (3.1)	2.6 (1.4)	5.6 (3.1)	11.3 (6.1)	1.5 (0.4)	0.7 (0.2)	1.4 (0.4)	2.8 (0.8)	53.2 (59.0)	384 (426)	2220 (2460)	3830 (4250)
31												
Avg	9.6	4.5	9.55	19.1	6.1	2.9	5.69	11.4	194.0	1400	8080	13700
n	16.0	16	16	16.0	20.0	20	20	20.0	24.0	24	24	24
SD	4.4	2.1	4.37	8.8	3.7	1.7	3.45	6.9	228.0	1640.0	9480.0	15900.0
Min	3.2	1.5	3.23	6.5	1.4	0.6	1.25	2.5	15.2	110	633	1110
Max	16.2	8	16.10	32.2	12.3	5.7	11.50	23.1	782.0	5650	32600	55100

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for November, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	7.0 (2.8)	3.3 (1.3)	7.0 (2.8)	14.0 (5.5)	1.9 (1.7)	0.9 (0.8)	1.8 (1.6)	3.6 (3.1)	109.0 (122.0)	788 (882)	4550 (5090)	7750 (8670)
2	8.1 (2.3)	3.7 (1.1)	8.0 (2.3)	15.9 (4.6)	1.7 (1.0)	0.8 (0.5)	1.5 (0.9)	3.1 (1.8)	68.7 (56.9)	496 (411)	2860 (2370)	4840 (4010)
3	9.7 (2.3)	4.5 (1.1)	9.5 (2.3)	19.1 (4.5)	3.0 (1.2)	1.4 (0.6)	2.7 (1.1)	5.4 (2.2)	78.3 (55.3)	565 (399)	3260 (2300)	5470 (3860)
4	12.1 (5.1)	5.6 (2.4)	11.9 (5.0)	23.9 (10.0)								
5	13.2 (3.9)	6.1 (1.8)	12.9 (3.8)	25.9 (7.7)	4.1 (1.5)	1.9 (0.7)	3.7 (1.4)	7.4 (2.7)	103.0 (275.0)	742 (1990)		
6									1.5 (0.5)	11 (4)	61 (22)	120 (44)
7												
8									9.7 (16.3)	70 (118)	402 (679)	776 (1310)
9									3.4 (5.4)	25 (39)	142 (223)	272 (426)
10	4.1 (2.0)	1.9 (0.9)	4.0 (2.0)	8.1 (4.0)	3.3 (1.0)	1.6 (0.5)	3.0 (0.9)	5.9 (1.8)	3.0 (4.8)	22 (35)	124 (199)	235 (378)
11												
12	5.6 (1.9)	2.6 (0.9)	5.5 (1.9)	11.0 (3.8)	3.2 (1.1)	1.5 (0.5)	2.9 (1.0)	5.7 (2.0)	4.4 (5.4)	32 (39)	184 (226)	343 (420)
13	6.9 (3.1)	3.2 (1.5)	6.7 (3.0)	13.4 (6.1)	1.9 (0.5)	0.9 (0.2)	1.7 (0.5)	3.5 (0.9)	4.4 (4.4)	32 (32)	182 (182)	336 (336)
14	3.9 (1.4)	1.8 (0.6)	3.8 (1.4)	7.5 (2.7)	2.5 (1.0)	1.2 (0.4)	2.2 (0.9)	4.4 (1.7)	4.7 (5.1)	34 (37)	194 (213)	356 (391)
15	3.0 (0.9)	1.4 (0.4)	2.9 (0.9)	5.9 (1.8)	2.3 (0.6)	1.1 (0.3)	2.0 (0.5)	4.1 (1.0)	5.8 (6.3)	42 (46)	243 (264)	442 (480)
16	3.4 (1.4)	1.6 (0.6)	3.3 (1.3)	6.6 (2.7)	1.9 (0.6)	0.9 (0.3)	1.7 (0.5)	3.5 (1.1)	9.4 (10.9)	68 (79)	391 (456)	705 (821)
17	3.1 (1.2)	1.4 (0.6)	3.0 (1.2)	6.0 (2.4)	2.5 (1.1)	1.2 (0.5)	2.2 (0.9)	4.5 (1.9)	8.9 (10.5)	64 (76)	369 (438)	659 (783)
18												
19	4.1 (2.1)	1.9 (1.0)	4.0 (2.0)	8.0 (4.1)	2.4 (0.8)	1.1 (0.4)	2.1 (0.7)	4.2 (1.5)	10.5 (11.3)	76 (82)	436 (471)	766 (828)
20					3.2 (1.2)	1.5 (0.6)	2.9 (1.1)	5.8 (2.1)	10.4 (12.3)	75 (89)	432 (513)	753 (895)
21					3.1 (0.5)	1.4 (0.2)	2.8 (0.5)	5.5 (0.9)	9.2 (12.6)	66 (91)	382 (526)	662 (911)
22					3.0 (0.5)	1.4 (0.2)	2.6 (0.5)	5.3 (0.9)	12.9 (15.5)	93 (112)	538 (646)	924 (1110)
23	3.9 (1.2)	1.8 (0.6)	3.8 (1.2)	7.6 (2.3)	3.0 (0.5)	1.4 (0.3)	2.7 (0.5)	5.4 (1.0)	18.4 (19.8)	133 (143)	766 (823)	1310 (1400)
24	3.5 (1.3)	1.6 (0.6)	3.4 (1.3)	6.8 (2.6)	3.5 (1.5)	1.6 (0.7)	3.1 (1.3)	6.2 (2.6)	22.0 (24.1)	159 (174)	916 (1000)	1550 (1700)
25	3.2 (1.0)	1.5 (0.5)	3.1 (1.0)	6.2 (2.0)	4.2 (0.9)	1.9 (0.4)	3.7 (0.8)	7.4 (1.6)	18.9 (21.6)	136 (156)	786 (901)	1320 (1510)
26	3.8 (1.2)	1.8 (0.6)	3.7 (1.2)	7.4 (2.4)	3.6 (0.8)	1.7 (0.4)	3.2 (0.8)	6.5 (1.5)	26.8 (30.2)	193 (218)	1120 (1260)	1860 (2100)
27	3.2 (0.8)	1.5 (0.4)	3.1 (0.8)	6.3 (1.6)	3.8 (1.1)	1.8 (0.5)	3.4 (0.9)	6.8 (1.9)	35.3 (50.1)	255 (362)	1470 (2090)	2660 (3730)
28	3.6 (1.7)	1.7 (0.8)	3.5 (1.7)	7.0 (3.4)	4.0 (1.1)	1.8 (0.5)	3.5 (0.9)	7.0 (1.9)	7.6 (13.9)	55 (100)		
29	3.0 (1.0)	1.4 (0.5)	2.9 (1.0)	5.8 (1.9)	4.4 (1.2)	2.0 (0.5)	3.9 (1.0)	7.8 (2.1)	15.1 (29.9)	109 (216)	627 (1250)	1240 (2460)
30	2.9 (1.0)	1.4 (0.5)	2.8 (1.0)	5.7 (1.9)	4.1 (1.3)	1.9 (0.6)	3.6 (1.2)	7.3 (2.4)	1.4 (0.3)	10 (2)	60 (14)	114 (26)
Avg	5.3	2.5	5.18	10.4	3.1	1.4	2.73	5.5	23.2	167	854	1480
n	21.0	21	21	21.0	23.0	23	23	23.0	26.0	26	24	24
SD	3.0	1.4	2.97	6.0	0.8	0.4	0.70	1.4	30.1	218.0	1110.0	1870.0
Min	2.9	1.4	2.82	5.7	1.7	0.8	1.53	3.1	1.4	10	60	114
Max	13.2	6	12.90	25.9	4.4	2.0	3.87	7.8	109.0	788	4550	7750

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for December, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	2.8 (0.8)	1.3 (0.4)	2.7 (0.8)	5.5 (1.5)					4.5 (4.1)	32 (30)	187 (171)	360 (329)
2												
3	3.6 (1.3)	1.7 (0.6)	3.5 (1.3)	7.0 (2.5)	3.4 (1.1)	1.6 (0.5)	3.0 (0.9)	6.0 (1.9)	5.3 (6.0)	39 (43)	222 (249)	419 (470)
4	3.5 (0.9)	1.6 (0.4)	3.4 (0.9)	6.9 (1.8)	3.7 (0.5)	1.7 (0.2)	3.3 (0.4)	6.6 (0.9)	6.0 (7.8)	44 (56)	252 (325)	471 (608)
5	3.9 (1.1)	1.8 (0.5)	3.8 (1.1)	7.5 (2.2)	3.4 (0.9)	1.6 (0.4)	3.0 (0.8)	6.1 (1.6)	7.4 (7.9)	53 (57)	306 (331)	568 (613)
6									6.0 (3.9)	43 (28)	250 (162)	460 (297)
7					3.4 (0.4)	1.6 (0.2)	3.1 (0.3)	6.1 (0.6)	5.2 (5.1)	37 (37)	215 (214)	391 (389)
8	4.3 (1.4)	2.0 (0.7)	4.1 (1.4)	8.3 (2.8)	3.6 (0.7)	1.7 (0.3)	3.2 (0.6)	6.5 (1.2)	9.2 (6.7)	67 (49)	385 (280)	694 (505)
9	4.1 (2.2)	1.9 (1.0)	3.9 (2.1)	7.9 (4.2)	1.9 (0.6)	0.9 (0.3)	1.7 (0.5)	3.4 (1.0)	8.7 (5.5)	63 (40)	364 (230)	650 (411)
10	4.9 (1.0)	2.3 (0.5)	4.7 (0.9)	9.4 (1.9)	2.4 (0.3)	1.1 (0.1)	2.1 (0.2)	4.3 (0.5)	9.2 (6.6)	67 (48)	384 (275)	679 (487)
11	4.5 (1.5)	2.1 (0.7)	4.4 (1.4)	8.8 (2.9)	2.8 (0.8)	1.3 (0.4)	2.5 (0.7)	5.0 (1.4)	10.0 (8.3)	72 (60)	415 (347)	728 (610)
12	5.0 (1.4)	2.3 (0.7)	4.9 (1.4)	9.7 (2.7)	2.4 (0.8)	1.1 (0.4)	2.2 (0.7)	4.3 (1.4)	9.3 (11.6)	67 (84)	387 (482)	674 (839)
13	5.4 (1.7)	2.5 (0.8)	5.2 (1.6)	10.5 (3.2)	2.7 (0.5)	1.3 (0.2)	2.4 (0.4)	4.9 (0.8)	13.1 (14.0)	95 (101)	547 (583)	944 (1010)
14	6.1 (3.0)	2.8 (1.4)	5.9 (2.9)	11.7 (5.8)					11.2 (10.5)	81 (76)	467 (436)	799 (746)
15	3.9 (0.4)	1.8 (0.2)	3.8 (0.3)	7.6 (0.7)					14.4 (18.9)	104 (137)	599 (788)	1010 (1340)
16									11.6 (15.6)	84 (113)	483 (649)	811 (1090)
17	3.0 (0.5)	1.4 (0.3)	2.9 (0.5)	5.8 (1.0)	2.4 (0.3)	1.1 (0.1)	2.1 (0.2)	4.3 (0.5)	9.8 (21.6)	71 (156)	407 (899)	679 (1500)
18	2.5 (0.4)	1.1 (0.2)	2.4 (0.4)	4.8 (0.7)	2.4 (0.3)	1.1 (0.1)	2.1 (0.2)	4.2 (0.4)	8.7 (20.5)	63 (148)	363 (852)	602 (1410)
19	2.2 (0.3)	1.0 (0.2)	2.2 (0.3)	4.3 (0.7)	2.3 (0.5)	1.1 (0.3)	2.0 (0.5)	4.1 (1.0)	12.1 (23.4)	87 (169)	504 (976)	827 (1600)
20	2.6 (0.3)	1.2 (0.1)	2.5 (0.3)	5.0 (0.6)					16.7 (18.0)	120 (130)	694 (748)	1130 (1220)
21	2.7 (0.3)	1.2 (0.2)	2.6 (0.3)	5.1 (0.7)					26.7 (22.4)	193 (162)	1110 (935)	1800 (1510)
22	2.7 (0.5)	1.2 (0.2)	2.6 (0.5)	5.2 (0.9)	2.4 (0.6)	1.1 (0.3)	2.2 (0.5)	4.3 (1.1)	24.5 (24.4)	177 (176)	1020 (1020)	1630 (1630)
23												
24	2.3 (0.3)	1.1 (0.1)	2.2 (0.2)	4.5 (0.5)	2.2 (0.4)	1.0 (0.2)	2.0 (0.4)	3.9 (0.8)	10.9 (18.0)	79 (130)		
25	2.6 (0.5)	1.2 (0.2)	2.5 (0.5)	5.0 (1.0)	2.1 (0.3)	1.0 (0.2)	1.8 (0.3)	3.7 (0.6)	17.2 (25.2)	124 (182)	716 (1050)	1400 (2060)
26	2.7 (2.0)	1.3 (0.9)	2.7 (2.0)	5.3 (3.9)	1.3 (0.5)	0.6 (0.2)	1.2 (0.5)	2.4 (0.9)	17.0 (21.4)	123 (154)	710 (890)	1360 (1710)
27					2.0 (0.7)	0.9 (0.3)	1.8 (0.6)	3.6 (1.2)	10.3 (12.8)	74 (92)	428 (532)	823 (1020)
28					2.0 (0.4)	1.0 (0.2)	1.8 (0.4)	3.7 (0.8)	8.6 (11.8)	62 (86)	357 (494)	680 (940)
29					2.1 (0.5)	1.0 (0.2)	1.9 (0.5)	3.9 (0.9)	7.3 (9.6)	53 (69)	304 (400)	574 (754)
30									6.2 (8.1)	45 (59)	258 (338)	482 (631)
31					1.9 (0.4)	0.9 (0.2)	1.7 (0.3)	3.4 (0.7)	5.5 (7.3)	40 (53)	230 (303)	426 (560)
Avg	3.6	1.7	3.46	6.9	2.5	1.2	2.24	4.5	10.8	78	449	789
n	21.0	21	21	21.0	21.0	21	21	21.0	29.0	29	28	28
SD	1.1	0.5	1.06	2.1	0.6	0.3	0.56	1.1	5.3	38.3	225.0	366.0
Min	2.2	1.0	2.15	4.3	1.3	0.6	1.18	2.4	4.5	32	187	360
Max	6.1	3	5.85	11.7	3.7	1.7	3.27	6.6	26.7	193	1110	1800

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for January, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1					2.2 (0.2)	1.0 (0.1)	2.0 (0.2)	4.0 (0.4)	6.2 (8.4)	45 (60)	258 (349)	473 (639)
2					2.7 (0.7)	1.3 (0.3)	2.5 (0.6)	5.0 (1.3)	6.8 (9.8)	49 (70)	283 (406)	514 (738)
3	3.3 (0.8)	1.5 (0.4)	3.3 (0.8)	6.6 (1.6)	3.1 (0.6)	1.4 (0.3)	2.8 (0.6)	5.7 (1.1)	8.3 (10.3)	60 (75)	344 (431)	620 (776)
4	3.1 (0.3)	1.5 (0.2)	3.2 (0.3)	6.3 (0.7)					7.5 (9.6)	54 (70)	313 (401)	560 (715)
5	4.3 (1.2)	2.0 (0.6)	4.3 (1.3)	8.6 (2.5)	2.3 (0.6)	1.1 (0.3)	2.1 (0.6)	4.1 (1.2)	10.9 (12.3)	79 (89)	455 (514)	806 (910)
6	3.4 (1.1)	1.6 (0.5)	3.5 (1.1)	6.9 (2.2)	2.2 (0.4)	1.0 (0.2)	2.0 (0.4)	4.0 (0.8)	12.1 (10.5)	87 (76)	503 (437)	883 (766)
7	2.9 (0.4)	1.3 (0.2)	2.9 (0.4)	5.9 (0.9)					22.3 (31.0)	161 (224)	930 (1290)	1620 (2250)
8	2.9 (0.7)	1.4 (0.3)	3.0 (0.7)	6.0 (1.5)	2.4 (0.3)	1.1 (0.2)	2.2 (0.3)	4.4 (0.6)	14.2 (13.5)	102 (98)	590 (564)	1020 (975)
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20									5.9 (10.5)	43 (76)	246 (437)	473 (839)
21	2.5 (0.5)	1.2 (0.2)	2.6 (0.5)	5.2 (1.0)	1.7 (0.4)	0.8 (0.2)	1.6 (0.4)	3.2 (0.8)	4.6 (6.9)	33 (50)	193 (287)	367 (545)
22	2.6 (0.7)	1.2 (0.3)	2.6 (0.7)	5.3 (1.4)	1.6 (0.2)	0.8 (0.1)	1.5 (0.2)	3.0 (0.4)	8.6 (14.1)	62 (102)	360 (586)	679 (1110)
23									16.9 (20.8)	122 (150)	703 (868)	1320 (1620)
24	3.0 (0.4)	1.4 (0.2)	3.0 (0.4)	6.1 (0.9)	2.1 (0.5)	1.0 (0.2)	1.8 (0.5)	3.7 (0.9)	16.8 (27.4)	121 (198)	700 (1140)	1300 (2120)
25	2.8 (0.3)	1.3 (0.2)	2.8 (0.3)	5.6 (0.6)	2.0 (0.3)	0.9 (0.1)	1.7 (0.3)	3.5 (0.5)	11.5 (16.6)	83 (120)	477 (690)	879 (1270)
26	2.6 (0.4)	1.2 (0.2)	2.5 (0.4)	5.1 (0.8)	1.7 (0.3)	0.8 (0.1)	1.5 (0.2)	2.9 (0.5)	9.6 (13.1)	70 (94)	401 (544)	733 (994)
27	2.9 (0.5)	1.3 (0.2)	2.7 (0.5)	5.5 (1.0)	1.9 (0.4)	0.9 (0.2)	1.6 (0.4)	3.3 (0.7)	12.2 (17.0)	88 (123)	510 (710)	924 (1290)
28	3.6 (2.7)	1.7 (1.3)	3.4 (2.6)	6.8 (5.2)	1.5 (0.2)	0.7 (0.1)	1.3 (0.2)	2.6 (0.4)	36.8 (53.3)	266 (385)	1530 (2220)	2760 (3990)
29	2.1 (0.3)	1.0 (0.1)	2.0 (0.3)	4.0 (0.5)	1.7 (0.3)	0.8 (0.2)	1.4 (0.3)	2.9 (0.5)	54.7 (60.8)	395 (439)	2280 (2530)	4080 (4550)
30	2.7 (0.5)	1.2 (0.2)	2.5 (0.5)	5.0 (1.0)	2.3 (0.4)	1.1 (0.2)	1.9 (0.3)	3.8 (0.7)	35.1 (45.9)	254 (331)	1460 (1910)	2610 (3410)
31	2.9 (1.1)	1.3 (0.5)	2.7 (1.0)	5.4 (2.0)	1.8 (0.5)	0.8 (0.2)	1.5 (0.5)	3.1 (0.9)	37.1 (38.9)	268 (281)	1550 (1620)	2740 (2870)
Avg	3.0	1.4	2.94	5.9	2.1	1.0	1.84	3.7	16.9	122	704	1270
n	16.0	16	16	16.0	16.0	16	16	16.0	20.0	20	20	20
SD	0.5	0.2	0.51	1.0	0.4	0.2	0.40	0.8	13.2	95.3	550.0	978.0
Min	2.1	1.0	1.99	4.0	1.5	0.7	1.28	2.6	4.6	33	193	367
Max	4.3	2	4.30	8.6	3.1	1.4	2.83	5.7	54.7	395	2280	4080

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for February, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	2.6 (1.0)	1.2 (0.5)	2.4 (1.0)	4.9 (1.9)	2.3 (0.5)	1.1 (0.2)	2.0 (0.4)	4.0 (0.8)	30.3 (32.0)	219 (231)	1260 (1330)	2230 (2350)
2	2.5 (0.8)	1.2 (0.4)	2.4 (0.8)	4.9 (1.5)	2.2 (0.7)	1.0 (0.3)	1.9 (0.6)	3.8 (1.3)	29.2 (33.6)	211 (243)	1220 (1400)	2140 (2460)
3									24.1 (31.7)	174 (229)	1010 (1320)	1760 (2310)
4	3.5 (2.2)	1.6 (1.0)	3.4 (2.2)	6.8 (4.4)	2.7 (0.5)	1.3 (0.3)	2.5 (0.5)	4.9 (1.0)	27.9 (39.8)	202 (287)	1160 (1660)	2030 (2890)
5									20.8 (27.4)	150 (198)	866 (1140)	1500 (1980)
6	5.4 (3.0)	2.5 (1.4)	5.4 (3.0)	10.8 (5.9)	2.0 (0.5)	0.9 (0.2)	1.8 (0.5)	3.6 (1.0)	21.8 (19.9)	157 (144)	907 (828)	1560 (1420)
7	6.7 (4.2)	3.1 (2.0)	6.6 (4.2)	13.3 (8.3)	1.9 (0.7)	0.9 (0.4)	1.7 (0.7)	3.5 (1.4)	15.3 (10.7)	110 (78)	636 (447)	1090 (765)
8	2.8 (1.0)	1.3 (0.5)	2.7 (1.0)	5.5 (1.9)	2.4 (0.5)	1.1 (0.2)	2.1 (0.5)	4.3 (0.9)	16.4 (17.0)	118 (123)	683 (709)	1190 (1240)
9	6.3 (3.3)	2.9 (1.5)	6.2 (3.2)	12.5 (6.5)	2.1 (1.0)	1.0 (0.5)	1.9 (0.9)	3.8 (1.8)	23.7 (38.4)	171 (277)		
10	12.9 (5.7)	6.0 (2.7)	12.7 (5.6)	25.4 (11.3)	2.3 (1.0)	1.1 (0.5)	2.1 (0.9)	4.2 (1.8)	1.3 (1.8)	10 (13)		
11	3.8 (1.7)	1.8 (0.8)	3.8 (1.7)	7.5 (3.4)	3.1 (1.1)	1.5 (0.5)	2.9 (1.0)	5.7 (2.0)	1.9 (2.3)	14 (17)	78 (95)	155 (188)
12	6.0 (4.5)	2.8 (2.1)	5.9 (4.4)	11.8 (8.8)					2.3 (6.0)	17 (43)	97 (250)	189 (486)
13	4.1 (1.9)	1.9 (0.9)	4.0 (1.8)	8.0 (3.7)	2.6 (0.9)	1.2 (0.4)	2.3 (0.8)	4.7 (1.6)	0.7 (1.3)	5 (9)	27 (54)	52 (104)
14	3.4 (0.8)	1.6 (0.4)	3.3 (0.8)	6.7 (1.6)	2.4 (0.6)	1.1 (0.3)	2.2 (0.5)	4.4 (1.0)	0.4 (0.4)	3 (3)	15 (16)	28 (30)
15	3.4 (0.6)	1.6 (0.3)	3.3 (0.6)	6.6 (1.2)	2.4 (0.3)	1.1 (0.1)	2.2 (0.2)	4.4 (0.5)	0.5 (0.3)	3 (2)	20 (13)	38 (24)
16					2.6 (0.5)	1.2 (0.2)	2.4 (0.5)	4.8 (0.9)	0.8 (1.4)	6 (10)	34 (57)	64 (107)
17									1.7 (2.7)	12 (20)	69 (114)	129 (212)
18	4.3 (1.6)	2.0 (0.7)	4.2 (1.5)	8.4 (3.1)					4.4 (7.3)	32 (53)	183 (305)	339 (564)
19	4.3 (0.9)	2.0 (0.4)	4.2 (0.9)	8.5 (1.8)	2.8 (1.0)	1.3 (0.5)	2.6 (0.9)	5.2 (1.7)	3.5 (6.8)	25 (49)	145 (285)	266 (520)
20					2.3 (0.6)	1.1 (0.3)	2.1 (0.5)	4.1 (1.0)	4.8 (7.8)	35 (56)	202 (325)	366 (590)
21	3.4 (0.6)	1.6 (0.3)	3.4 (0.6)	6.8 (1.1)					15.1 (30.2)	109 (218)	630 (1260)	1140 (2280)
22	4.0 (1.1)	1.9 (0.5)	4.0 (1.1)	8.0 (2.1)	2.4 (0.8)	1.1 (0.4)	2.1 (0.7)	4.3 (1.5)	5.5 (9.1)	40 (66)	229 (378)	410 (676)
23					2.3 (0.7)	1.1 (0.3)	2.1 (0.6)	4.2 (1.2)	5.7 (8.2)	41 (59)	236 (342)	420 (607)
24												
25	11.1 (6.2)	5.2 (2.9)	11.2 (6.3)	22.4 (12.5)	3.5 (1.5)	1.6 (0.7)	3.1 (1.4)	6.3 (2.8)	14.4 (13.6)	104 (99)	602 (568)	1060 (996)
26												
27	3.2 (0.8)	1.5 (0.4)	3.3 (0.8)	6.5 (1.6)					14.0 (18.5)	101 (134)	585 (772)	1010 (1330)
28	3.4 (1.1)	1.6 (0.5)	3.4 (1.2)	6.9 (2.3)					13.4 (17.1)	97 (124)	558 (712)	960 (1230)
Avg	4.9	2.3	4.79	9.6	2.5	1.1	2.22	4.5	11.5	83	477	838
n	20.0	20	20	20.0	18.0	18	18	18.0	26.0	26	24	24
SD	2.7	1.2	2.65	5.3	0.4	0.2	0.35	0.7	10.0	72.1	411.0	716.0
Min	2.5	1.2	2.43	4.9	1.9	0.9	1.73	3.5	0.4	3	15	28
Max	12.9	6	12.70	25.4	3.5	1.6	3.12	6.3	30.3	219	1260	2230

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for March, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	3.0 (0.7)	1.4 (0.3)	3.0 (0.7)	6.1 (1.3)	3.2 (0.6)	1.5 (0.3)	2.9 (0.5)	5.8 (1.1)	13.4 (18.7)	97 (135)	558 (781)	954 (1330)
2	3.7 (0.9)	1.7 (0.4)	3.7 (0.9)	7.5 (1.9)	3.9 (0.8)	1.8 (0.4)	3.5 (0.7)	6.9 (1.4)	24.6 (30.0)	177 (217)	1020 (1250)	1740 (2120)
3												
4					2.8 (0.9)	1.3 (0.4)	2.6 (0.8)	5.1 (1.6)	54.1 (124.0)	391 (899)		
5												
6	10.8 (7.5)	5.0 (3.5)	11.1 (7.8)	22.3 (15.6)	6.4 (3.2)	3.0 (1.5)	5.7 (2.9)	11.5 (5.8)	6.1 (7.7)	44 (56)	256 (322)	493 (620)
7	5.4 (2.2)	2.5 (1.0)	5.6 (2.2)	11.2 (4.4)	3.9 (1.0)	1.8 (0.5)	3.5 (0.9)	7.0 (1.8)	5.0 (6.0)	36 (43)	209 (251)	403 (482)
8	5.0 (3.0)	2.3 (1.4)	5.1 (3.1)	10.3 (6.2)	3.9 (1.1)	1.8 (0.5)	3.5 (1.0)	7.1 (2.0)	2.9 (3.6)	21 (26)	122 (148)	234 (285)
9	4.6 (1.2)	2.1 (0.6)	4.7 (1.2)	9.4 (2.4)	4.0 (0.7)	1.9 (0.3)	3.6 (0.7)	7.3 (1.3)	3.6 (5.6)	26 (40)	150 (232)	285 (440)
10									3.3 (3.5)	24 (25)	136 (147)	256 (276)
11									6.2 (10.0)	44 (72)	256 (417)	477 (779)
12									3.6 (4.7)	26 (34)	151 (195)	278 (358)
13					4.0 (0.7)	1.9 (0.3)	3.6 (0.6)	7.2 (1.2)	4.4 (6.6)	32 (48)	185 (274)	338 (501)
14					5.5 (2.7)	2.6 (1.2)	5.0 (2.4)	9.9 (4.8)	7.1 (8.2)	51 (59)	296 (340)	537 (615)
15	12.7 (8.1)	5.9 (3.8)	12.8 (8.2)	25.6 (16.3)	6.3 (3.0)	2.9 (1.4)	5.7 (2.7)	11.3 (5.3)	7.3 (9.0)	53 (65)	303 (374)	545 (671)
16	18.6 (13.3)	8.6 (6.2)	18.7 (13.4)	37.4 (26.8)	5.9 (2.3)	2.7 (1.1)	5.3 (2.1)	10.6 (4.1)	5.2 (7.6)	38 (55)	217 (314)	387 (559)
17	16.4 (9.1)	7.6 (4.3)	16.4 (9.2)	32.9 (18.4)	9.4 (7.1)	4.4 (3.3)	8.4 (6.4)	16.9 (12.8)	11.3 (12.1)	81 (87)	470 (503)	830 (887)
18	10.4 (6.3)	4.8 (2.9)	10.4 (6.3)	20.9 (12.7)	7.2 (3.6)	3.3 (1.7)	6.4 (3.3)	12.8 (6.5)	22.1 (23.6)	159 (171)	920 (984)	1610 (1720)
19	8.1 (5.8)	3.8 (2.7)	8.1 (5.8)	16.2 (11.7)	5.8 (2.4)	2.7 (1.1)	5.2 (2.1)	10.4 (4.2)	35.0 (41.2)	253 (297)	1460 (1720)	2540 (2980)
20	6.2 (1.5)	2.9 (0.7)	6.2 (1.5)	12.4 (3.1)	6.0 (1.8)	2.8 (0.9)	5.3 (1.6)	10.7 (3.3)	32.5 (31.7)	235 (229)	1360 (1320)	2350 (2280)
21	16.7 (10.2)	7.8 (4.8)	16.8 (10.3)	33.6 (20.6)	7.7 (3.5)	3.6 (1.6)	6.8 (3.2)	13.7 (6.3)	73.9 (79.8)	534 (576)	3080 (3320)	5280 (5690)
22	11.6 (5.6)	5.4 (2.6)	11.6 (5.6)	23.3 (11.3)	7.3 (2.9)	3.4 (1.4)	6.5 (2.6)	13.1 (5.2)	59.0 (48.5)	426 (351)	2460 (2020)	4190 (3440)
23	14.0 (7.5)	6.5 (3.5)	14.1 (7.5)	28.3 (15.1)	8.9 (5.1)	4.2 (2.4)	8.0 (4.6)	16.0 (9.2)	93.2 (58.9)	673 (425)	3880 (2450)	6560 (4140)
24												
25	6.2 (2.6)	2.9 (1.2)	6.3 (2.6)	12.6 (5.2)	6.3 (2.2)	2.9 (1.0)	5.6 (1.9)	11.2 (3.9)	95.1 (93.5)	687 (675)	3960 (3900)	6620 (6510)
26					8.5 (4.4)	4.0 (2.0)	7.6 (3.9)	15.2 (7.8)	86.0 (84.9)	621 (613)	3580 (3540)	5940 (5870)
27	4.7 (1.6)	2.2 (0.7)	4.7 (1.6)	9.5 (3.2)	5.8 (1.9)	2.7 (0.9)	5.2 (1.7)	10.3 (3.3)	52.6 (72.9)	380 (527)	2190 (3040)	3610 (5020)
28	4.3 (1.6)	2.0 (0.7)	4.3 (1.6)	8.7 (3.2)	4.8 (1.5)	2.3 (0.7)	4.3 (1.3)	8.6 (2.6)	30.8 (25.7)	222 (186)	1280 (1070)	2100 (1750)
29	5.5 (2.2)	2.6 (1.0)	5.6 (2.3)	11.3 (4.6)	5.2 (1.7)	2.4 (0.8)	4.6 (1.5)	9.2 (3.0)	128.0 (72.8)	924 (526)	5330 (3030)	8940 (5090)
30	4.8 (3.1)	2.2 (1.4)	4.9 (3.1)	9.8 (6.3)	3.6 (2.3)	1.7 (1.1)	3.2 (2.0)	6.5 (4.1)	120.0 (361.0)	867 (2610)		
31												
Avg	8.6	4.0	8.71	17.5	5.7	2.6	5.08	10.2	36.5	264	1350	2300
n	20.0	20	20	20.0	24.0	24	24	24.0	27.0	27	25	25
SD	4.8	2.2	4.76	9.6	1.8	0.8	1.60	3.2	38.2	276.0	1480.0	2480.0
Min	3.0	1.4	3.04	6.1	2.8	1.3	2.55	5.1	2.9	21	122	234
Max	18.6	9	18.70	37.4	9.4	4.4	8.42	16.9	128.0	924	5330	8940

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for April, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	9.2 (4.1)	4.3 (1.9)	9.5 (4.2)	18.9 (8.5)	5.9 (1.8)	2.8 (0.8)	5.3 (1.6)	10.6 (3.2)	21.8 (26.6)	157 (192)	908 (1110)	1790 (2190)
2	5.9 (2.1)	2.8 (1.0)	6.1 (2.2)	12.2 (4.4)					5.8 (6.3)	42 (46)	241 (264)	465 (510)
3	9.8 (6.5)	4.6 (3.0)	10.0 (6.6)	20.0 (13.3)	5.8 (1.6)	2.7 (0.8)	5.2 (1.5)	10.4 (2.9)	6.6 (6.8)	48 (49)	275 (283)	527 (541)
4	6.6 (3.7)	3.1 (1.7)	6.8 (3.8)	13.6 (7.6)	4.7 (2.9)	2.2 (1.3)	4.2 (2.6)	8.5 (5.2)	4.3 (4.5)	31 (33)	178 (189)	338 (359)
5	3.9 (1.5)	1.8 (0.7)	3.9 (1.6)	7.9 (3.1)					4.8 (5.1)	34 (37)	198 (214)	372 (402)
6	4.9 (1.3)	2.3 (0.6)	4.9 (1.3)	9.8 (2.6)	4.5 (1.2)	2.1 (0.6)	4.0 (1.1)	8.1 (2.2)	5.8 (7.4)	42 (54)	243 (309)	451 (573)
7									6.4 (7.3)	46 (53)	264 (306)	487 (562)
8	7.3 (2.7)	3.4 (1.3)	7.4 (2.8)	14.8 (5.5)	6.0 (1.2)	2.8 (0.6)	5.4 (1.1)	10.9 (2.2)	8.7 (8.3)	63 (60)	363 (347)	662 (634)
9												
10	11.4 (4.6)	5.3 (2.1)	11.5 (4.6)	23.0 (9.3)	6.9 (2.5)	3.2 (1.2)	6.2 (2.3)	12.5 (4.5)	19.0 (20.4)	138 (147)	793 (850)	1420 (1520)
11	16.7 (11.7)	7.8 (5.4)	16.9 (11.8)	33.9 (23.6)	7.3 (4.9)	3.4 (2.3)	6.6 (4.4)	13.2 (8.9)	35.8 (42.2)	258 (305)	1490 (1760)	2640 (3120)
12					5.8 (2.5)	2.7 (1.1)	5.2 (2.2)	10.5 (4.5)	26.0 (29.0)	188 (209)	1080 (1210)	1910 (2120)
13	1.9 (1.2)	0.9 (0.6)	1.9 (1.3)	3.9 (2.5)	4.4 (0.8)	2.1 (0.4)	4.0 (0.8)	8.1 (1.5)	27.6 (35.2)	199 (255)	1150 (1470)	2010 (2570)
14												
15	11.0 (7.0)	5.1 (3.3)	11.3 (7.2)	22.6 (14.5)	6.1 (2.7)	2.8 (1.2)	5.5 (2.4)	11.0 (4.9)	59.6 (59.7)	431 (431)	2480 (2490)	4260 (4250)
16	8.0 (4.5)	3.7 (2.1)	8.2 (4.7)	16.5 (9.3)	7.0 (3.8)	3.3 (1.8)	6.4 (3.4)	12.7 (6.9)	43.3 (36.4)	312 (263)	1800 (1520)	3070 (2570)
17	9.3 (4.8)	4.3 (2.2)	9.5 (4.9)	19.1 (9.8)	7.5 (3.2)	3.5 (1.5)	6.8 (2.9)	13.6 (5.8)	92.2 (66.1)	666 (478)	3840 (2760)	6480 (4630)
18	10.0 (3.1)	4.7 (1.4)	10.2 (3.1)	20.5 (6.3)	7.1 (3.3)	3.3 (1.5)	6.4 (3.0)	12.9 (6.0)	105.0 (52.3)	759 (378)	4380 (2180)	7330 (3640)
19	8.2 (2.9)	3.8 (1.4)	8.3 (3.0)	16.7 (6.0)	7.8 (2.3)	3.6 (1.1)	7.0 (2.1)	14.1 (4.1)	136.0 (98.1)	985 (709)	5680 (4090)	9450 (6780)
20	4.8 (3.1)	2.2 (1.4)	4.9 (3.1)	9.7 (6.2)	5.7 (1.7)	2.7 (0.8)	5.2 (1.5)	10.4 (3.1)	163.0 (121.0)	1180 (874)	6780 (5040)	11500 (8510)
21												
22	12.1 (6.7)	5.6 (3.1)	12.2 (6.8)	24.4 (13.5)	7.3 (2.9)	3.4 (1.3)	6.5 (2.6)	13.1 (5.2)	109.0 (299.0)	785 (2160)		
23									29.2 (22.9)	211 (166)	1220 (955)	2360 (1850)
24	13.9 (5.7)	6.5 (2.6)	14.0 (5.7)	28.1 (11.4)					41.1 (22.1)	297 (159)	1710 (919)	3290 (1770)
25	3.9 (2.7)	1.8 (1.2)	3.9 (2.7)	7.8 (5.4)					17.2 (21.0)	124 (152)	717 (874)	1380 (1680)
26	12.9 (5.6)	6.0 (2.6)	12.9 (5.6)	25.9 (11.2)	10.9 (3.0)	5.1 (1.4)	9.9 (2.7)	19.9 (5.4)	32.7 (24.7)	236 (178)	1360 (1030)	2580 (1950)
27									18.8 (24.8)	136 (179)	784 (1040)	1480 (1950)
28	7.2 (3.4)	3.3 (1.6)	7.2 (3.4)	14.4 (6.8)					25.9 (28.9)	187 (209)	1080 (1200)	2010 (2240)
29	8.5 (2.6)	4.0 (1.2)	8.5 (2.6)	17.1 (5.1)	8.5 (2.4)	4.0 (1.1)	7.8 (2.2)	15.6 (4.3)	24.4 (23.6)	177 (171)	1020 (984)	1880 (1810)
30												
Avg	8.5	4.0	8.63	17.3	6.6	3.1	5.99	12.0	41.2	297	1600	2800
n	22.0	22	22	22.0	18.0	18	18	18.0	26.0	26	25	25
SD	3.5	1.7	3.57	7.2	1.5	0.7	1.40	2.8	42.6	308.0	1720.0	2850.0
Min	1.9	0.9	1.93	3.9	4.4	2.1	4.03	8.1	4.3	31	178	338
Max	16.7	8	16.90	33.9	10.9	5.1	9.91	19.9	163.0	1180	6780	11500

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for May, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1									98.4 (116.0)	711 (841)	4100 (4850)	7460 (8820)
2									75.1 (56.9)	543 (411)	3130 (2370)	5700 (4320)
3	16.8 (8.3)	7.8 (3.8)	16.9 (8.3)	33.9 (16.6)	11.4 (3.6)	5.3 (1.7)	10.5 (3.3)	21.0 (6.5)	101.0 (78.9)	729 (570)	4210 (3290)	7660 (5980)
4												
5	19.4 (7.9)	9.0 (3.7)	19.6 (8.0)	39.2 (15.9)	11.5 (4.5)	5.3 (2.1)	10.5 (4.1)	21.0 (8.3)	163.0 (123.0)	1180 (889)	6790 (5130)	12400 (9390)
6	18.3 (5.9)	8.5 (2.8)	18.5 (6.0)	37.1 (12.0)	8.2 (2.5)	3.8 (1.2)	7.5 (2.3)	15.1 (4.6)	156.0 (72.8)	1130 (526)	6500 (3040)	11900 (5570)
7	13.4 (3.3)	6.2 (1.5)	13.5 (3.4)	27.1 (6.7)	12.4 (3.1)	5.8 (1.4)	11.3 (2.8)	22.7 (5.6)	125.0 (74.5)	902 (538)	5200 (3100)	9580 (5710)
8									182.0 (164.0)	1310 (1180)	7570 (6820)	13900 (12500)
9									80.8 (65.1)	584 (470)	3370 (2710)	6160 (4950)
10	7.4 (3.1)	3.5 (1.5)	7.5 (3.2)	15.0 (6.3)					93.5 (81.0)	675 (585)	3900 (3380)	7100 (6140)
11	10.1 (4.5)	4.7 (2.1)	10.1 (4.6)	20.2 (9.1)	7.8 (2.3)	3.6 (1.1)	7.0 (2.1)	14.1 (4.2)	109.0 (83.6)	785 (604)	4530 (3480)	8210 (6310)
12	12.3 (6.3)	5.7 (2.9)	12.3 (6.3)	24.6 (12.5)	9.1 (2.1)	4.2 (1.0)	8.2 (1.9)	16.5 (3.7)	104.0 (61.3)	751 (443)	4330 (2560)	7940 (4690)
13												
14					6.9 (2.3)	3.2 (1.1)	6.2 (2.1)	12.4 (4.2)	40.8 (35.2)	294 (254)		
15												
16									16.1 (15.7)	116 (113)	670 (654)	1300 (1270)
17	5.8 (1.8)	2.7 (0.8)	5.7 (1.7)	11.4 (3.5)	6.1 (2.2)	2.8 (1.0)	5.6 (2.0)	11.1 (4.0)	15.1 (15.8)	109 (114)	629 (659)	1220 (1270)
18									58.7 (50.8)	424 (367)	2440 (2120)	4710 (4080)
19												
20												
21	12.4 (2.3)	5.8 (1.1)	12.0 (2.2)	24.0 (4.5)					99.0 (135.0)	715 (973)	4120 (5610)	7870 (10700)
22	11.8 (1.9)	5.5 (0.9)	11.4 (1.9)	22.9 (3.7)	9.4 (1.8)	4.4 (0.8)	8.8 (1.7)	17.6 (3.3)	134.0 (156.0)	968 (1130)	5590 (6510)	10600 (12400)
23	13.6 (2.7)	6.3 (1.3)	13.3 (2.7)	26.6 (5.4)	7.1 (1.8)	3.3 (0.8)	6.7 (1.6)	13.3 (3.3)	155.0 (208.0)	1120 (1510)	6470 (8690)	12300 (16400)
24	12.2 (2.3)	5.7 (1.1)	11.9 (2.2)	23.8 (4.4)	8.1 (2.4)	3.7 (1.1)	7.5 (2.3)	15.0 (4.5)	248.0 (319.0)	1790 (2300)	10400 (13300)	19500 (25100)
25	11.6 (2.5)	5.4 (1.2)	11.4 (2.5)	22.8 (4.9)	7.2 (2.9)	3.3 (1.4)	6.7 (2.7)	13.4 (5.4)				
26	9.3 (1.7)	4.3 (0.8)	9.2 (1.7)	18.4 (3.3)	6.7 (1.2)	3.1 (0.6)	6.2 (1.1)	12.5 (2.3)	65.6 (96.0)	474 (694)	2730 (4000)	5130 (7520)
27	9.4 (1.4)	4.4 (0.7)	9.3 (1.4)	18.6 (2.8)					27.4 (31.3)	198 (226)	1140 (1310)	2140 (2440)
28									66.4 (122.0)	480 (884)	2770 (5100)	5150 (9490)
29	11.2 (3.0)	5.2 (1.4)	11.1 (3.0)	22.2 (6.0)	8.8 (2.4)	4.1 (1.1)	8.1 (2.2)	16.3 (4.4)	421.0 (525.0)	3040 (3790)	17500 (21900)	32500 (40600)
30	11.2 (2.7)	5.2 (1.3)	11.0 (2.7)	22.1 (5.4)	6.2 (1.7)	2.9 (0.8)	5.8 (1.6)	11.6 (3.1)	339.0 (452.0)	2450 (3270)	14100 (18800)	26100 (34800)
31	12.5 (3.3)	5.8 (1.5)	12.3 (3.2)	24.7 (6.4)	5.4 (1.6)	2.5 (0.8)	5.0 (1.5)	10.0 (3.0)	496.0 (599.0)	3580 (4330)	20700 (25000)	38000 (45800)
Avg	12.1	5.7	12.00	24.1	8.3	3.8	7.60	15.2	139.0	1000	5950	11000
n	18.0	18	18	18.0	16.0	16	16	16.0	25.0	25	24	24
SD	3.3	1.6	3.41	6.8	2.0	0.9	1.82	3.6	118.0	853.0	4950.0	9130.0
Min	5.8	2.7	5.68	11.4	5.4	2.5	5.01	10.0	15.1	109	629	1220
Max	19.4	9	19.60	39.2	12.4	5.8	11.30	22.7	496.0	3580	20700	38000

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for June, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	kg·d^{-1}	g·d^{-1}m^{-2}	g·d^{-1}hd^{-1}	g·d^{-1}AU^{-1}	kg·d^{-1}	g·d^{-1}m^{-2}	g·d^{-1}hd^{-1}	g·d^{-1}AU^{-1}	g·d^{-1}	mg·d^{-1}m^{-2}	mg·d^{-1}hd^{-1}	mg·d^{-1}AU^{-1}
1	9.6 (1.2)	4.4 (0.6)	9.4 (1.2)	18.8 (2.3)	5.5 (1.2)	2.6 (0.5)	5.2 (1.1)	10.3 (2.2)	131.0 (178.0)	946 (1280)	5460 (7400)	9990 (13600)
2	7.6 (1.3)	3.5 (0.6)	7.5 (1.2)	15.0 (2.5)								
3												
4												
5	10.1 (3.2)	4.7 (1.5)	9.9 (3.1)	19.8 (6.3)	4.9 (1.1)	2.3 (0.5)	4.6 (1.0)	9.2 (2.0)	368.0 (272.0)	2660 (1970)	15300 (11400)	27600 (20400)
6	8.2 (2.0)	3.8 (0.9)	8.0 (2.0)	15.9 (3.9)	4.0 (1.2)	1.8 (0.6)	3.7 (1.1)	7.4 (2.3)	394.0 (159.0)	2850 (1150)	16400 (6630)	29500 (11900)
7	6.7 (1.7)	3.1 (0.8)	6.6 (1.6)	13.1 (3.2)	3.7 (0.4)	1.7 (0.2)	3.4 (0.3)	6.9 (0.7)	509.0 (101.0)	3680 (732)	21200 (4220)	38000 (7570)
8	5.9 (1.2)	2.7 (0.5)	5.7 (1.1)	11.4 (2.2)					287.0 (131.0)	2070 (945)	12000 (5450)	21400 (9740)
9	6.9 (1.8)	3.2 (0.8)	6.7 (1.7)	13.3 (3.4)	5.0 (1.3)	2.3 (0.6)	4.6 (1.2)	9.1 (2.4)	209.0 (199.0)	1510 (1430)	8720 (8280)	15700 (14800)
10	6.7 (2.2)	3.1 (1.0)	6.4 (2.2)	12.9 (4.3)	4.9 (1.0)	2.3 (0.5)	4.5 (0.9)	9.0 (1.8)	589.0 (535.0)	4260 (3870)		
11												
12												
13												
14												
15												
16												
17	7.5 (1.1)	3.5 (0.5)	7.4 (1.1)	14.8 (2.2)	2.0 (0.6)	0.9 (0.3)	1.8 (0.5)	3.6 (1.1)	103.0 (61.6)	741 (445)	4460 (2680)	8930 (5360)
18												
19	9.1 (1.4)	4.2 (0.6)	8.9 (1.4)	17.9 (2.7)	4.0 (0.8)	1.9 (0.4)	3.6 (0.7)	7.2 (1.5)	36.8 (21.0)	266 (151)	1600 (911)	3130 (1780)
20	11.5 (2.5)	5.4 (1.1)	11.4 (2.4)	22.8 (4.9)	4.3 (0.9)	2.0 (0.4)	3.9 (0.8)	7.7 (1.6)	33.6 (20.6)	243 (149)	1460 (896)	2850 (1750)
21	9.8 (1.4)	4.6 (0.6)	9.7 (1.4)	19.5 (2.7)	2.9 (0.7)	1.3 (0.3)	2.6 (0.6)	5.2 (1.2)	26.3 (22.3)	190 (161)	1140 (968)	2230 (1890)
22	8.1 (0.8)	3.8 (0.4)	8.0 (0.8)	16.0 (1.6)	2.5 (0.5)	1.2 (0.2)	2.2 (0.4)	4.5 (0.8)	21.9 (5.6)	158 (40)	951 (241)	1840 (466)
23	6.8 (2.0)	3.2 (0.9)	6.8 (2.0)	13.6 (4.0)					86.9 (99.0)	628 (715)	3780 (4300)	7260 (8260)
24	5.9 (2.9)	2.8 (1.3)	5.9 (2.8)	11.8 (5.7)	3.1 (1.2)	1.5 (0.6)	2.8 (1.1)	5.7 (2.2)	85.5 (93.0)	617 (672)	3720 (4040)	7130 (7760)
25									61.7 (114.0)	446 (821)	2680 (4940)	5100 (9370)
26	8.3 (1.1)	3.9 (0.5)	8.2 (1.1)	16.5 (2.2)	3.0 (0.5)	1.4 (0.2)	2.7 (0.4)	5.3 (0.8)	356.0 (415.0)	2570 (2990)	15500 (18000)	29300 (34200)
27	7.5 (1.3)	3.5 (0.6)	7.4 (1.3)	14.9 (2.5)	2.9 (0.5)	1.4 (0.3)	2.6 (0.5)	5.2 (1.0)	706.0 (496.0)	5100 (3580)	30700 (21600)	57700 (40700)
28	10.6 (1.4)	4.9 (0.7)	10.5 (1.4)	21.1 (2.8)					334.0 (206.0)	2410 (1490)	14500 (8970)	27100 (16800)
29	11.6 (2.3)	5.4 (1.1)	11.4 (2.2)	22.9 (4.5)					432.0 (272.0)	3120 (1960)	18800 (11800)	34800 (21900)
30	11.2 (2.4)	5.2 (1.1)	11.0 (2.4)	22.1 (4.7)					498.0 (328.0)	3600 (2370)	21700 (14300)	40000 (26300)
Avg	8.5	3.9	8.34	16.7	3.8	1.7	3.43	6.9	263.0	1900	10500	19500
n	20.0	20	20	20.0	14.0	14	14	14.0	20.0	20	19	19
SD	1.8	0.8	1.79	3.6	1.0	0.5	0.98	2.0	207.0	1490.0	8500.0	15700.0
Min	5.9	2.7	5.70	11.4	2.0	0.9	1.78	3.6	21.9	158	951	1840
Max	11.6	5	11.40	22.9	5.5	2.6	5.16	10.3	706.0	5100	30700	57700

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for July, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1	10.5 (1.6)	4.9 (0.7)	10.4 (1.6)	20.8 (3.1)	3.3 (1.3)	1.5 (0.6)	2.9 (1.1)	5.9 (2.3)	598.0 (332.0)	4320 (2400)	26000 (14400)	47700 (26400)
2	11.1 (2.1)	5.2 (1.0)	10.9 (2.1)	21.8 (4.2)	3.1 (0.7)	1.5 (0.3)	2.8 (0.7)	5.7 (1.3)	435.0 (356.0)	3140 (2570)	18900 (15500)	34500 (28300)
3	9.6 (1.0)	4.5 (0.5)	9.4 (1.0)	18.7 (1.9)	2.9 (0.5)	1.4 (0.2)	2.6 (0.5)	5.3 (0.9)	297.0 (188.0)	2150 (1360)	12900 (8170)	23500 (14900)
4	9.4 (1.2)	4.4 (0.6)	9.1 (1.2)	18.3 (2.4)	2.9 (0.7)	1.3 (0.3)	2.6 (0.7)	5.2 (1.3)	563.0 (211.0)	4070 (1520)	24500 (9180)	44200 (16600)
5	9.7 (1.4)	4.5 (0.7)	9.4 (1.4)	18.9 (2.8)	3.4 (0.6)	1.6 (0.3)	3.0 (0.5)	6.0 (1.1)	317.0 (233.0)	2290 (1680)	13800 (10100)	24700 (18200)
6	8.3 (1.2)	3.9 (0.6)	8.0 (1.2)	16.1 (2.4)	2.8 (0.8)	1.3 (0.4)	2.5 (0.7)	5.0 (1.4)	378.0 (259.0)	2730 (1870)	16400 (11300)	29300 (20100)
7	7.4 (1.2)	3.5 (0.6)	7.1 (1.2)	14.3 (2.3)	2.4 (0.7)	1.1 (0.3)	2.2 (0.6)	4.4 (1.2)	739.0 (374.0)	5340 (2700)	32100 (16200)	
8	5.8 (1.0)	2.7 (0.5)	5.6 (1.0)	11.1 (2.0)	2.6 (0.7)	1.2 (0.3)	2.3 (0.6)	4.7 (1.3)	799.0 (367.0)	5770 (2650)	34700 (16000)	
9	7.2 (2.2)	3.3 (1.0)	6.8 (2.1)	13.7 (4.3)	2.8 (0.8)	1.3 (0.4)	2.5 (0.7)	4.9 (1.3)	609.0 (282.0)	4400 (2040)	26500 (12300)	
10					2.0 (0.6)	0.9 (0.3)	1.8 (0.5)	3.5 (1.1)	462.0 (258.0)	3330 (1860)	20100 (11200)	
11					3.2 (0.6)	1.5 (0.3)	2.8 (0.6)	5.7 (1.1)	807.0 (220.0)	5830 (1590)	35100 (9560)	
12					3.6 (0.7)	1.7 (0.3)	3.2 (0.6)	6.4 (1.2)	559.0 (164.0)	4040 (1180)	24300 (7120)	
13					3.3 (0.9)	1.5 (0.4)	3.0 (0.8)	5.9 (1.7)	368.0 (143.0)	2650 (1030)	16000 (6220)	
14					2.3 (0.6)	1.1 (0.3)	2.1 (0.5)	4.1 (1.1)	391.0 (152.0)	2820 (1100)	17000 (6620)	
15												
16												
17									150.0 (93.4)	1090 (674)	6530 (4060)	
18									149.0 (80.9)	1070 (584)	6470 (3520)	
19									164.0 (82.9)	1180 (599)	7130 (3610)	
20					3.7 (0.6)	1.7 (0.3)	3.3 (0.6)	6.7 (1.1)	195.0 (97.5)	1410 (704)	8470 (4240)	
21					2.8 (0.8)	1.3 (0.4)			169.0 (297.0)	1220 (2140)		
22					4.2 (0.6)	2.0 (0.3)			2.4 (1.2)	17 (9)		
23					3.9 (0.9)	1.8 (0.4)			3.1 (6.3)	23 (46)		
24					3.9 (1.3)	1.8 (0.6)			4.0 (4.4)	29 (32)		
25					5.1 (1.3)	2.4 (0.6)			1.2 (0.2)	9 (2)		
26					4.2 (0.6)	1.9 (0.3)			0.8 (0.9)	6 (7)		
27					3.7 (0.9)	1.7 (0.4)			13.2 (11.8)	96 (85)		
28					5.4 (0.8)	2.5 (0.4)			18.7 (10.6)	135 (77)		
29					6.7 (2.1)	3.1 (1.0)			18.8 (12.2)	136 (89)		
30					6.6 (2.6)	3.1 (1.2)			15.9 (10.3)	115 (75)		
31									13.5 (8.2)	97 (59)		
Avg	8.8	4.1	8.52	17.1	3.6	1.7	2.64	5.3	284.0	2050	19300	34000
n	9.0	9	9	9.0	25.0	25	15	15.0	29.0	29	18	6
SD	1.6	0.8	1.65	3.3	1.2	0.6	0.43	0.9	263.0	1900.0	9100.0	9230.0
Min	5.8	2.7	5.56	11.1	2.0	0.9	1.75	3.5	0.8	6	6470	23500
Max	11.1	5	10.90	21.8	6.7	3.1	3.34	6.7	807.0	5830	35100	47700

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for August, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1					6.5 (1.5)	3.0 (0.7)			18.2 (10.5)	132 (76)		
2					4.1 (1.5)	1.9 (0.7)			22.6 (12.5)	163 (91)		
3					3.7 (0.8)	1.7 (0.4)			34.2 (17.9)	247 (129)		
4	11.6 (1.8)	5.4 (0.8)			5.9 (1.9)	2.7 (0.9)			74.5 (58.4)	538 (422)		
5	15.3 (2.8)	7.1 (1.3)							129.0 (90.4)	935 (653)		
6												
7	12.3 (2.5)	5.7 (1.2)										
8					2.4 (0.7)	1.1 (0.3)			146.0 (87.9)	1050 (635)		
9					5.4 (2.9)	2.5 (1.3)			651.0 (858.0)	4700 (6200)		
10					5.1 (2.2)	2.4 (1.0)			844.0 (696.0)	6090 (5030)		
11					5.2 (1.1)	2.4 (0.5)			881.0 (515.0)	6360 (3720)		
12					4.4 (1.1)	2.0 (0.5)			484.0 (490.0)	3500 (3540)		
13												
14	7.2 (1.0)	3.4 (0.5)			4.8 (1.3)	2.2 (0.6)			330.0 (154.0)	2380 (1110)		
15	6.9 (1.3)	3.2 (0.6)			4.7 (0.9)	2.2 (0.4)			458.0 (232.0)	3310 (1680)		
16					6.9 (3.3)	3.2 (1.5)			696.0 (623.0)	5030 (4500)		
17					5.4 (1.3)	2.5 (0.6)			1090.0 (656.0)	7900 (4740)		
18	8.0 (1.7)	3.7 (0.8)			8.3 (3.6)	3.9 (1.7)			543.0 (286.0)	3920 (2070)		
19	5.1 (0.8)	2.4 (0.4)			9.2 (2.0)	4.3 (0.9)			479.0 (218.0)	3460 (1570)		
20									505.0 (196.0)	3650 (1410)		
21									443.0 (228.0)	3200 (1650)		
22	8.0 (2.6)	3.7 (1.2)							269.0 (135.0)	1940 (978)		
23	6.3 (0.8)	2.9 (0.4)							294.0 (174.0)	2130 (1260)		
24	5.2 (0.6)	2.4 (0.3)			12.0 (3.7)	5.6 (1.7)			210.0 (167.0)	1520 (1200)		
25	3.6 (1.6)	1.7 (0.7)			9.6 (2.5)	4.5 (1.2)			335.0 (330.0)	2420 (2390)		
26	4.7 (1.1)	2.2 (0.5)			11.6 (3.2)	5.4 (1.5)			247.0 (287.0)	1780 (2070)		
27	5.1 (0.6)	2.4 (0.3)							499.0 (248.0)	3600 (1790)		
28	6.3 (1.3)	2.9 (0.6)							455.0 (1090.0)	3280 (7880)		
29									2.8 (0.3)	20 (2)		
30												
31									6.1 (10.1)	44 (73)		
Avg	7.5	3.5			6.4	3.0			376.0	2720		
n	14.0	14	0	0.0	18.0	18	0	0.0	27.0	27	0	0
SD	3.2	1.5			2.6	1.2			284.0	2050.0		
Min	3.6	1.7			2.4	1.1			2.8	20		
Max	15.3	7			12.0	5.6			1090.0	7900		

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Table E9. Daily mean (SD) of H2S emissions at site IA4B for September, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} m^{-2}$	$g \cdot d^{-1} hd^{-1}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1}$	$mg \cdot d^{-1} m^{-2}$	$mg \cdot d^{-1} hd^{-1}$	$mg \cdot d^{-1} AU^{-1}$
1												
2									24.0 (16.0)	173 (116)		
3									22.1 (13.6)	160 (98)		
4									24.4 (16.5)	176 (119)		
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
Avg									23.5	170		
n	0.0	0	0	0.0	0.0	0	0	0.0	3.0	3	0	0
SD									1.0	7.2		
Min									22.1	160		
Max									24.4	176		

Table E10. $PM_{2.5}$ Emissions

Table E10. Daily mean (SD) of NH3 concentration at site IA4B for July, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21	0.4 (0.0)	0.3 (0.0)	7.3 (0.8)	5.3 (0.6)	6.3 (0.5)	4.5 (0.3)	1.8 (0.7)	1.3 (0.5)
22	0.5 (0.0)							
23	0.5 (0.1)							
24								
25								
26								
27	0.6 (0.1)		7.2 (0.7)		5.4 (0.6)	3.9 (0.4)	0.4 (0.1)	0.3 (0.1)
28	0.5 (0.1)		7.5 (0.6)		6.0 (0.6)	4.3 (0.4)	0.3 (0.1)	0.2 (0.1)
29	0.5 (0.1)		7.3 (0.4)		6.4 (0.8)	4.6 (0.6)	0.3 (0.1)	0.2 (0.1)
30	0.4 (0.1)		7.7 (0.4)		6.3 (0.5)	4.5 (0.4)	0.3 (0.1)	0.2 (0.1)
31	0.4 (0.0)		7.5 (0.6)		5.7 (1.7)	4.1 (1.2)	0.5 (0.3)	0.4 (0.2)
Avg	0.5		7.4		6.0	4.3	0.6	0.4
n	8	1	6	1	6	6	6	6
SD	0.1		0.2		0.4	0.3	0.6	0.4
Min	0.4		7.2		5.4	3.9	0.3	0.2
Max	0.6		7.7		6.4	4.6	1.8	1.3

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for August, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.5 (0.1)		7.7 (0.3)		6.6 (0.6)	4.8 (0.5)	0.4 (0.1)	0.3 (0.1)
2	0.4 (0.1)		7.7 (0.7)		6.4 (0.8)	4.6 (0.6)	0.5 (0.2)	0.4 (0.1)
3	0.4 (0.1)		8.1 (0.5)		6.7 (0.6)	4.8 (0.4)	0.7 (0.5)	0.5 (0.3)
4	0.4 (0.1)		7.9 (0.4)		6.3 (0.7)	4.5 (0.5)	0.4 (0.2)	0.3 (0.1)
5	0.6 (0.1)							
6	0.6 (0.1)		8.2 (0.7)		7.2 (0.5)	5.2 (0.3)	1.0 (0.4)	0.7 (0.3)
7	0.6 (0.1)		7.7 (0.5)		6.6 (0.5)	4.8 (0.4)	1.9 (0.5)	1.4 (0.4)
8	0.4 (0.1)		7.6 (1.5)		6.4 (1.1)	4.6 (0.8)	1.9 (0.4)	1.4 (0.3)
9	0.6 (0.1)		7.7 (0.7)		6.1 (0.6)	4.4 (0.5)	1.9 (0.4)	1.4 (0.3)
10	0.6 (0.1)		7.8 (0.6)	5.7 (0.5)	6.8 (0.6)	4.9 (0.4)	2.2 (0.8)	1.6 (0.6)
11	0.6 (0.1)	0.5 (0.1)	7.6 (0.6)	5.5 (0.4)	7.1 (0.4)	5.1 (0.3)	1.6 (0.2)	1.2 (0.1)
12	0.4 (0.1)	0.3 (0.1)	7.8 (1.0)	5.6 (0.7)	7.2 (0.6)	5.2 (0.5)	1.1 (0.2)	0.8 (0.1)
13	0.6 (0.1)	0.4 (0.1)	8.3 (0.8)	6.0 (0.6)	7.2 (0.8)	5.2 (0.6)	1.5 (0.3)	1.1 (0.2)
14	0.5 (0.1)	0.4 (0.1)	7.8 (0.6)	5.6 (0.4)	7.1 (0.6)	5.1 (0.5)	1.7 (0.3)	
15	0.7 (0.2)	0.5 (0.1)	8.5 (0.8)	6.2 (0.5)	7.3 (0.7)	5.3 (0.5)	0.8 (0.3)	
16	0.7 (0.1)	0.5 (0.1)	8.9 (0.9)	6.4 (0.6)	6.7 (0.5)	4.8 (0.3)	0.5 (0.1)	0.3 (0.1)
17	1.7 (1.7)	1.2 (1.2)	9.5 (1.0)	6.8 (0.7)	7.3 (1.6)	5.3 (1.2)	0.8 (0.5)	0.6 (0.4)
18	0.5 (0.3)	0.4 (0.2)	9.5 (0.8)	6.8 (0.6)	6.5 (0.8)	4.7 (0.6)	0.7 (0.1)	0.5 (0.1)
19	0.6 (0.1)	0.4 (0.1)	9.5 (0.6)	6.9 (0.4)	6.7 (0.6)	4.8 (0.4)	0.8 (0.2)	0.6 (0.1)
20	0.6 (0.1)	0.4 (0.1)	9.9 (0.5)	7.1 (0.4)	6.7 (0.8)	4.8 (0.6)	0.8 (0.3)	0.6 (0.2)
21	0.6 (0.1)	0.5 (0.1)	10.4 (0.6)	7.5 (0.4)	6.7 (0.6)	4.8 (0.5)	1.1 (0.2)	0.8 (0.1)
22	0.5 (0.1)	0.4 (0.1)	11.0 (1.1)	7.9 (0.8)	6.6 (0.8)	4.8 (0.6)	0.7 (0.3)	0.5 (0.2)
23	0.6 (0.1)	0.4 (0.1)	10.9 (1.1)	7.8 (0.8)			0.6 (0.4)	0.5 (0.3)
24	0.4 (0.1)	0.3 (0.0)	11.9 (0.8)	8.6 (0.6)	5.9 (0.5)	4.3 (0.4)	1.1 (0.5)	0.8 (0.4)
25	0.4 (0.0)	0.3 (0.0)	13.2 (1.2)	9.5 (0.8)	6.3 (1.2)	4.5 (0.9)	2.6 (1.3)	1.8 (0.9)
26	0.5 (0.1)	0.3 (0.0)	13.4 (1.7)	9.6 (1.2)	7.7 (0.6)	5.5 (0.4)	2.1 (1.2)	1.5 (0.9)
27	0.6 (0.1)	0.4 (0.1)	14.3 (1.2)	10.3 (0.8)	7.9 (1.1)	5.7 (0.8)	2.2 (0.7)	1.6 (0.5)
28	0.6 (0.2)	0.4 (0.1)	13.2 (1.0)	9.6 (0.7)	7.5 (0.6)	5.4 (0.4)	1.3 (0.2)	1.0 (0.1)
29	0.4 (0.1)	0.3 (0.0)	14.9 (1.1)	10.7 (0.8)	6.8 (0.5)	4.9 (0.3)	1.6 (1.2)	1.2 (0.8)
30	0.3 (0.2)	0.2 (0.1)	15.6 (1.8)	11.2 (1.3)	7.7 (0.8)	5.5 (0.6)	2.5 (1.4)	1.8 (1.0)
31	0.5 (0.1)							
Avg	0.6	0.4	9.9	7.7	6.8	4.9	1.3	0.9
n	31	20	29	21	28	28	29	27
SD	0.2	0.2	2.5	1.8	0.5	0.3	0.7	0.5
Min	0.3	0.2	7.6	5.5	5.9	4.3	0.4	0.3
Max	1.7	1.2	15.6	11.2	7.9	5.7	2.6	1.8

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for September, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.6 (0.1)	0.4 (0.1)	13.3 (1.9)	9.5 (1.4)	8.0 (0.6)	5.7 (0.5)	3.2 (1.5)	2.3 (1.0)
2	0.5 (0.1)	0.4 (0.1)	12.4 (1.8)	8.9 (1.3)	7.9 (0.8)	5.7 (0.6)	2.9 (1.6)	2.1 (1.2)
3	0.4 (0.1)	0.3 (0.1)	12.7 (1.7)	9.1 (1.2)	8.2 (0.8)	5.9 (0.6)	2.5 (1.1)	1.8 (0.8)
4	0.7 (0.1)	0.5 (0.1)	14.2 (2.4)	10.2 (1.7)	8.5 (0.7)	6.1 (0.5)	2.8 (1.2)	2.0 (0.9)
5	0.7 (0.1)	0.5 (0.0)	14.9 (0.7)	10.8 (0.5)	8.6 (0.6)	6.2 (0.4)		
6	0.6 (0.1)	0.5 (0.1)	14.0 (0.8)	10.1 (0.6)	8.0 (0.8)	5.7 (0.6)		
7	0.5 (0.0)							
8	0.5 (0.1)		21.6 (1.3)	15.5 (0.9)	8.3 (0.6)	5.9 (0.5)	1.3 (0.2)	0.9 (0.2)
9	0.6 (0.1)		23.8 (1.0)	17.1 (0.7)	7.8 (0.4)	5.6 (0.3)	1.4 (0.1)	1.0 (0.1)
10	0.4 (0.1)							
11	0.3 (0.1)		20.6 (2.8)	14.7 (2.0)	8.0 (1.9)	5.7 (1.3)	0.7 (0.1)	0.5 (0.1)
12	0.6 (0.2)		21.7 (2.7)	15.5 (1.9)	8.3 (1.3)	5.9 (0.9)	0.8 (0.1)	0.6 (0.1)
13	0.5 (0.2)		20.5 (5.1)	14.7 (3.7)	7.6 (2.0)	5.4 (1.4)	0.6 (0.2)	0.5 (0.2)
14	0.4 (0.0)		23.5 (1.7)	16.7 (1.2)	10.4 (0.9)	7.4 (0.7)	0.9 (0.1)	0.6 (0.1)
15	0.3 (0.1)		20.6 (2.2)	14.7 (1.6)	9.4 (0.9)	6.7 (0.7)	1.1 (0.1)	0.8 (0.1)
16	0.4 (0.1)		17.3 (3.3)	12.4 (2.3)	7.2 (1.9)	5.2 (1.3)	0.9 (0.3)	0.7 (0.2)
17	0.5 (0.1)		14.3 (1.5)	10.3 (1.0)	8.1 (0.9)	5.8 (0.7)	0.8 (0.2)	0.6 (0.2)
18	0.5 (0.1)		16.3 (2.4)	11.7 (1.7)	8.5 (0.8)	6.1 (0.5)		
19	0.5 (0.1)	0.4 (0.1)	22.7 (2.0)	16.2 (1.4)	8.6 (0.7)	6.1 (0.5)	1.2 (0.3)	0.8 (0.2)
20	0.6 (0.2)	0.4 (0.2)	17.8 (4.6)	12.8 (3.3)	8.0 (0.8)	5.8 (0.6)	1.3 (0.4)	0.9 (0.3)
21	0.5 (0.1)	0.4 (0.1)	18.8 (3.7)	13.5 (2.6)	8.0 (0.2)	5.8 (0.2)	0.9 (0.3)	0.7 (0.2)
22	0.4 (0.1)	0.3 (0.1)	19.9 (1.6)	14.2 (1.1)	7.8 (0.6)	5.6 (0.4)	1.5 (0.6)	1.1 (0.4)
23	0.5 (0.1)	0.3 (0.0)	12.3 (4.0)	8.9 (2.9)	6.6 (1.2)	4.7 (0.9)	1.4 (0.7)	1.0 (0.5)
24	0.4 (0.1)	0.3 (0.1)	15.7 (1.1)	11.3 (0.8)	7.4 (0.4)	5.3 (0.3)	0.9 (0.1)	0.7 (0.1)
25	0.5 (0.1)	0.3 (0.1)	22.6 (3.6)	16.2 (2.6)	9.3 (1.7)	6.6 (1.2)	1.6 (0.5)	1.2 (0.4)
26	0.4 (0.1)	0.3 (0.0)	22.5 (1.7)	16.1 (1.2)	10.2 (0.7)	7.3 (0.5)	2.0 (0.5)	1.4 (0.4)
27	0.5 (0.1)	0.3 (0.1)	24.2 (4.8)	17.3 (3.4)	10.0 (1.9)	7.2 (1.4)		
28	0.7 (0.2)	0.5 (0.1)	27.0 (5.1)	19.3 (3.7)	12.6 (2.0)	9.0 (1.5)		
29	0.7 (0.1)	0.5 (0.1)	20.2 (5.8)	14.4 (4.1)	12.6 (2.3)	9.0 (1.7)	0.9 (0.3)	0.6 (0.2)
30	0.6 (0.1)	0.4 (0.1)	21.9 (6.4)	15.7 (4.6)	11.8 (2.1)	8.5 (1.5)	0.8 (0.3)	0.6 (0.2)
Avg	0.5	0.4	18.8	13.5	8.8	6.3	1.4	1
n	30	18	28	28	28	28	23	23
SD	0.1	0.1	4.1	2.9	1.5	1.1	0.7	0.5
Min	0.3	0.3	12.3	8.9	6.6	4.7	0.6	0.5
Max	0.7	0.5	27.0	19.3	12.6	9.0	3.2	2.3

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for October, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.7 (0.2)	0.5 (0.1)	23.3 (5.7)	16.7 (4.1)	10.7 (1.5)	7.7 (1.1)	0.8 (0.2)	0.6 (0.2)
2	0.7 (0.2)	0.5 (0.1)	27.3 (6.2)	19.6 (4.4)	12.9 (2.1)	9.3 (1.5)	1.2 (0.2)	0.8 (0.1)
3	0.5 (0.1)	0.4 (0.1)	24.5 (6.6)	17.5 (4.7)	11.9 (2.3)	8.5 (1.6)	0.8 (0.2)	0.6 (0.2)
4	0.7 (0.1)	0.5 (0.1)	20.4 (7.6)	14.6 (5.4)	12.3 (2.5)	8.9 (1.7)	0.9 (0.2)	0.6 (0.2)
5	0.7 (0.1)	0.5 (0.1)	16.0 (2.6)	11.5 (1.8)	10.5 (1.0)	7.6 (0.7)	1.0 (0.2)	0.7 (0.2)
6	0.7 (0.2)	0.5 (0.1)	15.6 (2.5)	11.2 (1.8)	9.6 (0.4)	7.0 (0.3)	1.1 (0.2)	0.8 (0.1)
7	0.8 (0.1)	0.6 (0.0)	16.9 (1.3)	12.1 (0.9)	10.3 (1.0)	7.5 (0.7)	1.0 (0.1)	0.7 (0.1)
8	0.5 (0.1)	0.4 (0.1)	29.1 (6.9)	20.8 (4.9)	12.7 (2.8)	9.1 (2.0)	2.2 (0.9)	1.5 (0.6)
9	0.6 (0.1)	0.4 (0.0)	32.7 (3.4)	23.4 (2.4)	15.1 (2.7)	10.8 (1.9)	2.7 (0.8)	2.0 (0.6)
10	0.6 (0.1)	0.4 (0.1)	32.9 (1.0)	23.5 (0.7)	17.5 (1.7)	12.5 (1.2)	3.5 (0.3)	2.5 (0.2)
11	0.7 (0.1)	0.5 (0.0)	31.7 (1.8)	22.6 (1.3)	17.1 (3.1)	12.2 (2.2)	4.1 (0.4)	2.9 (0.3)
12	0.7 (0.1)	0.5 (0.0)	29.4 (3.1)	21.0 (2.2)	13.8 (3.0)	9.9 (2.2)	4.5 (0.6)	3.2 (0.4)
13	0.6 (0.1)	0.4 (0.0)	26.3 (3.0)	18.9 (2.2)	13.1 (1.3)	9.4 (0.9)	4.4 (0.2)	3.1 (0.2)
14	0.6 (0.1)	0.4 (0.1)	22.8 (2.0)	16.3 (1.4)	11.3 (2.1)	8.1 (1.5)	4.2 (0.4)	3.0 (0.3)
15	0.6 (0.0)	0.4 (0.0)	24.5 (1.9)	17.6 (1.3)	11.3 (1.8)	8.1 (1.3)	4.9 (1.0)	3.5 (0.7)
16	0.5 (0.1)	0.4 (0.0)	24.6 (1.6)	17.6 (1.2)	15.3 (2.4)	10.9 (1.7)	4.0 (0.7)	2.9 (0.5)
17	0.5 (0.1)	0.4 (0.1)	25.4 (3.5)	18.2 (2.5)	12.2 (3.6)	8.8 (2.6)	5.5 (0.9)	3.9 (0.6)
18	0.6 (0.0)	0.4 (0.0)					5.4 (1.3)	
19	0.5 (0.0)	0.4 (0.0)	6.9 (0.5)	4.9 (0.4)	13.9 (2.7)	10.0 (1.9)	2.5 (0.9)	
20	0.5 (0.1)	0.4 (0.0)	7.1 (0.9)	5.1 (0.6)	11.3 (4.9)	8.1 (3.5)	2.0 (0.4)	
21	0.5 (0.1)	0.3 (0.0)	13.4 (4.7)	9.6 (3.4)	11.0 (5.0)	7.8 (3.5)	1.8 (0.4)	
22	0.6 (0.0)	0.4 (0.0)	10.8 (1.2)	7.7 (0.9)	17.5 (1.6)	12.5 (1.1)	3.0 (0.2)	
23	0.5 (0.0)	0.4 (0.0)	10.0 (1.4)	7.2 (1.0)	14.7 (3.5)	10.5 (2.5)	2.1 (1.1)	
24	0.6 (0.1)	0.4 (0.1)	12.0 (1.0)	8.6 (0.7)	20.3 (2.7)	14.5 (1.9)	1.1 (0.2)	
25	0.6 (0.1)	0.4 (0.1)			19.8 (3.3)	14.1 (2.3)	1.1 (0.1)	
26	0.7 (0.1)	0.5 (0.0)	12.3 (0.7)	8.8 (0.5)	15.3 (2.3)	10.9 (1.6)	1.1 (0.1)	0.8 (0.1)
27	0.5 (0.0)							
28	0.5 (0.0)							
29	0.6 (0.1)	0.4 (0.1)	12.2 (0.9)	8.7 (0.6)	14.1 (4.9)	10.1 (3.5)	1.4 (0.1)	1.0 (0.1)
30	0.4 (0.1)	0.3 (0.1)	11.8 (0.9)	8.5 (0.7)	9.6 (3.5)	6.9 (2.5)	1.5 (0.2)	1.1 (0.1)
31	0.5 (0.1)	0.3 (0.1)	14.4 (2.0)	10.3 (1.5)	14.7 (4.6)	10.5 (3.3)	1.9 (0.3)	1.3 (0.2)
Avg	0.6	0.4	19.8	14.2	13.6	9.7	2.5	1.8
n	31	29	27	27	28	28	29	21
SD	0.1	0.1	8.0	5.7	2.9	2.0	1.5	1.1
Min	0.4	0.3	6.9	4.9	9.6	6.9	0.8	0.6
Max	0.8	0.6	32.9	23.5	20.3	14.5	5.5	3.9

US EPA ARCHIVE DOCUMENT

Table E10. Daily mean (SD) of NH3 concentration at site IA4B for November, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.6 (0.1)	0.4 (0.1)			19.0 (3.0)	13.6 (2.1)		
2	0.6 (0.0)	0.4 (0.0)	12.7 (1.6)	9.0 (1.2)	16.7 (3.8)	12.1 (2.7)	2.8 (0.4)	2.0 (0.3)
3	0.6 (0.1)	0.4 (0.0)	12.8 (0.5)	9.1 (0.4)	16.6 (3.1)	11.9 (2.2)	2.7 (0.3)	1.9 (0.2)
4	0.5 (0.0)	0.4 (0.0)	12.7 (0.8)	9.1 (0.5)	13.9 (2.8)	9.9 (2.0)	2.8 (0.3)	2.0 (0.2)
5	0.6 (0.1)	0.4 (0.0)	16.1 (2.4)	11.5 (1.7)	20.4 (4.5)	14.6 (3.2)	3.3 (0.5)	2.4 (0.4)
6	0.6 (0.1)	0.4 (0.0)	19.0 (3.6)	13.6 (2.6)	21.4 (2.4)	15.3 (1.7)	4.0 (0.2)	2.9 (0.2)
7	0.6 (0.0)	0.4 (0.0)	20.2 (3.7)	14.4 (2.7)	18.0 (2.1)	12.8 (1.5)	4.5 (0.3)	3.2 (0.2)
8	0.7 (0.0)	0.5 (0.0)	16.6 (7.5)	11.9 (5.4)	17.0 (3.6)	12.2 (2.5)	3.9 (0.4)	2.8 (0.3)
9	0.6 (0.1)	0.4 (0.1)	12.1 (1.2)	8.7 (0.8)	17.5 (2.5)	12.5 (1.8)	4.2 (0.3)	3.0 (0.2)
10	0.6 (0.1)	0.5 (0.1)	14.7 (1.5)	10.5 (1.1)	18.3 (2.2)	13.1 (1.6)	4.5 (0.7)	3.2 (0.5)
11	0.6 (0.1)	0.4 (0.1)	16.1 (1.3)	11.5 (1.0)	10.0 (3.5)	7.2 (2.5)	3.5 (0.3)	2.5 (0.2)
12	0.5 (0.1)	0.3 (0.1)	17.1 (1.9)	12.2 (1.4)	16.8 (4.3)	12.0 (3.0)		
13	0.5 (0.1)	0.3 (0.1)	16.4 (0.9)	11.7 (0.6)	16.1 (3.6)	11.5 (2.6)	1.5 (0.2)	1.1 (0.2)
14	0.5 (0.0)	0.3 (0.0)	16.0 (1.4)	11.4 (1.0)	20.3 (2.9)	14.5 (2.1)	1.7 (0.2)	1.2 (0.1)
15	0.7 (0.1)	0.5 (0.0)	13.5 (1.1)	9.7 (0.8)	21.8 (1.7)	15.5 (1.2)	1.8 (0.3)	1.3 (0.2)
16	0.6 (0.1)	0.4 (0.1)	11.5 (0.5)	8.2 (0.3)	19.5 (3.0)	13.9 (2.1)	1.5 (0.2)	1.1 (0.1)
17	0.6 (0.0)	0.5 (0.0)	15.0 (2.6)	10.7 (1.9)	21.7 (1.4)	15.5 (1.0)	1.9 (0.1)	1.3 (0.1)
18	0.6 (0.0)	0.4 (0.0)	17.7 (0.9)	12.7 (0.7)	21.7 (1.7)	15.5 (1.2)	2.5 (0.2)	1.8 (0.1)
19	0.6 (0.1)	0.5 (0.0)	13.5 (2.6)	9.7 (1.8)	18.2 (4.4)	13.0 (3.2)	2.6 (0.2)	1.9 (0.1)
20	0.7 (0.1)	0.5 (0.1)	15.3 (2.2)	10.9 (1.6)	20.4 (2.9)	14.7 (2.1)	2.9 (0.2)	2.1 (0.1)
21	0.6 (0.1)	0.4 (0.0)	17.5 (1.0)	12.5 (0.7)	20.2 (1.5)	14.4 (1.0)	3.4 (0.3)	2.4 (0.2)
22	0.6 (0.0)							
23	0.5 (0.0)	0.4 (0.0)	15.8 (0.5)	11.3 (0.4)	21.2 (0.6)	15.1 (0.4)	4.9 (0.2)	3.5 (0.2)
24	0.6 (0.1)	0.4 (0.0)	15.9 (1.1)	11.4 (0.8)	21.3 (0.8)	15.2 (0.6)	5.2 (0.3)	3.7 (0.2)
25	0.6 (0.1)	0.4 (0.0)	15.6 (1.0)	11.1 (0.7)	21.0 (1.8)	15.0 (1.3)	5.6 (0.3)	4.0 (0.2)
26	0.6 (0.1)	0.4 (0.0)	16.5 (0.9)	11.8 (0.6)	23.5 (1.5)	16.8 (1.0)	6.2 (0.5)	4.4 (0.3)
27	0.5 (0.0)	0.4 (0.0)	16.9 (1.0)	12.1 (0.7)	23.2 (1.5)	16.5 (1.0)	7.1 (0.8)	5.0 (0.5)
28	0.6 (0.1)	0.4 (0.1)	16.6 (1.0)	11.8 (0.7)	22.0 (1.1)	15.7 (0.8)	6.6 (0.5)	4.7 (0.3)
29	0.5 (0.0)	0.4 (0.0)	16.1 (1.1)	11.5 (0.8)	21.6 (1.7)	15.4 (1.2)	7.4 (0.5)	5.3 (0.4)
30	0.5 (0.1)	0.3 (0.0)	14.5 (2.3)	10.3 (1.6)	22.0 (1.1)	15.7 (0.8)	7.3 (0.3)	5.2 (0.2)
Avg	0.6	0.4	15.5	11.1	19.4	13.8	3.9	2.8
n	30	29	28	28	29	29	27	27
SD	0.1	0.0	2.0	1.5	2.9	2.1	1.8	1.3
Min	0.5	0.3	11.5	8.2	10.0	7.2	1.5	1.1
Max	0.7	0.5	20.2	14.4	23.5	16.8	7.4	5.3

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for December, 2007.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.5 (0.1)	0.3 (0.1)	14.8 (1.9)	10.5 (1.4)	12.8 (1.5)	9.2 (1.1)	7.6 (1.2)	5.4 (0.9)
2	0.5 (0.1)	0.3 (0.1)	15.0 (0.8)	10.7 (0.6)	11.8 (0.5)	8.4 (0.4)	6.1 (0.4)	4.4 (0.3)
3	0.4 (0.1)	0.3 (0.1)	14.6 (1.0)	10.4 (0.7)	10.9 (1.6)	7.8 (1.2)	7.1 (1.1)	5.1 (0.8)
4	0.5 (0.1)	0.3 (0.1)	14.6 (0.8)	10.4 (0.6)	11.8 (1.7)	8.4 (1.3)		
5	0.5 (0.1)	0.4 (0.0)	16.2 (1.4)	11.5 (1.0)	13.9 (1.0)	9.9 (0.7)		
6	0.5 (0.1)	0.3 (0.1)	17.1 (1.9)	12.2 (1.3)	14.7 (1.3)	10.5 (1.0)		
7	0.5 (0.1)	0.4 (0.0)	15.5 (0.6)	11.0 (0.4)	13.3 (0.5)	9.5 (0.4)	4.1 (0.5)	2.9 (0.3)
8	0.5 (0.0)							
9	0.6 (0.0)							
10	0.5 (0.0)	0.3 (0.0)	15.3 (0.9)	10.9 (0.6)	13.8 (1.1)	9.8 (0.8)	3.7 (1.2)	2.7 (0.8)
11	0.4 (0.0)	0.3 (0.0)	14.5 (0.9)	10.4 (0.6)	12.8 (0.6)	9.1 (0.4)	2.3 (0.1)	1.6 (0.1)
12	0.4 (0.1)	0.3 (0.0)	14.7 (0.9)	10.5 (0.6)	12.3 (2.8)	8.8 (2.0)	3.3 (0.3)	2.4 (0.2)
13	0.5 (0.0)	0.3 (0.0)	16.0 (0.6)	11.4 (0.4)	14.0 (1.4)	10.0 (1.0)	3.4 (0.2)	2.5 (0.2)
14								
15								
16								
17								
18	0.6 (0.2)	0.4 (0.1)	15.6 (1.0)	11.2 (0.8)	19.8 (1.2)	14.2 (0.8)	6.0 (0.4)	4.3 (0.3)
19	0.6 (0.0)	0.5 (0.0)	15.0 (0.5)	10.7 (0.3)	20.4 (1.7)	14.6 (1.2)	7.3 (0.7)	5.2 (0.5)
20	0.6 (0.0)	0.4 (0.0)			20.5 (2.1)	14.7 (1.5)		
21	0.7 (0.1)	0.5 (0.1)	14.3 (0.7)	10.2 (0.5)	18.0 (1.9)	12.9 (1.3)	6.6 (0.3)	4.7 (0.2)
22	0.6 (0.1)	0.4 (0.1)	15.2 (1.2)	10.9 (0.9)	19.1 (1.4)	13.7 (1.0)	6.7 (0.4)	4.8 (0.3)
23	0.7 (0.0)	0.5 (0.0)	17.5 (2.3)	12.5 (1.7)	23.0 (1.8)	16.5 (1.3)	6.5 (1.3)	4.6 (1.0)
24	0.7 (0.0)	0.5 (0.0)	16.3 (0.8)	11.6 (0.5)	23.2 (2.4)	16.6 (1.7)	6.6 (0.6)	4.7 (0.4)
25	0.7 (0.1)	0.5 (0.0)	16.1 (1.2)	11.5 (0.9)	23.0 (2.1)	16.4 (1.5)	6.3 (0.5)	4.5 (0.4)
26	0.7 (0.1)	0.5 (0.0)	16.3 (0.8)	11.6 (0.5)	22.9 (1.6)	16.4 (1.1)	6.3 (0.5)	4.5 (0.3)
27	0.7 (0.0)							
28	0.7 (0.1)		15.0 (1.5)					
29	0.7 (0.1)	0.5 (0.0)	15.2 (1.0)	10.9 (0.7)	24.1 (1.9)	17.2 (1.4)	2.6 (0.2)	1.9 (0.1)
30	0.6 (0.1)	0.5 (0.0)	15.5 (0.9)	11.1 (0.7)	24.2 (2.6)	17.3 (1.9)	2.7 (0.2)	2.0 (0.1)
31	0.6 (0.1)	0.5 (0.1)	16.6 (1.1)	11.9 (0.8)	25.8 (2.3)	18.5 (1.6)	2.8 (0.7)	2.0 (0.5)
Avg	0.6	0.4	15.5	11.1	17.7	12.6	5.2	3.7
n	27	23	23	22	23	23	19	19
SD	0.1	0.1	0.8	0.6	4.9	3.5	1.8	1.3
Min	0.4	0.3	14.3	10.2	10.9	7.8	2.3	1.6
Max	0.7	0.5	17.5	12.5	25.8	18.5	7.6	5.4

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for January, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.6 (0.1)	0.4 (0.1)	15.1 (0.5)	10.8 (0.4)	24.3 (3.7)	17.5 (2.7)	2.3 (0.3)	1.6 (0.2)
2	0.5 (0.1)	0.4 (0.0)	15.1 (1.2)	10.8 (0.9)	20.8 (1.2)	14.8 (0.8)	2.7 (0.3)	1.9 (0.2)
3	0.6 (0.1)	0.4 (0.0)	16.3 (1.8)	11.6 (1.3)	23.1 (1.1)	16.5 (0.8)	3.2 (0.2)	2.3 (0.1)
4	0.6 (0.0)							
5	0.7 (0.0)	0.5 (0.0)	15.1 (1.1)	10.8 (0.8)	20.3 (3.3)	14.5 (2.4)	3.4 (0.2)	2.4 (0.2)
6	0.7 (0.0)	0.5 (0.0)	14.7 (0.7)	10.5 (0.5)	18.8 (2.0)	13.5 (1.5)	3.7 (0.3)	2.6 (0.2)
7	0.8 (0.1)	0.5 (0.1)	14.5 (0.8)	10.4 (0.6)	19.4 (2.5)	13.9 (1.8)	4.2 (0.3)	3.0 (0.2)
8	0.7 (0.0)	0.5 (0.0)	15.6 (0.9)	11.2 (0.6)	24.1 (2.1)	17.2 (1.5)	4.6 (0.5)	3.3 (0.3)
9	0.6 (0.0)	0.5 (0.0)	15.8 (0.8)	11.3 (0.6)	22.8 (2.6)	16.3 (1.8)	5.4 (0.6)	3.9 (0.4)
10	0.7 (0.1)	0.5 (0.1)	16.3 (0.7)	11.6 (0.5)				
11	0.7 (0.1)	0.5 (0.0)	16.7 (0.5)	11.9 (0.4)	24.2 (2.8)	17.3 (2.0)	4.9 (0.4)	3.5 (0.3)
12	0.7 (0.0)	0.5 (0.0)	16.8 (0.6)	12.0 (0.5)	25.2 (2.0)	18.1 (1.4)	5.1 (0.4)	3.6 (0.3)
13	0.7 (0.0)	0.5 (0.0)	16.8 (0.9)	12.0 (0.6)	26.7 (3.0)	19.1 (2.1)	4.7 (0.2)	3.4 (0.2)
14	0.5 (0.2)	0.3 (0.2)	14.4 (3.1)	10.3 (2.2)	28.9 (2.8)	20.7 (2.0)	4.6 (0.5)	3.3 (0.3)
15	0.6 (0.0)	0.4 (0.0)	17.1 (0.5)	12.2 (0.4)	25.4 (2.6)	18.2 (1.8)	5.9 (0.5)	4.2 (0.4)
16	0.6 (0.0)	0.5 (0.0)	17.7 (0.8)	12.7 (0.6)	24.5 (2.5)	17.6 (1.8)	4.9 (0.4)	3.5 (0.3)
17	0.6 (0.1)	0.4 (0.1)	17.3 (0.8)	12.4 (0.6)	28.4 (3.9)	20.3 (2.8)	4.9 (0.6)	3.5 (0.4)
18	0.6 (0.1)	0.4 (0.0)	16.4 (1.2)	11.7 (0.9)	26.7 (2.2)	19.1 (1.6)		
19	0.6 (0.0)	0.4 (0.0)	17.3 (1.0)	12.3 (0.7)	28.9 (3.2)	20.7 (2.3)	2.9 (0.5)	2.1 (0.4)
20	0.5 (0.0)	0.4 (0.0)	16.8 (0.6)	12.0 (0.4)	24.0 (2.9)	17.2 (2.1)	2.7 (0.3)	1.9 (0.2)
21	0.5 (0.0)	0.3 (0.0)	17.9 (1.2)	12.8 (0.9)	21.0 (2.3)		2.5 (0.5)	1.8 (0.3)
22	0.6 (0.1)	0.4 (0.1)	17.9 (2.0)	12.8 (1.5)	24.1 (2.7)		1.8 (0.3)	1.3 (0.2)
23	0.3 (0.1)	0.2 (0.1)	16.6 (1.0)	11.8 (0.7)	24.3 (3.4)		1.7 (0.2)	1.2 (0.1)
24	0.2 (0.1)	0.2 (0.1)	17.5 (1.6)	12.5 (1.1)	23.1 (4.9)		3.2 (3.4)	2.3 (2.5)
25	0.2 (0.1)	0.1 (0.1)	18.0 (0.9)	12.9 (0.6)	19.7 (1.4)		1.6 (0.2)	1.1 (0.1)
26	0.3 (0.1)	0.2 (0.1)	19.4 (1.6)	13.8 (1.1)	21.3 (2.1)		1.8 (0.3)	1.3 (0.2)
27	0.3 (0.1)	0.2 (0.0)	18.9 (1.5)	13.5 (1.1)	20.0 (2.0)		2.3 (0.2)	1.6 (0.1)
28	0.2 (0.1)	0.1 (0.0)	17.7 (1.1)	12.7 (0.8)	16.3 (2.9)		2.7 (0.1)	2.0 (0.1)
29	0.2 (0.1)	0.1 (0.1)	16.1 (2.8)	11.5 (2.0)	18.9 (3.7)		4.3 (1.0)	3.1 (0.7)
30	0.2 (0.1)	0.1 (0.1)	17.3 (1.0)	12.4 (0.7)	16.7 (2.6)		5.1 (0.8)	3.7 (0.6)
31	0.2 (0.1)	0.1 (0.1)	17.6 (0.8)	12.6 (0.5)	16.1 (1.7)		6.8 (2.4)	4.8 (1.7)
Avg	0.5	0.4	16.7	11.9	22.7	17.4	3.7	2.7
n	31	30	30	30	29	18	28	28
SD	0.2	0.1	1.2	0.9	3.5	2.1	1.4	1
Min	0.2	0.1	14.4	10.3	16.1	13.5	1.6	1.1
Max	0.8	0.5	19.4	13.8	28.9	20.7	6.8	4.8

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for February, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.3 (0.1)	0.2 (0.1)	16.8 (0.7)	12.0 (0.5)	18.9 (2.6)		6.9 (0.5)	4.9 (0.4)
2	0.2 (0.1)	0.2 (0.1)	17.3 (0.8)	12.4 (0.5)	16.6 (0.9)		6.7 (0.3)	4.8 (0.2)
3	0.2 (0.1)	0.2 (0.1)	16.7 (0.4)	11.9 (0.3)	16.4 (1.7)		6.5 (0.2)	4.6 (0.2)
4	0.2 (0.1)	0.1 (0.0)	16.0 (0.6)	11.4 (0.4)	16.0 (1.6)		6.2 (0.5)	4.5 (0.4)
5	0.3 (0.1)	0.2 (0.1)	15.3 (0.8)	11.0 (0.6)	19.1 (1.6)		5.5 (0.6)	3.9 (0.4)
6	0.3 (0.1)	0.2 (0.1)	15.5 (1.0)	11.0 (0.6)	21.6 (2.3)		5.0 (0.2)	3.6 (0.2)
7	0.2 (0.1)	0.2 (0.0)	14.5 (0.7)	10.4 (0.5)	17.7 (2.5)		3.0 (1.7)	2.1 (1.2)
8	0.2 (0.1)	0.1 (0.1)	15.4 (1.1)	11.0 (0.8)	16.4 (2.8)		1.5 (0.4)	1.1 (0.3)
9	0.3 (0.1)	0.2 (0.1)	14.5 (1.7)	10.3 (1.2)	20.3 (3.1)		1.4 (0.1)	1.0 (0.1)
10	0.1 (0.1)	0.1 (0.1)	13.8 (1.2)	9.8 (0.9)	20.7 (2.2)		1.7 (0.2)	1.2 (0.1)
11	0.1 (0.1)	0.1 (0.1)	15.2 (1.0)	10.9 (0.7)	15.1 (2.8)		2.3 (0.3)	1.6 (0.2)
12	0.2 (0.1)	0.1 (0.1)	15.5 (0.9)	11.1 (0.7)	19.7 (2.5)		2.0 (0.4)	1.4 (0.3)
13	0.2 (0.1)	0.1 (0.0)	16.2 (0.9)	11.6 (0.6)	16.9 (2.9)		2.1 (0.6)	1.5 (0.5)
14	0.2 (0.0)							
15	0.2 (0.1)	0.1 (0.1)	14.8 (1.1)	10.6 (0.8)	20.0 (3.8)		1.6 (0.2)	1.1 (0.1)
16	0.1 (0.1)	0.1 (0.0)	16.9 (1.3)	12.0 (1.0)	16.3 (2.9)		1.9 (0.3)	1.4 (0.2)
17	0.3 (0.1)	0.2 (0.1)	17.5 (1.1)	12.5 (0.8)	18.4 (1.8)		1.9 (0.2)	1.4 (0.1)
18	0.3 (0.1)	0.2 (0.1)	16.4 (1.1)	11.7 (0.8)	22.7 (1.9)		3.2 (1.2)	2.3 (0.8)
19	0.2 (0.1)	0.1 (0.1)	18.1 (1.2)	12.9 (0.8)	18.3 (4.0)		3.0 (0.3)	2.1 (0.2)
20	0.2 (0.1)	0.1 (0.0)	16.2 (1.0)	11.6 (0.7)	19.3 (1.8)		3.5 (0.9)	2.5 (0.6)
21	0.2 (0.1)	0.1 (0.0)	17.5 (1.5)	12.5 (1.0)	15.8 (3.0)		4.3 (0.7)	3.1 (0.5)
22	0.1 (0.1)	0.1 (0.1)	17.0 (0.8)	12.2 (0.6)	17.4 (1.6)		3.7 (0.4)	2.6 (0.3)
23			17.2 (1.0)	12.3 (0.7)	16.9 (1.2)		3.6 (0.2)	2.6 (0.2)
24								
25								
26								
27								
28								
29	0.2 (0.1)	0.2 (0.1)	17.7 (0.8)	12.7 (0.6)	22.3 (1.9)	15.9 (1.4)		
Avg	0.2	0.2	16.2	11.6	18.4		3.5	2.5
n	23	22	23	23	23	1	22	22
SD	0.1	0.0	1.2	0.8	2.1		1.8	1.3
Min	0.1	0.1	13.8	9.8	15.1		1.4	1.0
Max	0.3	0.2	18.1	12.9	22.7		6.9	4.9

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for March, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.2 (0.1)	0.2 (0.1)	16.4 (1.2)	11.7 (0.9)	18.8 (2.0)	13.4 (1.5)		
2	0.3 (0.1)	0.2 (0.0)	16.4 (1.0)	11.8 (0.7)	17.9 (2.9)	12.8 (2.1)		
3	0.3 (0.1)	0.2 (0.1)	15.9 (1.4)	11.4 (1.0)	23.6 (1.1)	16.9 (0.8)		
4	0.2 (0.1)	0.1 (0.0)	17.4 (1.1)	12.4 (0.8)	22.8 (2.0)	16.3 (1.5)		
5	0.2 (0.1)	0.2 (0.1)	17.6 (1.1)	12.6 (0.8)	23.7 (1.6)	16.9 (1.2)	3.5 (0.4)	2.5 (0.3)
6	0.2 (0.1)	0.2 (0.0)	17.5 (1.3)	12.5 (0.9)	22.8 (2.1)	16.3 (1.5)	2.8 (0.6)	2.0 (0.4)
7	0.3 (0.1)	0.2 (0.1)	15.4 (1.1)	11.0 (0.8)	21.3 (1.8)	15.2 (1.3)	2.4 (0.2)	1.7 (0.2)
8	0.2 (0.1)	0.1 (0.0)	16.9 (1.2)	12.1 (0.9)	22.1 (1.3)	15.8 (0.9)	2.8 (0.1)	2.0 (0.1)
9	0.3 (0.1)	0.2 (0.1)	17.9 (1.4)	12.8 (1.0)	22.8 (1.0)	16.3 (0.7)	2.8 (0.2)	2.0 (0.1)
10	0.3 (0.1)	0.2 (0.1)	17.3 (1.4)	12.3 (1.0)	22.6 (1.0)	16.1 (0.7)	3.0 (0.2)	2.1 (0.1)
11	0.3 (0.0)	0.2 (0.0)	16.6 (0.9)	11.9 (0.7)	21.3 (1.3)	15.2 (0.9)	3.2 (0.2)	2.3 (0.2)
12	0.2 (0.1)	0.2 (0.0)	17.2 (1.3)	12.3 (0.9)	22.8 (2.8)	16.2 (2.0)	3.4 (0.3)	2.5 (0.2)
13	0.4 (0.1)	0.3 (0.1)	15.7 (1.6)	11.3 (1.2)	27.7 (1.9)	19.8 (1.4)	3.7 (0.5)	2.7 (0.3)
14	0.3 (0.1)	0.2 (0.1)	16.4 (0.9)	11.7 (0.7)	20.3 (7.9)	14.5 (5.7)	3.9 (0.2)	2.8 (0.1)
15	0.3 (0.1)	0.2 (0.1)	18.0 (0.7)	12.9 (0.5)	20.2 (1.6)	14.5 (1.1)	4.4 (0.4)	3.2 (0.3)
16	0.2 (0.1)	0.2 (0.1)	18.1 (0.8)	12.9 (0.6)	17.8 (2.8)	12.7 (2.0)	5.5 (0.4)	4.0 (0.3)
17	0.3 (0.1)	0.2 (0.0)	17.8 (1.3)	12.7 (0.9)	21.0 (4.8)	15.0 (3.4)	6.2 (0.4)	4.4 (0.3)
18	0.3 (0.1)	0.2 (0.1)	16.2 (0.6)	11.6 (0.4)	27.3 (1.0)	19.5 (0.7)	5.7 (0.2)	4.1 (0.2)
19	0.4 (0.1)	0.3 (0.1)	14.4 (1.6)	10.3 (1.1)	28.8 (4.5)	20.6 (3.2)	5.3 (0.4)	3.8 (0.3)
20	0.3 (0.1)	0.2 (0.1)	15.2 (1.2)	10.9 (0.9)	27.3 (10.4)	19.5 (7.4)	5.2 (0.5)	3.7 (0.4)
21	0.3 (0.1)	0.2 (0.1)	17.1 (1.0)	12.2 (0.7)	13.5 (1.6)	9.6 (1.1)		
22	0.4 (0.1)	0.3 (0.1)	18.4 (1.0)	13.1 (0.7)	15.9 (1.2)	11.4 (0.8)	3.4 (0.8)	2.5 (0.6)
23	0.4 (0.1)	0.3 (0.1)	18.5 (1.0)	13.2 (0.7)	18.9 (1.6)	13.5 (1.2)	4.8 (0.3)	3.5 (0.2)
24	0.3 (0.1)		16.9 (3.5)	12.1 (2.5)	14.5 (2.5)	10.4 (1.8)	4.0 (1.0)	2.9 (0.7)
25	0.3 (0.1)	0.2 (0.1)	16.7 (1.3)	11.9 (1.0)	12.8 (1.6)	9.1 (1.2)	2.6 (0.3)	1.9 (0.2)
26	0.4 (0.1)	0.3 (0.1)	17.2 (1.0)	12.3 (0.7)	13.9 (2.5)	9.9 (1.8)	2.6 (0.5)	1.8 (0.3)
27	0.3 (0.1)		19.6 (1.0)	14.0 (0.7)	14.4 (1.6)	10.3 (1.1)	2.5 (0.3)	1.8 (0.2)
28	0.4 (0.1)		19.6 (1.5)	14.0 (1.1)	14.9 (2.5)	10.6 (1.8)	2.4 (0.3)	1.7 (0.2)
29	0.3 (0.1)		20.8 (3.0)	14.9 (2.1)	13.8 (2.8)	9.9 (2.0)	2.9 (0.5)	2.1 (0.3)
30	0.3 (0.1)	0.2 (0.1)	18.5 (1.9)	13.2 (1.3)	12.3 (1.9)	8.8 (1.3)	2.5 (0.3)	1.8 (0.2)
31	0.3 (0.1)	0.2 (0.1)	19.4 (1.6)	13.9 (1.2)	14.3 (2.6)	10.2 (1.8)	3.2 (0.3)	2.3 (0.2)
Avg	0.3	0.2	17.3	12.4	19.7	14.1	3.6	2.6
n	31	27	31	31	31	31	26	26
SD	0.1	0.0	1.4	1.0	4.7	3.4	1.1	0.8
Min	0.2	0.1	14.4	10.3	12.3	8.8	2.4	1.7
Max	0.4	0.3	20.8	14.9	28.8	20.6	6.2	4.4

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for April, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.4 (0.1)	0.3 (0.1)	21.4 (1.5)	15.3 (1.1)	17.7 (3.0)	12.7 (2.2)	3.9 (0.5)	2.8 (0.4)
2	0.4 (0.1)	0.3 (0.1)	20.9 (2.3)	15.0 (1.7)	12.7 (2.5)	9.1 (1.8)	3.8 (0.4)	2.7 (0.3)
3	0.3 (0.1)	0.2 (0.1)	23.0 (1.9)	16.5 (1.4)	13.8 (1.0)	9.9 (0.7)	4.2 (0.3)	3.0 (0.2)
4	0.3 (0.1)	0.2 (0.1)	18.9 (3.8)	13.5 (2.7)	11.9 (3.6)	8.6 (2.6)	4.2 (0.8)	3.0 (0.5)
5	0.3 (0.1)	0.2 (0.1)	15.4 (2.8)	11.0 (2.0)	10.0 (1.9)	7.1 (1.3)	3.7 (0.6)	2.6 (0.4)
6	0.4 (0.1)	0.3 (0.1)	16.2 (2.5)	11.4 (1.7)	9.7 (2.2)	6.9 (1.6)	4.3 (0.5)	3.0 (0.4)
7	0.4 (0.1)	0.3 (0.1)	21.6 (3.3)	15.4 (2.3)	13.2 (3.5)	9.4 (2.5)	4.8 (0.6)	3.5 (0.4)
8	0.5 (0.1)	0.3 (0.1)	23.2 (2.3)	16.6 (1.7)	10.5 (0.7)	7.5 (0.5)	5.2 (0.4)	3.8 (0.3)
9	0.4 (0.1)	0.3 (0.1)	21.6 (2.5)	15.4 (1.8)	8.5 (1.8)	6.1 (1.3)	4.9 (0.4)	3.5 (0.3)
10	0.4 (0.1)	0.3 (0.1)	21.5 (1.7)	15.4 (1.2)	6.9 (1.3)	5.0 (0.9)	6.2 (1.1)	4.4 (0.8)
11	0.5 (0.2)	0.3 (0.1)	19.8 (2.1)	14.2 (1.5)	28.3 (21.5)	20.3 (15.4)	5.4 (0.5)	3.9 (0.4)
12	0.4 (0.1)	0.3 (0.1)	22.6 (2.3)	16.2 (1.6)	37.2 (6.5)	26.7 (4.7)	6.4 (1.1)	4.6 (0.8)
13	0.3 (0.1)	0.2 (0.1)	22.0 (2.7)	15.7 (2.0)	27.1 (2.1)	19.4 (1.5)	6.0 (0.5)	4.3 (0.4)
14	0.4 (0.2)	0.3 (0.2)	19.8 (2.9)	14.2 (2.1)	25.3 (1.6)	18.1 (1.1)	5.4 (0.7)	3.8 (0.5)
15	0.4 (0.2)	0.3 (0.1)	18.6 (3.9)	13.3 (2.8)	24.6 (1.7)	17.6 (1.2)	5.1 (1.1)	3.7 (0.8)
16	0.3 (0.1)	0.2 (0.1)	17.0 (2.8)	12.2 (2.0)	26.9 (2.0)	19.2 (1.5)	4.3 (0.4)	3.1 (0.3)
17	0.3 (0.1)	0.2 (0.1)	19.8 (1.3)	14.1 (0.9)	27.8 (1.7)	19.9 (1.2)		
18	0.3 (0.1)	0.2 (0.1)	18.6 (0.9)	13.3 (0.6)	25.1 (1.3)	17.9 (0.9)	3.4 (1.2)	2.4 (0.9)
19	0.3 (0.1)	0.2 (0.1)	19.4 (1.0)	13.9 (0.7)	27.5 (2.5)	19.7 (1.8)	2.2 (0.2)	1.6 (0.1)
20	0.4 (0.1)	0.3 (0.0)	17.0 (2.3)	12.2 (1.7)	28.1 (1.0)	20.1 (0.8)	2.8 (0.7)	2.0 (0.5)
21	0.4 (0.1)	0.3 (0.1)	16.0 (0.9)	11.4 (0.6)	30.1 (3.7)	21.6 (2.6)	3.0 (0.4)	2.1 (0.3)
22	0.3 (0.1)	0.2 (0.1)	21.6 (2.7)	15.5 (1.9)	25.6 (5.5)	18.3 (3.9)	3.1 (0.4)	2.2 (0.3)
23	0.4 (0.1)	0.3 (0.1)	20.8 (4.5)	14.8 (3.2)	38.7 (13.7)	27.7 (9.8)	2.9 (0.4)	2.1 (0.3)
24	0.6 (0.1)	0.4 (0.1)	19.9 (2.9)	14.3 (2.1)	33.5 (5.7)	24.1 (4.0)	3.4 (0.3)	2.4 (0.2)
25	0.4 (0.1)	0.3 (0.1)	28.4 (6.8)	20.3 (4.8)	28.5 (2.6)	20.4 (1.9)	3.4 (0.5)	2.4 (0.4)
26								
27								
28								
29								
30								
Avg	0.4	0.3	20.2	14.4	22.0	15.7	4.2	3
n	25	25	25	25	25	25	24	24
SD	0.1	0.0	2.8	2.0	9.3	6.7	1.1	0.8
Min	0.3	0.2	15.4	11.0	6.9	5.0	2.2	1.6
Max	0.6	0.4	28.4	20.3	38.7	27.7	6.4	4.6

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for May, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16	0.1 (0.1)	0.1 (0.1)	9.8 (1.1)	7.0 (0.8)	6.8 (2.5)	4.9 (1.8)	1.9 (0.3)	1.4 (0.2)
17	0.1 (0.1)	0.1 (0.0)	9.6 (1.7)	6.8 (1.2)	5.6 (0.9)	4.0 (0.6)	2.3 (0.2)	1.6 (0.2)
18	0.1 (0.1)	0.1 (0.1)	11.8 (2.2)	8.4 (1.6)	6.9 (1.7)	4.9 (1.2)	3.2 (0.4)	2.3 (0.3)
19	0.1 (0.1)	0.1 (0.1)	11.7 (2.1)	8.4 (1.5)	6.8 (1.2)	4.9 (0.8)	3.9 (1.0)	2.8 (0.7)
20	0.2 (0.1)	0.1 (0.1)	12.4 (2.2)	8.8 (1.6)	7.8 (2.1)	5.6 (1.5)	3.1 (0.2)	2.2 (0.2)
21	0.1 (0.1)	0.1 (0.1)	11.5 (3.0)	8.2 (2.1)	6.9 (2.7)	4.9 (1.9)	3.1 (0.5)	2.2 (0.3)
22	0.0 (0.1)	0.0 (0.1)	12.3 (1.0)	8.8 (0.7)	6.5 (1.1)	4.7 (0.8)	4.8 (0.4)	3.4 (0.3)
23	0.5 (0.3)	0.4 (0.2)			9.5 (1.3)	6.8 (0.9)		
24	0.4 (0.2)	0.3 (0.1)			8.6 (1.7)	6.1 (1.2)		
25	0.4 (0.1)	0.3 (0.1)	10.8 (0.9)	7.8 (0.7)	7.8 (0.8)	5.6 (0.6)	4.4 (1.6)	3.2 (1.1)
26	0.3 (0.2)		10.6 (1.5)		7.3 (1.3)		3.3 (1.6)	
27	0.2 (0.1)		14.4 (1.2)		10.6 (1.9)		6.1 (0.5)	
28	0.1 (0.1)		13.0 (1.9)		8.2 (2.3)		6.5 (0.4)	
29	0.1 (0.1)	0.1 (0.1)	14.6 (5.4)	10.5 (3.9)	7.6 (0.8)	5.5 (0.6)	5.1 (0.7)	3.7 (0.5)
30	0.2 (0.1)	0.2 (0.1)	10.7 (1.4)	7.7 (1.0)	6.9 (0.7)	5.0 (0.5)	3.9 (1.3)	2.8 (0.9)
31	0.2 (0.1)	0.2 (0.0)	9.0 (1.2)	6.5 (0.9)	6.3 (0.7)	4.5 (0.5)	3.4 (1.3)	2.4 (0.9)
Avg	0.2	0.1	11.6	8.1	7.5	5.2	3.9	2.6
n	16	13	14	11	16	13	14	11
SD	0.1	0.1	1.6	1.1	1.2	0.7	1.3	0.7
Min	0.0	0.0	9.0	6.5	5.6	4.0	1.9	1.4
Max	0.5	0.4	14.6	10.5	10.6	6.8	6.5	3.7

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for June, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.2 (0.1)	0.2 (0.1)	8.0 (1.6)	5.9 (1.1)	6.0 (1.2)	4.3 (0.9)	2.8 (1.7)	2.0 (1.2)
2	0.5 (0.2)	0.3 (0.1)	9.5 (0.8)	6.8 (0.6)	7.1 (0.8)	5.1 (0.6)		
3	0.2 (0.1)	0.1 (0.1)	9.3 (0.6)	6.7 (0.4)	7.5 (0.6)	5.4 (0.4)		
4	0.2 (0.1)	0.2 (0.1)	10.0 (0.5)	7.2 (0.3)	7.9 (0.5)	5.7 (0.4)	3.4 (0.4)	2.5 (0.3)
5	0.7 (0.2)		9.6 (0.6)		8.0 (0.9)		2.6 (0.9)	
6	0.4 (0.1)						2.8 (1.3)	
7	0.4 (0.1)		8.4 (0.8)		7.4 (1.0)		2.5 (0.9)	
8								
9								
10								
11								
12								
13								
14	0.2 (0.1)	0.1 (0.1)	9.1 (2.3)		6.4 (0.9)		2.3 (1.2)	1.6 (0.8)
15	0.2 (0.1)	0.2 (0.1)	8.6 (1.3)		6.7 (0.7)		1.7 (0.6)	1.2 (0.4)
16	0.2 (0.1)	0.2 (0.0)	9.7 (2.2)		7.0 (1.7)		2.6 (1.2)	1.8 (0.9)
17	0.3 (0.1)	0.2 (0.0)	9.9 (2.4)		7.0 (2.2)		2.5 (1.2)	1.8 (0.9)
18	0.4 (0.1)	0.3 (0.1)	9.2 (2.0)	6.6 (1.4)	6.3 (1.5)			
19	0.2 (0.1)	0.1 (0.1)	9.0 (0.8)	6.4 (0.5)	6.7 (1.4)	4.8 (1.0)	2.0 (0.9)	1.4 (0.7)
20	0.3 (0.1)	0.2 (0.1)						
21	0.2 (0.1)	0.2 (0.1)	7.9 (0.8)	5.6 (0.6)	6.2 (0.9)	4.5 (0.7)	1.6 (0.7)	1.2 (0.5)
22	0.2 (0.1)	0.2 (0.1)	8.2 (1.1)	5.9 (0.8)	7.0 (1.3)	5.0 (1.0)	1.8 (0.9)	1.3 (0.7)
23	0.2 (0.1)	0.2 (0.1)	8.8 (1.4)	6.3 (1.0)	6.4 (1.3)	4.6 (1.0)	1.6 (0.9)	1.1 (0.6)
24	0.3 (0.1)	0.2 (0.1)	9.3 (0.9)	6.6 (0.6)	6.1 (0.7)	4.4 (0.5)		
25	0.3 (0.1)	0.2 (0.1)	9.4 (0.8)	6.8 (0.6)	6.6 (0.8)	4.7 (0.6)		
26	0.3 (0.1)	0.2 (0.1)	10.1 (0.8)	7.3 (0.6)	6.4 (0.3)	4.6 (0.3)	1.0 (0.1)	0.7 (0.1)
27	0.4 (0.2)	0.3 (0.1)	9.3 (0.7)	6.7 (0.5)	6.7 (0.8)	4.8 (0.5)	1.5 (0.1)	1.1 (0.1)
28	0.2 (0.1)	0.1 (0.1)	9.4 (0.7)	6.6 (0.5)	5.9 (0.6)	4.2 (0.5)	2.1 (0.2)	1.5 (0.1)
29	0.2 (0.1)	0.2 (0.1)	8.9 (0.9)	6.4 (0.7)	6.0 (0.8)	4.3 (0.6)	2.5 (0.8)	1.8 (0.5)
30	0.2 (0.1)	0.1 (0.1)	9.3 (0.9)	6.6 (0.7)	5.9 (0.9)	4.2 (0.7)	2.8 (1.1)	2.0 (0.8)
Avg	0.3	0.2	9.1	6.5	6.7	4.7	2.2	1.5
n	24	21	22	16	22	15	18	15
SD	0.1	0.1	0.6	0.4	0.6	0.4	0.6	0.4
Min	0.2	0.1	7.9	5.6	5.9	4.2	1.0	0.7
Max	0.7	0.3	10.1	7.3	8.0	5.7	3.4	2.5

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for July, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.3 (0.1)	0.2 (0.1)	9.4 (1.0)		6.3 (0.6)	4.5 (0.4)	3.0 (1.4)	2.1 (1.0)
2	0.3 (0.1)	0.2 (0.1)	10.9 (2.4)		7.1 (1.0)	5.1 (0.7)	3.7 (1.4)	2.6 (1.0)
3	0.3 (0.1)	0.2 (0.1)	12.5 (1.9)		7.0 (0.7)	5.0 (0.5)	4.8 (1.4)	3.4 (1.0)
4	0.3 (0.1)	0.2 (0.1)	13.3 (0.9)		7.0 (1.0)	5.0 (0.7)	5.7 (1.1)	4.1 (0.8)
5	0.4 (0.1)	0.3 (0.1)	12.5 (0.8)		6.5 (0.8)	4.7 (0.6)	5.9 (1.9)	4.2 (1.4)
6	0.5 (0.1)	0.4 (0.1)	12.2 (1.3)		6.1 (0.3)	4.4 (0.2)	5.6 (2.7)	4.0 (1.9)
7	0.6 (0.2)	0.4 (0.1)	13.6 (1.1)		6.9 (0.8)	5.0 (0.6)	3.0 (0.7)	2.2 (0.5)
8	0.5 (0.1)	0.4 (0.1)	12.5 (1.1)		6.7 (0.4)	4.9 (0.3)	3.8 (1.0)	2.7 (0.7)
9	0.4 (0.1)	0.3 (0.1)	13.3 (1.7)	9.6 (1.2)	6.5 (0.5)	4.6 (0.4)	4.3 (2.2)	3.1 (1.6)
10	0.6 (0.2)	0.5 (0.1)	13.0 (1.2)		6.8 (0.5)	4.9 (0.4)	2.7 (1.0)	2.0 (0.7)
11	0.6 (0.1)	0.4 (0.1)	13.4 (0.6)		7.0 (0.4)	5.0 (0.3)	2.0 (0.4)	1.4 (0.3)
12	0.4 (0.1)	0.3 (0.1)	14.6 (1.0)	10.5 (0.7)	6.7 (0.6)	4.8 (0.4)	3.9 (1.3)	2.8 (0.9)
13	0.4 (0.1)	0.3 (0.1)	14.6 (0.8)	10.4 (0.6)	6.6 (0.7)	4.7 (0.5)	3.4 (0.9)	2.4 (0.6)
14	0.4 (0.1)	0.3 (0.1)	14.7 (0.9)	10.6 (0.6)	6.7 (0.3)	4.8 (0.2)	3.1 (1.2)	2.2 (0.9)
15	0.5 (0.1)	0.3 (0.1)	14.1 (1.8)	10.1 (1.3)	6.7 (0.5)	4.9 (0.4)	2.4 (0.5)	1.7 (0.4)
16	0.5 (0.1)	0.4 (0.1)	14.5 (1.7)	10.4 (1.2)	7.2 (0.2)	5.2 (0.2)	1.6 (0.3)	
17	0.5 (0.1)	0.4 (0.1)	14.9 (1.5)	10.7 (1.1)	7.1 (0.7)	5.2 (0.5)	1.1 (0.1)	0.8 (0.1)
18	0.5 (0.2)	0.4 (0.1)	13.6 (1.8)	9.8 (1.3)	7.6 (0.8)	5.5 (0.6)	1.6 (0.4)	1.1 (0.3)
19	0.4 (0.1)	0.3 (0.1)	14.0 (1.6)	10.0 (1.2)	7.6 (0.5)		2.9 (0.5)	2.1 (0.3)
20	0.6 (0.1)	0.5 (0.1)	14.3 (1.6)	10.3 (1.2)	7.8 (0.7)		2.7 (1.1)	2.0 (0.8)
21	0.5 (0.1)	0.3 (0.1)	16.6 (1.5)	11.9 (1.1)	7.4 (0.5)		4.0 (1.1)	2.9 (0.8)
22	0.5 (0.1)	0.3 (0.1)	15.9 (2.3)	11.4 (1.7)	7.1 (0.5)		3.3 (1.5)	2.4 (1.1)
23	0.4 (0.1)		15.7 (2.6)	11.2 (1.8)	7.4 (0.5)	5.3 (0.3)	4.1 (1.7)	3.0 (1.2)
24	0.4 (0.1)		13.6 (0.7)		7.5 (0.9)			
25	0.6 (0.1)		14.4 (1.1)		6.6 (0.3)		4.1 (2.2)	
26	0.4 (0.1)		16.9 (2.3)	12.2 (1.6)	6.6 (0.3)	4.8 (0.2)	3.0 (1.5)	2.2 (1.1)
27	0.4 (0.1)		15.0 (1.5)	10.8 (1.1)	6.9 (0.5)	5.0 (0.4)	4.7 (1.5)	3.4 (1.1)
28	0.5 (0.1)		14.6 (1.3)	10.5 (0.9)	6.5 (0.3)	4.7 (0.2)	4.1 (2.1)	3.0 (1.5)
29	0.5 (0.1)		16.6 (2.7)	12.0 (2.0)	7.6 (0.9)	5.5 (0.7)	2.9 (0.6)	2.1 (0.4)
30	0.6 (0.1)		16.7 (1.4)	12.1 (1.0)	6.9 (0.6)	5.0 (0.4)	2.9 (0.9)	2.1 (0.6)
31	0.7 (0.2)		17.5 (1.0)	12.6 (0.7)	7.3 (0.7)	5.2 (0.5)		
Avg	0.5	0.3	14.2	10.9	7.0	4.9	3.5	2.5
n	31	22	31	19	31	25	29	27
SD	0.1	0.1	1.8	0.9	0.4	0.3	1.2	0.8
Min	0.3	0.2	9.4	9.6	6.1	4.4	1.1	0.8
Max	0.7	0.5	17.5	12.6	7.8	5.5	5.9	4.2

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for August, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.6 (0.1)	0.4 (0.1)	18.8 (2.1)	13.5 (1.5)	8.1 (0.5)	5.8 (0.4)	2.7 (0.6)	2.0 (0.4)
2	0.6 (0.2)	0.4 (0.1)	20.2 (2.4)	14.5 (1.7)	8.5 (0.4)	6.1 (0.3)	3.7 (1.5)	2.7 (1.1)
3	0.9 (0.3)	0.6 (0.2)	17.7 (3.1)	12.8 (2.2)	8.0 (0.4)	5.8 (0.3)	3.7 (1.0)	2.7 (0.7)
4	1.0 (0.2)	0.7 (0.1)	19.6 (1.5)	14.2 (1.0)	8.1 (0.8)	5.9 (0.6)	2.7 (0.4)	2.0 (0.3)
5	1.2 (0.5)	0.9 (0.4)	23.2 (1.5)	16.7 (1.1)	7.8 (1.3)	5.6 (0.9)	2.4 (0.4)	1.8 (0.3)
6	0.6 (0.1)	0.4 (0.1)	21.8 (2.1)	15.6 (1.5)	7.2 (0.6)	5.1 (0.4)	2.9 (0.9)	2.1 (0.7)
7	0.5 (0.1)							
8	0.7 (0.1)							
9	0.6 (0.1)	0.5 (0.1)	20.4 (1.7)	14.7 (1.2)	7.1 (0.4)	5.1 (0.3)	1.6 (0.2)	1.1 (0.2)
10	0.5 (0.2)	0.3 (0.1)	22.0 (2.0)	15.8 (1.4)	7.0 (0.6)	5.0 (0.5)	2.4 (0.5)	1.8 (0.3)
11	0.5 (0.1)	0.4 (0.1)	25.1 (1.2)	18.0 (0.9)	7.5 (0.9)	5.4 (0.7)	2.9 (0.7)	2.1 (0.5)
12	0.5 (0.2)	0.4 (0.2)	23.0 (2.2)	16.5 (1.5)	7.6 (0.9)	5.5 (0.6)	3.3 (0.4)	2.3 (0.3)
13	0.5 (0.1)	0.4 (0.1)	23.1 (2.6)	16.6 (1.9)	7.2 (0.9)	5.2 (0.6)	3.0 (1.1)	2.1 (0.8)
14	0.5 (0.1)	0.4 (0.1)	24.4 (4.4)	17.5 (3.2)	6.7 (0.6)	4.8 (0.4)	3.1 (1.3)	2.2 (0.9)
15	0.4 (0.1)	0.3 (0.1)	27.4 (4.6)	19.6 (3.3)	7.5 (0.8)	5.4 (0.6)	4.3 (0.9)	3.1 (0.6)
16	0.5 (0.2)	0.4 (0.1)	27.9 (5.5)	20.0 (3.9)	7.8 (1.7)	5.6 (1.2)	4.0 (1.4)	2.8 (1.0)
17	0.6 (0.1)	0.4 (0.1)	28.2 (6.1)	20.3 (4.4)	7.4 (1.0)	5.3 (0.7)	3.3 (1.2)	2.4 (0.8)
18	0.5 (0.1)	0.4 (0.1)	27.8 (5.8)	19.9 (4.1)	7.3 (1.2)	5.2 (0.9)	3.3 (1.0)	2.3 (0.7)
19	0.5 (0.1)	0.4 (0.1)	26.8 (4.8)	19.3 (3.5)	7.4 (0.3)	5.3 (0.2)	3.1 (1.1)	2.2 (0.8)
20	0.5 (0.2)	0.4 (0.1)	27.2 (4.3)	19.5 (3.1)	7.9 (0.6)	5.7 (0.5)	2.8 (1.0)	2.0 (0.7)
21	0.7 (0.1)	0.5 (0.1)	26.6 (2.9)	19.1 (2.1)	7.7 (0.7)	5.6 (0.5)	3.2 (0.5)	2.3 (0.3)
22	0.9 (0.1)	0.6 (0.1)	22.8 (1.6)	16.5 (1.2)	7.8 (0.5)	5.6 (0.3)	2.6 (0.2)	1.8 (0.1)
23	0.6 (0.1)	0.5 (0.1)	31.7 (5.0)	22.8 (3.5)	7.9 (0.5)	5.7 (0.3)	3.0 (0.7)	2.1 (0.5)
24	0.5 (0.1)	0.4 (0.1)	36.9 (2.9)	26.4 (2.1)	9.5 (1.7)	6.8 (1.2)	4.0 (1.1)	2.9 (0.8)
25	0.6 (0.1)	0.4 (0.1)	37.1 (2.2)	26.6 (1.5)	9.6 (1.9)	6.8 (1.3)	4.4 (1.5)	3.2 (1.1)
26	0.6 (0.2)	0.4 (0.1)	36.0 (2.7)	25.8 (2.0)	8.9 (1.0)	6.4 (0.7)	4.3 (1.5)	3.1 (1.0)
27	0.7 (0.2)	0.5 (0.1)	31.2 (5.3)	22.4 (3.8)	8.0 (1.0)	5.8 (0.7)	3.6 (1.6)	
28	0.7 (0.1)	0.5 (0.1)	30.2 (5.2)	21.7 (3.7)	7.3 (0.4)	5.3 (0.3)	3.4 (1.8)	2.4 (1.3)
29	0.5 (0.1)	0.4 (0.1)						
30	0.8 (0.2)	0.6 (0.1)	37.7 (4.1)	27.0 (2.9)	7.6 (0.5)	5.5 (0.3)	3.4 (0.5)	2.5 (0.4)
31	1.0 (0.2)	0.7 (0.1)	37.1 (5.0)	26.6 (3.6)	7.7 (0.6)	5.5 (0.4)	3.4 (1.1)	2.5 (0.8)
Avg	0.6	0.5	26.8	19.3	7.8	5.6	3.2	2.3
n	31	29	28	28	28	28	28	27
SD	0.2	0.1	5.9	4.2	0.7	0.5	0.6	0.5
Min	0.4	0.3	17.7	12.8	6.7	4.8	1.6	1.1
Max	1.2	0.9	37.7	27.0	9.6	6.8	4.4	3.2

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for September, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	1.0 (0.2)	0.7 (0.1)	31.8 (6.6)	22.9 (4.7)	7.7 (0.3)	5.5 (0.2)	2.7 (0.6)	1.9 (0.4)
2	0.9 (0.2)	0.6 (0.1)	37.8 (7.6)	27.2 (5.4)	8.1 (0.4)	5.8 (0.3)	2.6 (0.7)	1.9 (0.5)
3	0.6 (0.2)	0.5 (0.1)	46.3 (3.3)	33.1 (2.3)	9.7 (1.1)	6.9 (0.7)	3.9 (0.2)	2.8 (0.2)
4	0.6 (0.1)	0.4 (0.1)	42.7 (2.1)	30.6 (1.5)	9.2 (0.6)	6.6 (0.4)	4.7 (0.3)	3.4 (0.2)
5	0.7 (0.2)	0.5 (0.1)	40.2 (2.2)	28.8 (1.6)	8.8 (1.8)	6.3 (1.3)	4.4 (0.4)	3.2 (0.3)
6	0.6 (0.1)	0.4 (0.1)	38.3 (3.7)	27.4 (2.6)	8.1 (0.6)	5.8 (0.4)	4.5 (0.3)	3.2 (0.2)
7	0.8 (0.1)	0.6 (0.1)	40.5 (3.0)	29.0 (2.1)	7.4 (0.7)	5.3 (0.5)	4.7 (0.8)	3.4 (0.6)
8	0.7 (0.1)	0.5 (0.1)	45.0 (2.4)	32.2 (1.7)	9.6 (1.2)	6.9 (0.8)	6.2 (0.3)	4.5 (0.2)
9	0.6 (0.3)	0.4 (0.2)	39.0 (3.5)	28.0 (2.6)	8.7 (0.9)	6.2 (0.6)	5.7 (1.0)	4.2 (0.7)
10	0.6 (0.1)	0.5 (0.1)	35.8 (6.3)	25.7 (4.5)	8.8 (1.3)	6.3 (0.9)	5.4 (0.6)	3.9 (0.4)
11	0.8 (0.1)	0.5 (0.1)	28.1 (2.6)	20.2 (1.8)	8.0 (0.6)	5.7 (0.4)	4.3 (0.5)	3.1 (0.4)
12	0.8 (0.1)	0.6 (0.1)	27.5 (2.8)	19.8 (2.0)	7.6 (0.7)	5.4 (0.5)	3.4 (0.4)	2.5 (0.3)
13	0.7 (0.1)		30.6 (6.0)	22.0 (4.3)	7.4 (0.5)	5.3 (0.3)	3.4 (0.2)	2.4 (0.2)
14	0.7 (0.1)		50.3 (6.0)	36.0 (4.3)	10.1 (2.3)	7.2 (1.6)	4.4 (0.4)	3.2 (0.3)
15	0.8 (0.1)		47.1 (3.7)	33.7 (2.7)	11.7 (2.5)	8.4 (1.8)	5.2 (0.8)	3.7 (0.6)
16	0.8 (0.1)		37.4 (5.4)	26.8 (3.9)	9.0 (1.5)	6.4 (1.1)	4.9 (1.1)	3.5 (0.8)
17	0.7 (0.1)	0.5 (0.1)	37.3 (6.3)	26.7 (4.5)	8.3 (1.0)	6.0 (0.7)	3.7 (1.3)	2.7 (0.9)
18	0.9 (0.2)		40.5 (8.2)		8.4 (0.9)		2.7 (1.2)	
19	0.9 (0.2)		41.4 (9.1)		8.5 (0.8)		1.6 (0.3)	
20	0.9 (0.2)							
21	0.8 (0.1)		43.9 (7.7)		8.9 (0.8)		3.6 (0.9)	
22	1.0 (0.1)		39.4 (8.7)		9.0 (1.1)		6.1 (0.4)	
23	0.9 (0.1)		38.2 (8.5)		8.4 (0.7)		5.0 (0.7)	
24	0.9 (0.1)	0.6 (0.1)	48.7 (7.0)	34.9 (5.0)	7.9 (0.5)	5.7 (0.4)	5.5 (0.8)	3.9 (0.5)
25	0.9 (0.2)	0.7 (0.2)	49.9 (8.3)	35.8 (6.0)	8.4 (0.3)	6.0 (0.2)	5.8 (1.2)	4.1 (0.9)
26	1.3 (0.1)	0.9 (0.1)	58.7 (9.3)	42.1 (6.7)	8.6 (0.7)	6.2 (0.5)	6.8 (1.9)	4.9 (1.4)
27	1.0 (0.2)	0.7 (0.1)	54.5 (7.6)	39.1 (5.4)	8.9 (0.6)	6.4 (0.4)	6.6 (1.7)	4.7 (1.2)
28	0.8 (0.2)	0.6 (0.1)	60.1 (3.3)	43.1 (2.3)	9.4 (1.3)	6.7 (1.0)	10.4 (1.8)	7.4 (1.3)
29	0.9 (0.1)	0.6 (0.1)	63.3 (5.3)	45.3 (3.8)	10.1 (1.5)	7.3 (1.1)	11.0 (1.9)	7.9 (1.3)
30	0.8 (0.2)	0.6 (0.1)	65.1 (2.7)	46.6 (1.9)	13.9 (2.7)	10.0 (2.0)	11.6 (1.8)	8.3 (1.3)
Avg	0.8	0.6	43.4	31.5	8.9	6.4	5.2	3.9
n	30	20	29	24	29	24	29	24
SD	0.2	0.1	9.7	7.5	1.3	1.0	2.3	1.7
Min	0.6	0.4	27.5	19.8	7.4	5.3	1.6	1.9
Max	1.3	0.9	65.1	46.6	13.9	10.0	11.6	8.3

US EPA ARCHIVE DOCUMENT

Table E10. Daily mean (SD) of NH3 concentration at site IA4B for October, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.8 (0.1)	0.6 (0.1)	66.6 (1.7)	47.7 (1.2)	14.3 (2.7)	10.2 (1.9)	10.5 (0.7)	7.6 (0.5)
2	0.9 (0.2)	0.6 (0.1)	60.2 (4.7)	43.1 (3.4)	11.8 (2.9)	8.4 (2.1)	10.1 (1.4)	7.2 (1.0)
3	0.8 (0.2)	0.6 (0.1)	55.7 (4.1)	39.9 (2.9)	11.3 (2.3)	8.1 (1.6)	8.8 (1.5)	6.3 (1.0)
4	0.9 (0.2)	0.6 (0.1)	56.2 (3.8)	40.2 (2.7)	11.8 (3.8)	8.5 (2.7)	7.3 (1.2)	5.2 (0.9)
5								
6								
7								
8								
9								
10								
11	0.7 (0.1)	0.5 (0.1)	48.2 (8.8)	34.6 (6.3)	11.6 (3.3)	8.3 (2.4)	4.5 (1.1)	3.2 (0.8)
12	0.7 (0.2)	0.5 (0.1)	44.1 (7.0)	31.7 (5.0)	10.1 (0.6)	7.3 (0.4)	3.9 (1.3)	2.8 (1.0)
13	0.6 (0.1)	0.4 (0.1)	53.8 (10.3)	38.6 (7.3)	13.0 (3.5)	9.3 (2.5)	4.2 (0.9)	3.0 (0.6)
14								
15								
16								
17	0.5 (0.1)	0.4 (0.1)	58.5 (3.7)	41.8 (2.7)	17.6 (1.5)	12.6 (1.1)	3.0 (0.4)	2.2 (0.3)
18	0.5 (0.1)	0.4 (0.1)	35.6 (14.5)	25.5 (10.4)	17.9 (1.8)	12.8 (1.3)	3.3 (0.3)	2.4 (0.2)
19	0.5 (0.1)	0.3 (0.1)	13.8 (2.3)	9.8 (1.6)	13.3 (3.3)	9.5 (2.4)	3.7 (0.5)	2.7 (0.4)
20	0.3 (0.1)	0.2 (0.1)	17.0 (3.3)	12.1 (2.4)	13.0 (2.8)	9.3 (2.0)	4.1 (0.3)	2.9 (0.2)
21	0.2 (0.1)	0.1 (0.1)	23.0 (5.6)	16.4 (4.0)	15.2 (2.6)	10.8 (1.9)		
22	0.3 (0.1)	0.2 (0.1)	18.1 (1.5)	13.0 (1.1)	12.1 (1.8)	8.6 (1.3)	7.0 (0.5)	5.0 (0.3)
23	0.3 (0.1)	0.2 (0.0)	20.8 (2.5)	14.9 (1.8)	13.5 (1.4)	9.6 (1.0)	6.7 (0.4)	4.8 (0.3)
24	0.5 (0.1)	0.3 (0.1)	19.5 (3.0)	14.0 (2.2)	14.4 (2.6)	10.4 (1.8)	6.7 (0.4)	4.8 (0.3)
25	0.4 (0.1)	0.3 (0.1)	18.5 (3.6)	13.2 (2.6)	13.5 (3.6)	9.7 (2.6)	6.5 (0.3)	4.7 (0.2)
26	0.4 (0.1)	0.3 (0.1)	19.6 (2.1)	14.0 (1.5)	18.5 (2.9)	13.2 (2.1)	6.7 (0.3)	4.8 (0.2)
27	0.5 (0.1)	0.4 (0.1)	21.7 (1.0)	15.5 (0.7)	18.2 (0.7)	13.0 (0.5)	7.1 (0.3)	5.1 (0.2)
28	0.5 (0.1)	0.3 (0.0)	20.5 (2.6)	14.7 (1.8)	15.7 (2.8)	11.2 (2.0)	7.6 (0.4)	5.4 (0.3)
29	0.4 (0.1)	0.3 (0.1)	16.2 (3.5)	11.6 (2.5)	12.3 (4.4)	8.8 (3.1)	7.3 (0.4)	5.2 (0.3)
30	0.4 (0.1)	0.3 (0.1)	13.5 (3.7)	9.6 (2.6)	10.5 (3.8)	7.5 (2.7)	6.6 (1.4)	4.7 (1.0)
31	0.5 (0.2)	0.3 (0.1)	15.9 (9.9)	11.4 (7.1)	10.4 (2.2)	7.4 (1.6)		
Avg	0.5	0.4	32.6	23.3	13.6	9.7	6.3	4.5
n	22	22	22	22	22	22	20	20
SD	0.2	0.1	18.2	13.0	2.5	1.8	2.1	1.5
Min	0.2	0.1	13.5	9.6	10.1	7.3	3.0	2.2
Max	0.9	0.6	66.6	47.7	18.5	13.2	10.5	7.6

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for November, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.3 (0.1)	0.2 (0.1)	15.1 (2.8)	10.8 (2.0)	10.0 (1.9)	7.1 (1.3)	7.1 (0.3)	5.1 (0.2)
2	0.5 (0.1)	0.3 (0.1)	13.9 (2.6)	9.9 (1.9)	8.9 (2.3)	6.3 (1.6)	6.7 (1.2)	4.8 (0.9)
3	0.6 (0.1)	0.4 (0.1)	12.3 (2.5)	8.8 (1.8)	9.6 (3.7)	6.8 (2.6)	5.8 (1.2)	4.2 (0.9)
4	0.4 (0.3)	0.3 (0.2)	14.7 (4.8)	10.5 (3.5)	9.3 (2.3)	6.7 (1.6)	5.1 (1.2)	3.7 (0.9)
5	0.4 (0.1)	0.3 (0.1)	11.6 (1.9)	8.3 (1.3)	8.7 (3.0)	6.2 (2.1)	3.5 (1.8)	
6	0.3 (0.1)	0.2 (0.1)	16.0 (2.9)	11.4 (2.1)	11.3 (2.2)	8.1 (1.5)	2.3 (0.2)	
7	0.4 (0.1)	0.3 (0.1)	20.9 (2.5)	14.9 (1.8)	18.6 (1.3)	13.3 (1.0)	2.7 (0.9)	1.9 (0.7)
8	0.4 (0.1)	0.3 (0.1)	19.6 (1.9)	14.1 (1.3)	18.5 (1.1)	13.2 (0.8)	4.2 (0.4)	3.0 (0.3)
9	0.3 (0.1)	0.2 (0.1)	19.2 (1.3)	13.7 (1.0)	18.7 (1.8)	13.4 (1.3)	4.5 (0.5)	3.2 (0.4)
10	0.3 (0.1)	0.2 (0.1)	18.3 (1.6)	13.1 (1.1)	15.0 (1.4)	10.7 (1.0)	6.2 (0.7)	4.5 (0.5)
11	0.2 (0.1)	0.1 (0.1)	15.7 (2.2)	11.3 (1.6)	11.1 (2.1)	8.0 (1.5)	9.4 (1.7)	6.7 (1.2)
12	0.2 (0.1)	0.2 (0.1)	16.2 (0.6)	11.6 (0.5)	11.8 (0.9)	8.4 (0.7)	6.9 (0.5)	5.0 (0.3)
13	0.3 (0.1)	0.2 (0.1)	14.6 (2.9)	10.4 (2.0)	9.6 (2.1)	6.9 (1.5)	7.6 (0.3)	5.5 (0.2)
14	0.4 (0.1)	0.3 (0.1)	13.5 (1.0)	9.7 (0.8)	12.0 (1.7)	8.6 (1.2)	7.9 (0.5)	5.7 (0.4)
15	0.3 (0.2)	0.2 (0.1)	15.8 (1.1)	11.3 (0.8)	15.8 (0.9)	11.3 (0.6)	9.0 (0.7)	6.4 (0.5)
16	0.3 (0.1)	0.2 (0.1)	17.0 (1.0)	12.2 (0.7)	14.8 (0.8)	10.6 (0.6)	9.4 (0.7)	6.7 (0.5)
17	0.3 (0.0)	0.2 (0.0)	16.6 (0.6)	11.9 (0.4)	15.4 (0.9)	11.0 (0.7)	8.8 (0.7)	6.3 (0.5)
18	0.3 (0.1)	0.2 (0.1)	15.9 (2.5)	11.4 (1.8)	14.1 (1.3)	10.1 (0.9)	8.8 (0.9)	6.3 (0.6)
19	0.3 (0.1)	0.2 (0.1)	17.3 (1.2)	12.4 (0.8)	14.2 (1.5)	10.1 (1.1)	8.7 (0.5)	6.2 (0.4)
20	0.3 (0.1)	0.2 (0.1)	17.0 (0.9)	12.2 (0.6)	17.3 (0.8)	12.3 (0.5)	9.0 (0.5)	6.4 (0.4)
21	0.3 (0.1)	0.2 (0.0)	18.8 (1.6)		16.5 (1.0)	11.6 (0.6)	9.0 (0.6)	6.4 (0.5)
22	0.3 (0.1)	0.2 (0.1)	19.3 (1.4)	13.8 (1.0)	16.2 (1.1)	11.6 (0.8)	8.3 (0.5)	6.0 (0.4)
23	0.5 (0.1)	0.3 (0.1)	17.3 (2.3)	12.3 (1.6)	13.8 (2.3)	9.9 (1.7)	8.0 (0.4)	5.7 (0.3)
24	0.3 (0.1)	0.2 (0.1)	16.6 (1.1)	11.8 (0.8)	14.6 (1.1)	10.5 (0.8)	7.6 (0.6)	5.4 (0.4)
25	0.4 (0.2)	0.3 (0.1)	18.1 (0.7)	12.9 (0.5)	15.9 (1.0)	11.4 (0.7)	7.0 (0.3)	5.0 (0.2)
26	0.4 (0.1)	0.2 (0.1)	17.2 (1.4)	12.3 (1.0)	14.6 (1.3)	10.4 (0.9)	7.3 (1.0)	5.2 (0.7)
27	0.3 (0.1)	0.2 (0.1)	17.8 (0.8)	12.7 (0.6)	14.8 (1.3)	10.6 (0.9)	5.5 (1.1)	3.9 (0.8)
28	0.2 (0.0)	0.2 (0.0)	17.7 (1.3)	12.6 (0.9)	13.9 (1.8)	9.9 (1.3)	5.4 (0.9)	3.9 (0.6)
29	0.3 (0.1)	0.2 (0.1)	18.0 (0.8)	12.9 (0.6)	14.5 (1.0)	10.3 (0.8)	2.8 (1.1)	
30	0.3 (0.1)	0.2 (0.1)	17.4 (0.5)	12.4 (0.4)	15.6 (1.3)	11.1 (0.9)	2.3 (0.4)	1.6 (0.3)
Avg	0.3	0.2	16.7	11.8	13.8	9.9	6.6	5
n	30	30	30	29	30	30	30	27
SD	0.1	0.1	2.1	1.5	2.9	2.1	2.2	1.4
Min	0.2	0.1	11.6	8.3	8.7	6.2	2.3	1.6
Max	0.6	0.4	20.9	14.9	18.7	13.4	9.4	6.7

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for December, 2008.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.3 (0.1)	0.2 (0.1)	17.9 (1.8)	12.8 (1.3)	16.0 (1.9)	11.4 (1.4)	2.6 (0.4)	1.8 (0.3)
2	0.3 (0.1)	0.2 (0.1)	20.8 (3.0)	14.9 (2.1)	16.8 (4.9)	12.0 (3.5)	2.2 (0.3)	1.5 (0.2)
3	0.3 (0.1)	0.2 (0.1)	17.3 (1.1)	12.3 (0.7)	15.7 (1.5)	11.2 (1.1)	3.2 (0.3)	2.3 (0.2)
4	0.3 (0.0)	0.2 (0.0)	18.2 (0.7)	13.0 (0.5)	14.7 (1.8)	10.5 (1.3)	3.8 (0.3)	2.7 (0.2)
5	0.3 (0.1)	0.2 (0.0)	20.0 (1.9)	14.3 (1.3)	13.3 (0.9)	9.4 (0.7)	4.5 (1.3)	3.2 (0.9)
6	0.2 (0.0)	0.2 (0.0)	18.4 (0.9)	13.1 (0.6)	16.5 (2.0)	11.8 (1.4)	3.0 (0.2)	2.1 (0.1)
7	0.2 (0.1)	0.1 (0.1)	18.6 (1.4)	13.2 (1.0)	13.6 (0.9)	9.7 (0.6)	3.8 (0.2)	2.7 (0.2)
8	0.2 (0.1)	0.2 (0.1)	17.9 (0.4)	12.8 (0.3)	15.2 (1.1)	10.8 (0.8)	4.0 (0.5)	2.8 (0.3)
9	0.3 (0.1)	0.2 (0.1)	16.5 (0.6)	11.8 (0.4)	13.3 (1.2)	9.5 (0.8)	4.1 (0.3)	2.9 (0.2)
10	0.2 (0.1)	0.2 (0.1)	18.9 (1.9)	13.5 (1.3)	10.9 (0.9)	7.8 (0.6)	3.8 (0.4)	2.7 (0.3)
11	0.3 (0.1)	0.2 (0.1)	18.6 (0.8)	13.3 (0.6)	12.3 (1.7)	8.8 (1.2)	4.3 (1.4)	3.1 (1.0)
12	0.4 (0.1)	0.3 (0.1)	18.5 (1.0)	13.2 (0.7)	11.7 (0.8)	8.4 (0.6)	8.6 (2.1)	6.1 (1.5)
13	0.4 (0.1)	0.3 (0.1)	16.2 (1.8)	11.5 (1.3)	11.8 (1.3)	8.4 (0.9)	8.0 (0.4)	5.7 (0.3)
14	0.3 (0.1)	0.2 (0.1)	16.2 (3.0)	11.6 (2.1)	13.3 (3.8)	9.5 (2.7)	6.6 (0.6)	4.7 (0.5)
15	0.3 (0.1)	0.2 (0.1)	16.8 (0.9)	12.0 (0.6)	14.9 (1.9)	10.6 (1.3)	6.2 (0.8)	4.4 (0.6)
16	0.2 (0.1)	0.2 (0.1)	16.7 (3.5)	11.9 (2.5)	9.1 (2.4)	6.4 (1.7)	8.5 (1.2)	6.1 (0.9)
17	0.3 (0.1)	0.2 (0.1)	19.7 (1.1)	14.0 (0.8)	10.4 (0.6)	7.4 (0.5)	8.3 (0.3)	5.9 (0.2)
18	0.2 (0.1)	0.1 (0.1)	19.4 (1.0)	13.9 (0.7)	9.6 (0.9)	6.8 (0.7)	8.9 (0.9)	6.4 (0.6)
19	0.1 (0.1)	0.1 (0.0)	18.3 (0.8)	13.1 (0.6)	8.4 (1.1)	6.0 (0.8)	8.6 (0.9)	6.2 (0.7)
20	0.2 (0.1)	0.2 (0.1)	18.1 (1.4)	12.9 (1.0)	9.5 (2.0)	6.8 (1.5)	7.9 (1.3)	5.6 (0.9)
21	0.3 (0.1)	0.2 (0.1)	17.5 (0.8)	12.4 (0.6)	12.0 (1.1)	8.6 (0.8)	6.6 (0.7)	4.7 (0.5)
22	0.2 (0.1)	0.2 (0.0)	17.4 (0.7)	12.4 (0.5)	9.7 (1.2)	6.9 (0.8)	5.6 (1.3)	4.0 (0.9)
23	0.2 (0.1)	0.2 (0.1)	16.7 (3.5)	11.9 (2.5)	9.5 (2.1)	6.8 (1.5)	4.5 (1.8)	
24	0.2 (0.1)	0.2 (0.1)	18.6 (1.4)	13.3 (1.0)	12.9 (1.7)	9.2 (1.2)	4.0 (0.9)	2.9 (0.7)
25	0.2 (0.1)	0.1 (0.0)	19.9 (0.7)	14.2 (0.5)	9.5 (1.0)	6.8 (0.7)	6.8 (0.6)	4.9 (0.4)
26	0.3 (0.1)	0.2 (0.1)	16.7 (2.1)	11.9 (1.5)	9.2 (2.1)	6.5 (1.5)	4.8 (0.7)	3.5 (0.5)
27	0.3 (0.1)	0.2 (0.1)	16.5 (1.9)	11.8 (1.4)	10.5 (1.2)	7.5 (0.9)	3.8 (0.3)	2.8 (0.2)
28	0.3 (0.1)	0.2 (0.1)	18.0 (1.4)	12.9 (1.0)	8.9 (1.6)	6.4 (1.2)	4.6 (0.2)	3.3 (0.2)
29	0.2 (0.1)	0.2 (0.1)	16.4 (0.9)	11.7 (0.7)	9.7 (2.0)	6.9 (1.5)	4.5 (0.4)	3.2 (0.3)
30	0.3 (0.1)	0.2 (0.1)	15.9 (1.0)	11.3 (0.7)	10.5 (2.6)	7.5 (1.9)	4.9 (0.6)	3.5 (0.4)
31	0.2 (0.1)	0.2 (0.1)	16.1 (1.4)	11.5 (1.0)	8.1 (1.4)	5.8 (1.0)	6.3 (0.5)	4.5 (0.4)
Avg	0.3	0.2	17.8	12.7	11.9	8.5	5.4	3.9
n	31	31	31	31	31	31	31	30
SD	0.1	0.0	1.3	0.9	2.6	1.8	2.0	1.4
Min	0.1	0.1	15.9	11.3	8.1	5.8	2.2	1.5
Max	0.4	0.3	20.8	14.9	16.8	12.0	8.9	6.4

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for January, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.2 (0.1)	0.2 (0.1)	17.7 (0.7)	12.7 (0.5)	7.5 (1.3)	5.3 (0.9)	6.3 (0.3)	4.5 (0.2)
2	0.3 (0.1)	0.2 (0.0)	16.8 (0.9)	12.0 (0.7)	10.2 (0.9)	7.3 (0.6)	7.5 (1.3)	5.4 (0.9)
3	0.4 (0.1)	0.3 (0.1)	17.3 (0.9)	12.4 (0.7)	14.8 (1.6)	10.5 (1.2)	9.6 (1.4)	6.8 (1.0)
4	0.3 (0.1)	0.2 (0.0)	16.0 (0.9)	11.4 (0.6)	14.0 (2.4)	10.0 (1.7)	8.5 (0.4)	6.1 (0.3)
5	0.3 (0.1)	0.2 (0.1)	19.7 (1.4)	14.1 (1.0)	8.8 (0.8)	6.3 (0.6)	7.8 (1.9)	5.6 (1.4)
6	0.4 (0.1)	0.3 (0.1)	18.2 (1.2)	13.0 (0.9)	9.4 (1.0)	6.7 (0.7)	6.0 (1.7)	4.3 (1.2)
7	0.4 (0.1)	0.3 (0.1)	16.5 (0.8)	11.8 (0.6)	13.6 (2.2)	9.8 (1.6)	9.4 (0.7)	6.7 (0.5)
8	0.3 (0.0)	0.2 (0.0)	16.7 (0.8)	11.9 (0.6)	11.9 (1.6)	8.5 (1.2)	8.0 (2.0)	5.7 (1.5)
9	0.3 (0.1)	0.2 (0.1)	17.4 (0.9)	12.5 (0.6)	10.1 (1.0)	7.2 (0.7)	10.9 (1.9)	7.8 (1.3)
10	0.1 (0.1)	0.1 (0.0)	15.2 (0.8)	10.8 (0.6)	7.9 (0.8)	5.6 (0.6)	8.3 (0.5)	6.0 (0.3)
11	0.1 (0.1)	0.1 (0.1)	16.3 (0.8)	11.6 (0.6)	10.1 (2.8)	7.2 (2.0)	8.7 (0.7)	6.3 (0.5)
12	0.1 (0.1)	0.1 (0.1)	17.0 (1.2)	12.2 (0.8)	10.2 (1.6)	7.3 (1.2)	8.4 (0.7)	6.0 (0.5)
13	0.1 (0.1)	0.0 (0.1)	16.2 (1.5)	11.5 (1.1)	9.2 (1.8)	6.6 (1.3)	9.7 (1.7)	6.9 (1.3)
14	0.0 (0.1)	0.0 (0.1)	17.0 (0.8)	12.1 (0.6)	9.4 (2.3)	6.7 (1.7)	9.1 (1.4)	6.5 (1.0)
15	0.0 (0.1)	0.0 (0.1)	15.5 (0.7)	11.1 (0.5)	10.3 (1.0)	7.4 (0.7)	8.6 (0.7)	6.2 (0.5)
16	0.1 (0.1)	0.0 (0.1)	19.0 (3.4)	13.3 (2.3)	7.7 (1.0)	5.5 (0.7)	6.3 (3.4)	
17	0.2 (0.1)	0.1 (0.1)	19.0 (1.4)		11.5 (2.3)	8.2 (1.7)	5.3 (1.2)	3.8 (0.8)
18	0.2 (0.1)	0.2 (0.1)	17.0 (0.5)		12.0 (1.8)	8.6 (1.3)	4.6 (0.2)	3.3 (0.1)
19	0.2 (0.1)	0.1 (0.1)						
20	0.1 (0.1)	0.1 (0.1)	13.9 (3.8)		8.0 (2.0)	5.7 (1.4)	6.5 (1.2)	4.6 (0.9)
21	0.2 (0.1)	0.1 (0.1)	16.1 (1.7)	11.5 (1.2)	10.4 (1.8)	7.4 (1.3)	6.6 (0.5)	4.7 (0.4)
22	0.3 (0.1)	0.2 (0.1)	15.7 (0.9)	11.2 (0.6)	9.6 (1.2)	6.9 (0.9)	6.2 (0.7)	4.5 (0.5)
23	0.1 (0.1)	0.1 (0.1)	13.9 (0.8)	9.9 (0.6)	10.9 (2.1)	7.8 (1.5)	6.3 (0.6)	4.5 (0.4)
24	0.0 (0.1)	0.0 (0.0)	12.5 (0.7)	8.9 (0.5)	9.8 (1.3)	7.0 (0.9)	6.6 (0.6)	4.7 (0.4)
25	0.1 (0.1)	0.1 (0.0)	14.4 (0.9)	10.3 (0.6)	9.5 (1.2)	6.8 (0.8)	7.1 (0.4)	5.1 (0.3)
26	0.1 (0.1)	0.1 (0.0)	14.8 (0.8)	10.6 (0.5)	8.5 (0.8)	6.1 (0.6)	7.7 (0.4)	5.5 (0.3)
27	0.2 (0.1)	0.1 (0.1)	14.7 (1.2)	10.5 (0.8)	8.9 (1.5)	6.4 (1.1)	8.1 (0.6)	5.8 (0.4)
28	0.2 (0.1)	0.2 (0.1)	16.0 (1.4)	11.4 (1.0)	7.7 (0.8)	5.5 (0.6)	8.1 (1.1)	5.8 (0.8)
29	0.2 (0.1)	0.1 (0.0)	13.8 (2.2)	9.8 (1.6)	10.3 (1.1)	7.3 (0.8)	6.6 (0.6)	4.7 (0.4)
30	0.1 (0.1)	0.1 (0.0)	14.2 (0.7)	10.2 (0.5)	10.5 (1.1)	7.5 (0.8)	7.2 (0.7)	5.2 (0.5)
31	0.2 (0.1)	0.1 (0.0)	15.1 (1.0)	10.8 (0.7)	9.1 (1.1)	6.5 (0.8)	6.5 (0.8)	4.7 (0.6)
Avg	0.2	0.1	16.1	11.5	10.1	7.2	7.6	5.4
n	31	31	30	27	30	30	30	29
SD	0.1	0.1	1.7	1.1	1.8	1.3	1.4	1
Min	0.0	0.0	12.5	8.9	7.5	5.3	4.6	3.3
Max	0.4	0.3	19.7	14.1	14.8	10.5	10.9	7.8

US EPA ARCHIVE DOCUMENT

Table E10. Daily mean (SD) of NH3 concentration at site IA4B for February, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.1 (0.1)	0.1 (0.0)	14.4 (0.9)	10.3 (0.6)	11.0 (1.4)	7.8 (1.0)	5.9 (0.4)	4.2 (0.3)
2	0.2 (0.1)	0.1 (0.0)	13.9 (1.2)	10.0 (0.8)	10.4 (1.8)	7.5 (1.3)	7.0 (0.7)	5.0 (0.5)
3	0.1 (0.1)	0.0 (0.1)	10.8 (3.8)	7.7 (2.7)	9.0 (1.7)	6.4 (1.2)	9.6 (0.7)	6.9 (0.5)
4	0.1 (0.1)	0.1 (0.0)	14.2 (1.1)	10.2 (0.8)	9.5 (1.6)	6.8 (1.2)	7.4 (1.9)	5.3 (1.3)
5	0.1 (0.1)	0.1 (0.1)	16.4 (3.9)	11.7 (2.8)	7.6 (0.8)	5.4 (0.6)	4.4 (0.3)	3.1 (0.2)
6	0.2 (0.1)	0.2 (0.1)	14.3 (0.7)	10.2 (0.5)	8.2 (1.0)	5.8 (0.7)	5.4 (0.7)	3.9 (0.5)
7	0.2 (0.1)	0.2 (0.1)	14.0 (1.4)	10.0 (1.0)	7.7 (1.2)	5.5 (0.8)	4.7 (0.3)	3.4 (0.2)
8	0.1 (0.1)	0.1 (0.1)	13.0 (0.9)	9.3 (0.7)	8.4 (1.5)	6.0 (1.1)	6.3 (0.6)	4.5 (0.5)
9	0.2 (0.1)	0.1 (0.1)	14.0 (0.9)	10.0 (0.6)	8.3 (2.9)	5.9 (2.0)	5.2 (3.3)	
10	0.2 (0.1)	0.1 (0.0)	13.1 (1.5)	9.4 (1.1)	5.4 (0.9)	3.9 (0.7)	2.9 (0.4)	2.1 (0.3)
11	0.2 (0.1)	0.1 (0.1)	12.6 (0.8)		8.5 (1.6)	6.0 (1.1)	2.5 (0.3)	1.8 (0.2)
12	0.7 (0.3)	0.5 (0.2)	13.9 (0.5)	9.9 (0.4)	9.6 (1.5)	6.8 (1.1)	3.0 (0.5)	2.2 (0.3)
13	0.2 (0.1)	0.2 (0.1)	13.5 (0.7)	9.7 (0.5)	8.0 (0.9)	5.7 (0.7)	3.6 (0.4)	2.6 (0.3)
14	0.2 (0.1)	0.2 (0.1)	13.6 (0.8)	9.7 (0.6)	7.9 (0.8)	5.7 (0.6)	4.6 (0.4)	3.3 (0.3)
15	0.1 (0.1)	0.1 (0.0)	13.2 (0.7)	9.4 (0.5)	7.9 (0.7)	5.7 (0.5)	5.3 (0.2)	3.8 (0.2)
16	0.2 (0.0)	0.1 (0.0)	13.2 (0.7)	9.4 (0.5)	8.5 (1.0)	6.0 (0.7)	5.8 (0.7)	4.1 (0.5)
17	0.1 (0.2)	0.1 (0.2)	14.7 (1.8)		8.0 (2.1)	5.7 (1.5)	5.5 (0.6)	4.0 (0.5)
18	0.2 (0.1)	0.2 (0.0)	12.9 (1.3)		12.2 (1.5)	8.8 (1.1)	6.3 (0.6)	4.5 (0.5)
19	0.2 (0.1)	0.1 (0.0)	12.3 (1.6)		11.0 (1.9)	7.9 (1.3)	7.5 (1.5)	5.3 (1.1)
20	0.2 (0.1)	0.1 (0.1)	14.0 (0.9)	10.0 (0.7)	8.3 (1.2)	6.0 (0.9)	6.2 (0.5)	4.4 (0.4)
21	0.2 (0.1)	0.2 (0.1)	11.5 (0.9)	8.2 (0.6)	11.0 (1.2)	7.9 (0.8)	6.2 (0.6)	4.5 (0.4)
22	0.2 (0.1)	0.2 (0.0)	12.3 (0.7)	8.8 (0.5)	9.1 (1.0)	6.5 (0.7)	7.1 (0.5)	5.1 (0.4)
23	0.1 (0.1)	0.1 (0.0)	13.2 (0.8)	9.4 (0.6)	8.8 (1.3)	6.3 (0.9)	7.4 (0.4)	5.3 (0.3)
24	0.1 (0.1)	0.1 (0.1)	13.1 (1.2)		8.7 (0.7)	6.2 (0.5)	5.8 (1.2)	4.2 (0.8)
25	0.2 (0.1)	0.1 (0.1)	13.5 (1.0)		8.5 (1.0)	6.1 (0.7)	5.7 (0.5)	4.0 (0.4)
26	0.2 (0.1)	0.1 (0.1)	12.2 (1.0)		10.5 (1.6)	7.5 (1.2)		
27	0.2 (0.1)	0.1 (0.1)	11.3 (0.6)	8.1 (0.4)	9.1 (0.8)	6.5 (0.6)	7.0 (0.6)	5.0 (0.4)
28	0.1 (0.1)	0.1 (0.1)	12.3 (1.0)	8.8 (0.7)	9.7 (0.8)	6.9 (0.6)	7.6 (0.5)	5.5 (0.4)
Avg	0.2	0.1	13.3	9.5	9.0	6.4	5.8	4.2
n	28	28	28	21	28	28	27	26
SD	0.1	0.1	1.1	0.9	1.4	1.0	1.6	1.2
Min	0.1	0.0	10.8	7.7	5.4	3.9	2.5	1.8
Max	0.7	0.5	16.4	11.7	12.2	8.8	9.6	6.9

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for March, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.1 (0.1)	0.1 (0.1)	11.6 (0.7)	8.3 (0.5)	9.1 (0.8)	6.5 (0.6)	7.8 (0.6)	5.6 (0.4)
2	0.0 (0.1)	0.0 (0.1)	12.8 (0.6)	9.1 (0.4)	10.9 (1.5)	7.8 (1.1)	7.8 (0.9)	5.6 (0.6)
3	0.2 (0.1)	0.1 (0.1)	16.3 (4.0)	11.7 (2.9)	14.6 (5.7)	10.4 (4.0)	7.8 (1.2)	5.6 (0.9)
4	0.1 (0.1)	0.1 (0.1)	14.0 (1.1)	10.0 (0.8)	8.7 (2.0)	6.2 (1.5)	5.0 (2.4)	
5	0.3 (0.1)	0.2 (0.0)	13.0 (1.9)	9.3 (1.4)	7.7 (1.3)	5.5 (0.9)	2.4 (0.4)	1.7 (0.3)
6	0.2 (0.1)	0.2 (0.1)	11.3 (0.8)	8.1 (0.6)	7.9 (0.7)	5.7 (0.5)	2.3 (0.3)	1.7 (0.2)
7	0.1 (0.1)	0.1 (0.1)	11.9 (0.4)	8.5 (0.3)	8.4 (1.2)	6.0 (0.8)	3.3 (0.4)	2.4 (0.3)
8	0.2 (0.1)	0.1 (0.1)	11.8 (0.8)	8.4 (0.6)	12.3 (1.3)	8.8 (0.9)	3.9 (0.3)	2.8 (0.2)
9	0.2 (0.1)	0.1 (0.1)	12.8 (1.0)	9.2 (0.7)	12.3 (1.4)	8.8 (1.0)	4.8 (0.4)	3.5 (0.3)
10	0.1 (0.1)	0.1 (0.1)	13.0 (1.1)	9.3 (0.8)	10.8 (1.2)	7.7 (0.9)	4.8 (0.7)	3.4 (0.5)
11	0.1 (0.1)	0.1 (0.1)	11.4 (0.7)	8.1 (0.5)	11.0 (1.2)	7.9 (0.8)	5.5 (0.6)	3.9 (0.5)
12	0.1 (0.1)	0.1 (0.1)	12.9 (2.2)	9.2 (1.6)	9.5 (1.6)	6.8 (1.1)	6.8 (0.4)	4.9 (0.3)
13	0.2 (0.1)	0.1 (0.0)	12.4 (0.7)	8.8 (0.5)	10.8 (1.4)	7.7 (1.0)	6.5 (0.6)	4.7 (0.4)
14	0.2 (0.1)	0.2 (0.1)	11.6 (1.2)	8.3 (0.8)	9.4 (0.7)	6.7 (0.5)	6.5 (0.9)	4.6 (0.6)
15	0.3 (0.1)	0.2 (0.1)	11.0 (0.9)	7.9 (0.7)	8.3 (1.6)	6.0 (1.1)	5.8 (0.7)	4.2 (0.5)
16	0.3 (0.1)	0.2 (0.1)	11.0 (1.2)	7.8 (0.8)	7.5 (1.4)	5.4 (1.0)	6.0 (0.7)	4.3 (0.5)
17	0.2 (0.1)	0.1 (0.1)	11.1 (0.8)	7.9 (0.5)	6.5 (1.4)	4.6 (1.0)	6.5 (0.7)	4.6 (0.5)
18	0.3 (0.1)	0.2 (0.1)	11.1 (0.8)	7.9 (0.5)	7.8 (1.1)	5.6 (0.8)	5.8 (0.5)	4.2 (0.4)
19	0.2 (0.1)	0.1 (0.1)	11.5 (0.7)	8.2 (0.5)	8.9 (0.9)	6.3 (0.7)	6.1 (0.6)	4.3 (0.4)
20	0.2 (0.1)	0.1 (0.1)	12.5 (0.6)	9.0 (0.4)	9.3 (1.7)	6.6 (1.2)	6.6 (0.6)	4.7 (0.4)
21	0.2 (0.1)	0.2 (0.1)	11.9 (1.6)	8.5 (1.2)	7.3 (1.6)	5.2 (1.2)	5.6 (0.7)	4.0 (0.5)
22	0.2 (0.1)	0.2 (0.1)	11.5 (1.2)	8.2 (0.8)	6.7 (0.6)	4.8 (0.4)	5.1 (0.5)	3.6 (0.4)
23	0.2 (0.1)	0.2 (0.0)	11.9 (0.8)	8.5 (0.5)	7.1 (0.6)	5.1 (0.4)	4.7 (0.8)	3.4 (0.6)
24	0.1 (0.1)	0.1 (0.1)	12.9 (1.9)	9.2 (1.3)	9.1 (2.9)	6.5 (2.1)	4.9 (0.5)	3.5 (0.4)
25	0.2 (0.1)	0.2 (0.1)	12.6 (1.2)	9.0 (0.8)	10.6 (1.5)	7.6 (1.1)	5.5 (0.6)	4.0 (0.4)
26	0.3 (0.1)	0.2 (0.1)	13.2 (1.1)	9.5 (0.8)	8.9 (0.9)	6.3 (0.7)	5.8 (0.5)	4.2 (0.4)
27	0.2 (0.1)	0.1 (0.1)	12.3 (0.6)	8.8 (0.5)	10.3 (0.8)	7.4 (0.6)	7.3 (0.9)	5.2 (0.7)
28	0.1 (0.1)	0.1 (0.0)	13.1 (0.7)	9.3 (0.5)	9.8 (0.9)	7.0 (0.6)	7.9 (0.3)	5.6 (0.2)
29	0.2 (0.1)	0.2 (0.0)	13.7 (0.8)	9.8 (0.6)	13.0 (1.3)	9.3 (0.9)	4.0 (2.2)	2.9 (1.6)
30	0.2 (0.1)	0.2 (0.0)	13.4 (0.5)	9.6 (0.3)	9.9 (2.9)	7.1 (2.0)	2.5 (1.2)	
31	0.1 (0.1)	0.1 (0.1)	16.5 (2.6)	11.8 (1.9)	6.6 (3.1)	4.7 (2.2)	2.6 (0.4)	1.8 (0.3)
Avg	0.2	0.1	12.5	8.9	9.4	6.7	5.4	4
n	31	31	31	31	31	31	31	29
SD	0.1	0.0	1.3	0.9	1.9	1.4	1.6	1.1
Min	0.0	0.0	11.0	7.8	6.5	4.6	2.3	1.7
Max	0.3	0.2	16.5	11.8	14.6	10.4	7.9	5.6

US EPA ARCHIVE DOCUMENT

Table E10. Daily mean (SD) of NH3 concentration at site IA4B for April, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.2 (0.1)	0.1 (0.1)	15.5 (1.3)	11.0 (0.9)	10.3 (2.7)	7.4 (1.9)	2.8 (0.3)	2.0 (0.2)
2	0.2 (0.1)	0.2 (0.1)	14.6 (1.4)	10.5 (1.0)	8.7 (1.6)	6.2 (1.1)	2.9 (0.4)	2.1 (0.3)
3	0.3 (0.1)	0.2 (0.1)	14.1 (1.2)	10.0 (0.8)	8.9 (2.3)	6.4 (1.6)	3.4 (0.4)	2.4 (0.3)
4	0.1 (0.1)	0.1 (0.0)	15.0 (0.9)	10.7 (0.7)	8.5 (1.7)	6.1 (1.2)	4.3 (0.2)	3.1 (0.2)
5	0.2 (0.1)	0.1 (0.1)	15.1 (1.0)	10.8 (0.7)	9.1 (1.6)	6.5 (1.1)	5.4 (0.7)	3.9 (0.5)
6	0.2 (0.1)	0.1 (0.1)	13.7 (1.0)	9.8 (0.7)	11.9 (1.3)	8.5 (0.9)	6.0 (0.3)	4.3 (0.2)
7	0.2 (0.1)	0.1 (0.1)	14.0 (1.6)	10.0 (1.2)	10.9 (2.0)	7.8 (1.4)	5.2 (1.0)	3.8 (0.7)
8	0.3 (0.1)	0.2 (0.0)	15.8 (0.7)	11.3 (0.5)	10.7 (1.8)	7.7 (1.3)	6.3 (0.3)	4.5 (0.2)
9	0.2 (0.1)	0.2 (0.0)						
10	0.2 (0.0)	0.1 (0.0)	15.8 (1.5)	11.3 (1.1)	7.7 (0.9)	5.5 (0.6)	5.9 (0.6)	4.2 (0.4)
11	0.2 (0.1)	0.1 (0.0)	14.9 (2.4)	10.7 (1.8)	8.4 (1.3)	6.0 (0.9)	5.7 (0.8)	4.1 (0.6)
12	0.1 (0.1)	0.1 (0.1)	12.4 (1.9)	8.8 (1.4)	8.6 (1.7)	6.1 (1.2)	5.8 (0.3)	4.1 (0.2)
13	0.1 (0.1)	0.1 (0.0)	12.5 (1.9)	8.9 (1.4)	8.7 (1.1)	6.2 (0.8)	6.3 (0.4)	4.5 (0.3)
14	0.2 (0.1)	0.1 (0.1)	12.0 (2.5)	8.6 (1.8)	7.1 (2.3)	5.0 (1.7)	6.0 (0.5)	4.3 (0.4)
15	0.2 (0.1)	0.2 (0.0)	12.1 (1.8)	8.7 (1.3)	6.7 (1.1)	4.8 (0.8)	6.0 (1.2)	4.3 (0.8)
16	0.2 (0.1)	0.1 (0.1)	12.3 (3.1)	8.8 (2.2)	6.5 (0.9)	4.6 (0.7)	5.5 (1.1)	3.9 (0.8)
17	0.2 (0.1)	0.1 (0.0)	10.3 (2.0)	7.4 (1.5)	6.1 (1.1)	4.4 (0.8)	4.0 (0.8)	2.8 (0.6)
18	0.2 (0.1)	0.2 (0.1)	10.3 (0.6)	7.3 (0.5)	6.6 (0.6)	4.7 (0.4)	4.1 (0.5)	3.0 (0.4)
19	0.3 (0.1)	0.2 (0.1)	12.0 (1.1)	8.6 (0.8)	8.3 (0.8)	6.0 (0.5)	4.0 (0.2)	2.9 (0.2)
20	0.3 (0.1)	0.2 (0.1)	13.3 (1.0)	9.5 (0.7)	10.7 (1.4)	7.6 (1.0)	4.4 (0.3)	3.1 (0.2)
21	0.1 (0.2)	0.1 (0.1)	15.1 (4.7)	10.8 (3.4)	10.1 (2.7)	7.3 (1.9)		
22	0.2 (0.1)	0.1 (0.1)	10.5 (2.4)	7.5 (1.7)	6.3 (1.4)	4.5 (1.0)	2.8 (0.6)	2.0 (0.4)
23	0.2 (0.1)	0.1 (0.1)	8.3 (2.0)	5.9 (1.4)	6.5 (1.6)	4.7 (1.1)	3.9 (0.5)	2.8 (0.3)
24	0.4 (0.1)	0.3 (0.1)	10.0 (1.7)	7.2 (1.2)	7.7 (1.7)	5.5 (1.2)	2.8 (0.9)	2.0 (0.7)
25	0.3 (0.1)	0.2 (0.1)	14.2 (1.4)	10.2 (1.0)	9.1 (1.1)	6.5 (0.8)	4.9 (0.6)	3.5 (0.4)
26	0.4 (0.1)	0.3 (0.0)	11.7 (0.9)	8.4 (0.6)	9.9 (1.9)	7.1 (1.3)	5.1 (0.4)	3.6 (0.3)
27	0.4 (0.1)	0.3 (0.1)	14.4 (2.3)	10.3 (1.6)	12.7 (0.5)	9.1 (0.3)	5.2 (0.5)	3.7 (0.4)
28	0.4 (0.1)	0.3 (0.1)	13.0 (1.7)	9.3 (1.2)	11.9 (1.0)	8.5 (0.7)	6.2 (1.9)	4.4 (1.4)
29	0.3 (0.1)	0.2 (0.1)	11.7 (0.6)	8.4 (0.4)	11.9 (0.6)	8.5 (0.4)	6.6 (1.0)	4.7 (0.7)
30	0.5 (0.3)	0.4 (0.2)						
Avg	0.2	0.2	13.0	9.3	9.0	6.4	4.9	3.5
n	30	30	28	28	28	28	27	27
SD	0.1	0.1	2.0	1.4	1.9	1.4	1.2	0.8
Min	0.1	0.1	8.3	5.9	6.1	4.4	2.8	2.0
Max	0.5	0.4	15.8	11.3	12.7	9.1	6.6	4.7

US EPA ARCHIVE DOCUMENT

Table E10. Daily mean (SD) of NH3 concentration at site IA4B for May, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.5 (0.1)	0.4 (0.1)	12.7 (2.1)	9.1 (1.5)	11.6 (0.8)	8.3 (0.6)	7.6 (0.7)	5.5 (0.5)
2	0.5 (0.1)	0.3 (0.1)	10.5 (1.4)	7.5 (1.0)	10.3 (2.3)	7.4 (1.7)	6.8 (1.6)	4.9 (1.1)
3	0.3 (0.1)	0.2 (0.1)	9.9 (1.1)	7.1 (0.8)	7.7 (2.2)	5.5 (1.6)	7.3 (1.8)	5.2 (1.3)
4	0.3 (0.2)	0.2 (0.1)	12.1 (3.9)	8.6 (2.8)	7.8 (1.4)	5.6 (1.0)	7.3 (1.9)	5.2 (1.4)
5	0.4 (0.1)	0.3 (0.1)	9.5 (1.0)	6.8 (0.7)	7.0 (1.7)	5.0 (1.2)	7.5 (1.3)	5.3 (1.0)
6	0.4 (0.1)	0.3 (0.1)	9.2 (0.8)	6.6 (0.5)	6.4 (0.7)	4.6 (0.5)	7.4 (1.0)	5.3 (0.7)
7	0.5 (0.1)	0.4 (0.1)	9.6 (0.7)	6.9 (0.5)	8.1 (0.9)	5.8 (0.6)	8.6 (1.7)	6.1 (1.2)
8	0.4 (0.2)	0.3 (0.1)	10.0 (0.7)	7.2 (0.5)	7.8 (1.7)	5.6 (1.2)	8.7 (1.0)	6.2 (0.7)
9	0.4 (0.1)	0.3 (0.1)	11.9 (1.7)	8.5 (1.2)	9.4 (1.3)	6.7 (0.9)	9.3 (0.4)	6.6 (0.3)
10	0.4 (0.1)	0.3 (0.1)	11.1 (1.7)	8.0 (1.2)	10.3 (0.6)	7.4 (0.5)	9.3 (1.3)	6.7 (1.0)
11	0.4 (0.1)	0.3 (0.1)	10.4 (1.4)	7.4 (1.0)	8.3 (2.2)	5.9 (1.5)	9.1 (2.1)	6.5 (1.5)
12	0.4 (0.1)	0.2 (0.1)	9.7 (0.7)	7.0 (0.5)	8.4 (1.3)	6.0 (0.9)	8.0 (2.1)	5.7 (1.5)
13	0.3 (0.2)	0.2 (0.1)	12.0 (4.1)	8.6 (3.0)	8.4 (1.4)	6.0 (1.0)	5.7 (2.8)	
14	0.2 (0.1)	0.2 (0.1)	9.4 (1.0)	6.8 (0.7)	7.7 (1.7)	5.5 (1.2)	4.1 (0.5)	2.9 (0.4)
15	0.2 (0.1)	0.2 (0.1)	11.1 (6.1)	8.0 (4.4)	6.2 (0.8)	4.4 (0.6)		
16	0.3 (0.1)	0.2 (0.1)	10.5 (1.2)	7.5 (0.9)	8.1 (1.1)	5.8 (0.8)	5.1 (0.4)	3.6 (0.3)
17	0.4 (0.1)	0.2 (0.1)	9.9 (0.5)	7.1 (0.4)	7.6 (0.7)	5.4 (0.5)	5.8 (0.5)	4.2 (0.3)
18	0.3 (0.1)	0.2 (0.1)					5.2 (0.7)	3.7 (0.5)
19	0.3 (0.1)	0.2 (0.1)						
20	0.3 (0.1)	0.2 (0.1)						
21	0.3 (0.0)	0.2 (0.0)	6.7 (0.8)	4.8 (0.6)	6.5 (1.1)	4.6 (0.8)	3.5 (1.4)	2.5 (1.0)
22	0.4 (0.1)	0.3 (0.1)	7.4 (0.5)	5.3 (0.4)	7.5 (1.2)	5.3 (0.8)	4.3 (1.1)	3.1 (0.8)
23	0.4 (0.1)	0.3 (0.1)	7.5 (0.5)	5.4 (0.4)	6.7 (0.7)	4.8 (0.5)	4.1 (1.6)	2.9 (1.2)
24	0.3 (0.1)	0.2 (0.1)	7.1 (0.7)	5.1 (0.5)	6.7 (1.3)	4.8 (0.9)	4.1 (1.5)	2.9 (1.1)
25	0.2 (0.1)	0.2 (0.1)	7.4 (0.5)	5.3 (0.3)	6.9 (1.1)	4.9 (0.8)	6.9 (1.9)	5.0 (1.4)
26	0.4 (0.1)	0.3 (0.1)	7.4 (0.4)	5.3 (0.3)	7.8 (0.7)	5.6 (0.5)	5.7 (2.1)	4.1 (1.5)
27	0.4 (0.1)	0.3 (0.1)	8.4 (0.5)	6.1 (0.3)	9.8 (0.7)	7.0 (0.5)	5.8 (0.8)	4.2 (0.6)
28	0.4 (0.1)	0.3 (0.1)	9.4 (2.0)	6.7 (1.4)	9.1 (2.0)	6.5 (1.4)	5.9 (2.2)	4.2 (1.6)
29	0.3 (0.1)	0.2 (0.1)	7.4 (0.7)	5.3 (0.5)	7.1 (1.7)	5.1 (1.2)	4.8 (1.4)	3.4 (1.0)
30	0.3 (0.1)	0.2 (0.1)	7.2 (0.6)	5.1 (0.4)	7.1 (1.6)	5.1 (1.1)	4.0 (1.2)	2.8 (0.9)
31	0.2 (0.1)	0.2 (0.0)	7.9 (0.9)	5.6 (0.6)	7.1 (2.0)	5.1 (1.4)	4.4 (1.9)	3.2 (1.4)
Avg	0.3	0.2	9.4	6.7	8.0	5.7	6.3	4.5
n	31	31	28	28	28	28	28	27
SD	0.1	0.1	1.7	1.2	1.3	0.9	1.8	1.3
Min	0.2	0.2	6.7	4.8	6.2	4.4	3.5	2.5
Max	0.5	0.4	12.7	9.1	11.6	8.3	9.3	6.7

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for June, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.5 (0.2)	0.4 (0.1)	7.7 (0.6)	5.5 (0.4)	7.4 (0.4)	5.3 (0.3)	1.8 (0.4)	1.3 (0.3)
2	0.4 (0.1)	0.3 (0.1)	6.9 (0.7)	5.0 (0.5)	7.7 (0.9)	5.5 (0.7)	5.9 (1.9)	4.2 (1.4)
3	0.3 (0.1)	0.2 (0.1)						
4	0.3 (0.1)	0.2 (0.1)						
5	0.4 (0.1)	0.3 (0.1)	8.3 (0.6)	5.9 (0.4)	7.3 (1.4)	5.2 (1.0)	8.0 (2.0)	5.8 (1.5)
6	0.5 (0.1)	0.3 (0.1)	7.6 (1.1)	5.4 (0.8)	7.5 (0.5)	5.4 (0.4)	10.2 (1.2)	7.3 (0.9)
7	0.5 (0.1)	0.4 (0.1)	7.5 (1.1)	5.4 (0.8)	7.3 (0.6)	5.2 (0.4)	10.2 (1.5)	7.3 (1.1)
8	0.4 (0.1)	0.3 (0.1)	6.8 (0.5)	4.9 (0.3)	8.4 (1.1)	6.0 (0.7)	8.6 (0.8)	6.2 (0.6)
9	0.5 (0.1)	0.4 (0.1)	8.2 (1.0)	5.9 (0.7)	8.2 (1.0)	5.9 (0.7)	8.8 (1.3)	6.3 (0.9)
10	0.3 (0.1)	0.2 (0.1)	8.8 (1.0)	6.3 (0.7)	8.4 (1.0)	6.0 (0.7)	4.6 (3.2)	
11								
12								
13								
14								
15								
16								
17	0.7 (0.2)	0.5 (0.1)	9.7 (1.0)	7.0 (0.8)	7.7 (0.6)	5.5 (0.4)	2.5 (0.3)	1.8 (0.2)
18	1.1 (0.4)	0.8 (0.3)						
19	1.5 (0.3)	1.1 (0.2)	9.6 (0.4)	7.0 (0.3)	9.6 (0.4)	6.9 (0.3)	1.8 (0.3)	1.3 (0.2)
20	1.3 (0.2)	0.9 (0.1)	9.4 (0.8)	6.8 (0.5)	8.7 (0.7)	6.2 (0.5)	1.8 (0.5)	1.3 (0.3)
21	1.8 (0.3)	1.3 (0.3)	10.4 (0.6)	7.6 (0.4)	9.6 (0.8)	7.0 (0.6)	2.3 (0.5)	1.6 (0.4)
22	1.7 (0.3)	1.3 (0.2)	9.6 (0.9)	6.9 (0.6)	9.7 (1.2)	7.0 (0.8)	1.8 (0.3)	1.3 (0.2)
23	2.1 (0.5)	1.5 (0.4)	9.2 (0.9)	6.6 (0.6)	11.3 (0.5)	8.1 (0.4)	2.7 (0.9)	1.9 (0.7)
24	1.5 (0.3)	1.1 (0.2)	8.2 (0.8)	5.9 (0.6)	9.9 (0.6)	7.1 (0.4)	2.7 (1.1)	1.9 (0.8)
25	1.6 (0.2)	1.2 (0.1)	9.2 (2.3)	6.6 (1.7)	10.0 (0.9)	7.2 (0.6)	1.9 (0.3)	1.3 (0.2)
26	1.3 (0.2)	0.9 (0.2)	10.7 (0.4)	7.7 (0.3)	8.7 (0.4)	6.3 (0.3)	1.9 (0.4)	1.4 (0.3)
27	1.5 (0.2)	1.1 (0.2)	10.9 (0.8)	7.9 (0.6)	9.3 (0.6)	6.7 (0.5)	2.8 (0.7)	2.0 (0.5)
28	1.0 (0.2)	0.7 (0.1)	11.1 (1.0)	8.0 (0.7)	8.4 (1.8)	6.1 (1.3)	4.3 (1.3)	3.1 (0.9)
29	1.1 (0.2)	0.8 (0.1)	11.5 (1.9)	8.3 (1.4)	9.7 (2.2)	7.0 (1.6)	6.6 (0.8)	4.7 (0.6)
30	1.1 (0.1)	0.8 (0.1)	11.8 (1.4)	8.4 (1.0)	11.0 (2.7)	7.9 (2.0)	7.4 (0.6)	5.3 (0.4)
Avg	1.0	0.7	9.2	6.6	8.8	6.4	4.7	3.4
n	24	24	21	21	21	21	21	20
SD	0.5	0.4	1.5	1.1	1.2	0.8	3.0	2.2
Min	0.3	0.2	6.8	4.9	7.3	5.2	1.8	1.3
Max	2.1	1.5	11.8	8.4	11.3	8.1	10.2	7.3

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for August, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1								
2								
3								
4								
5								
6								
7	0.1 (0.2)	0.1 (0.1)	19.1 (3.4)	13.7 (2.4)	14.1 (4.4)	10.1 (3.1)	4.0 (1.5)	2.9 (1.0)
8	0.2 (0.2)	0.1 (0.1)	15.6 (0.6)	11.3 (0.5)	11.9 (1.3)	8.6 (1.0)	2.1 (0.6)	1.5 (0.4)
9	0.0 (0.2)	0.0 (0.1)	20.5 (4.2)	14.8 (3.0)	16.3 (5.3)	11.7 (3.8)	1.7 (0.9)	1.2 (0.6)
10	0.1 (0.2)	0.1 (0.1)	22.9 (4.4)	16.5 (3.1)	16.3 (5.1)	11.8 (3.7)	2.6 (1.1)	1.8 (0.8)
11	0.1 (0.1)	0.1 (0.1)	24.4 (2.6)	17.6 (1.9)	14.5 (3.7)	10.4 (2.6)	2.5 (1.0)	1.8 (0.7)
12	0.2 (0.1)	0.1 (0.1)	23.5 (3.3)	17.0 (2.4)	14.4 (2.5)	10.3 (1.8)	2.3 (1.1)	1.7 (0.8)
13	0.0 (0.1)	0.0 (0.1)						
14	0.1 (0.1)	0.1 (0.1)	23.6 (2.5)	17.0 (1.8)	17.6 (2.9)	12.7 (2.1)	1.8 (0.5)	1.3 (0.3)
15	0.2 (0.1)	0.1 (0.1)	27.1 (2.6)	19.5 (1.8)	18.7 (3.6)	13.5 (2.6)	1.8 (0.4)	1.3 (0.3)
16	0.0 (0.1)	0.0 (0.1)	27.0 (3.3)	19.5 (2.3)	17.9 (3.5)	12.9 (2.5)	1.4 (0.5)	1.0 (0.4)
17	0.1 (0.1)	0.1 (0.1)	30.0 (2.9)	21.6 (2.1)	22.5 (3.7)	16.2 (2.7)	2.2 (0.7)	1.6 (0.5)
18	0.0 (0.1)	0.0 (0.1)	30.7 (3.6)	22.1 (2.6)	22.3 (6.7)	16.0 (4.8)	3.4 (1.5)	2.4 (1.0)
19	0.2 (0.1)	0.1 (0.1)	33.0 (2.9)	23.7 (2.1)	25.6 (4.8)	18.4 (3.4)	2.6 (0.9)	1.9 (0.6)
20	0.0 (0.1)	0.0 (0.1)	32.5 (8.8)	23.4 (6.3)	30.8 (6.7)	22.1 (4.8)	3.9 (0.6)	2.8 (0.5)
21	0.1 (0.2)	0.1 (0.1)	39.7 (2.6)	28.5 (1.8)	38.1 (6.4)	27.4 (4.6)	4.9 (0.5)	3.5 (0.4)
22	0.0 (0.1)	0.0 (0.1)	35.9 (5.8)	25.7 (4.2)	32.0 (9.7)	22.9 (6.9)	5.3 (1.7)	3.8 (1.3)
23	0.1 (0.2)	0.0 (0.1)	36.7 (6.9)	26.4 (4.9)	32.0 (10.3)	22.9 (7.4)	4.5 (2.1)	3.2 (1.5)
24	0.1 (0.1)	0.1 (0.1)	35.8 (5.2)	25.7 (3.7)	31.2 (11.6)	22.4 (8.3)	3.9 (2.1)	2.8 (1.5)
25	0.2 (0.2)	0.1 (0.2)	33.0 (8.6)	23.8 (6.1)	29.7 (9.5)	21.3 (6.8)	2.9 (1.5)	2.1 (1.0)
26	0.2 (0.1)	0.1 (0.1)	37.1 (6.2)	26.8 (4.5)	34.7 (11.0)	25.0 (7.9)	1.7 (0.6)	1.2 (0.5)
27	0.2 (0.2)	0.1 (0.1)	44.6 (2.0)	32.1 (1.4)	62.0 (4.0)	44.5 (2.9)	4.8 (0.5)	3.4 (0.3)
28								
29								
30								
31	0.1 (0.1)	0.0 (0.1)	37.3 (2.0)	26.7 (1.5)	53.7 (7.3)	38.4 (5.2)	5.2 (0.6)	3.7 (0.4)
Avg	0.1	0.1	30.0	21.6	26.5	19.0	3.1	2.2
n	22	22	21	21	21	21	21	21
SD	0.1	0.1	7.4	5.3	12.8	9.2	1.3	0.9
Min	0.0	0.0	15.6	11.3	11.9	8.6	1.4	1.0
Max	0.2	0.1	44.6	32.1	62.0	44.5	5.3	3.8

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Table E10. Daily mean (SD) of NH3 concentration at site IA4B for September, 2009.

Day	Inlet		Barn 1		Barn 2		Farrowing room 9	
	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}	ppm	mg·dsm^{-3}
1	0.2 (0.2)	0.1 (0.1)	34.9 (7.1)	25.1 (5.1)	73.6 (30.8)	51.8 (21.6)		
2	0.1 (0.2)	0.0 (0.1)	40.3 (2.4)	28.9 (1.7)	45.9 (16.2)	32.9 (11.6)	6.1 (1.2)	4.4 (0.9)
3	0.0 (0.2)	0.0 (0.1)	42.5 (3.4)	30.5 (2.4)	22.9 (11.4)	16.4 (8.2)	6.7 (1.4)	4.8 (1.0)
4	0.0 (0.1)	0.0 (0.1)	43.1 (5.8)	31.0 (4.2)	14.2 (1.2)	10.2 (0.8)	5.8 (1.8)	4.1 (1.3)
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
Avg	0.1	0.1	40.2	28.9	39.1	27.8	6.2	4.4
n	4	4	4	4	4	4	3	3
SD	0.1	0.0	3.2	2.3	23.0	16.1	0.4	0.3
Min	0.0	0.0	34.9	25.1	14.2	10.2	5.8	4.1
Max	0.2	0.1	43.1	31.0	73.6	51.8	6.7	4.8

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Table E11. TSP emissions

Table E11. Daily mean (SD) of NH3 emissions at site IA4B for July, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21	18.40 (4.65)	8.58 (2.16)	18.30 (4.62)	36.70 (9.26)	15.00 (5.33)	6.99 (2.48)	13.60 (4.81)	27.20 (9.64)	0.33 (0.16)	2.41 (1.17)		
22												
23												
24												
25												
26												
27	20.00 (3.36)	9.30 (1.56)	19.70 (3.32)	39.60 (6.65)	20.00 (2.65)	9.32 (1.23)	18.00 (2.38)	36.10 (4.77)				
28	19.00 (3.34)	8.84 (1.55)	18.80 (3.29)	37.60 (6.60)	23.10 (4.19)	10.80 (1.95)	20.80 (3.76)	41.70 (7.54)				
29	19.00 (3.32)	8.82 (1.55)	18.70 (3.28)	37.50 (6.57)	24.60 (4.60)	11.40 (2.14)	22.10 (4.13)	44.20 (8.27)				
30	22.80 (3.22)	10.60 (1.50)	22.50 (3.17)	45.10 (6.36)	24.20 (3.92)	11.30 (1.82)	21.80 (3.51)	43.60 (7.04)				
31	22.50 (2.58)	10.50 (1.20)	22.10 (2.54)	44.30 (5.08)	25.40 (5.46)	11.80 (2.54)	22.80 (4.89)	45.60 (9.80)				
Avg	20.30	9.44	20.00	40.10	22.10	10.30	19.80	39.70				
n	6	6	6	6	6	6	6	6	1	1	0	0
SD	1.74	0.81	1.68	3.36	3.58	1.66	3.18	6.37				
Min	18.40	8.58	18.30	36.70	15.00	6.99	13.60	27.20				
Max	22.80	10.60	22.50	45.10	25.40	11.80	22.80	45.60				

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for August, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	20.20 (2.07)	9.39 (0.96)	19.90 (2.03)	39.80 (4.08)	26.90 (3.88)	12.50 (1.81)	24.10 (3.47)	48.30 (6.96)				
2												
3	21.00 (1.92)	9.76 (0.89)	20.60 (1.88)	41.30 (3.76)	25.60 (3.57)	11.90 (1.66)	22.90 (3.19)	45.90 (6.40)				
4	23.50 (2.14)	10.90 (0.99)	23.10 (2.09)	46.20 (4.20)	20.40 (2.91)	9.49 (1.35)	18.20 (2.60)	36.50 (5.21)				
5												
6	25.30 (4.53)	11.70 (2.11)	24.70 (4.44)	49.60 (8.89)	27.00 (4.39)	12.60 (2.04)	24.10 (3.92)	48.30 (7.85)				
7	23.20 (3.02)	10.80 (1.40)	22.70 (2.96)	45.60 (5.93)	28.30 (2.81)	13.10 (1.31)	25.20 (2.50)	50.50 (5.02)	0.42 (0.22)	3.01 (1.57)	17.30 (9.03)	29.90 (15.60)
8									0.49 (0.13)	3.57 (0.94)	20.60 (5.43)	35.30 (9.29)
9	20.00 (1.95)	9.28 (0.91)	19.50 (1.91)	39.10 (3.82)	27.30 (4.34)	12.70 (2.02)	24.30 (3.86)	48.70 (7.75)	0.42 (0.14)	3.00 (1.03)	17.30 (5.94)	29.50 (10.10)
10	21.50 (2.25)	9.98 (1.05)	21.00 (2.20)	42.00 (4.41)	31.70 (5.93)	14.80 (2.76)	28.20 (5.27)	56.50 (10.60)	0.51 (0.25)	3.71 (1.78)	21.40 (10.30)	36.10 (17.30)
11					34.30 (5.47)	16.00 (2.54)	30.50 (4.86)	61.10 (9.74)	0.29 (0.07)	2.06 (0.48)	11.90 (2.74)	19.90 (4.59)
12					24.60 (4.12)	11.40 (1.92)	21.80 (3.66)	43.70 (7.33)	0.17 (0.03)	1.20 (0.20)	6.94 (1.15)	11.50 (1.91)
13					23.00 (3.74)	10.70 (1.74)	20.40 (3.32)	40.90 (6.65)	0.27 (0.07)	1.96 (0.52)	11.30 (2.99)	18.70 (4.94)
14					20.60 (2.69)	9.58 (1.25)	18.30 (2.39)	36.60 (4.78)	0.33 (0.08)	2.35 (0.61)		
15					26.90 (8.07)	12.50 (3.75)	23.80 (7.14)	47.70 (14.30)	0.07 (0.08)	0.52 (0.61)		
16					27.20 (1.65)	12.70 (0.77)	24.10 (1.46)	48.30 (2.92)				
17	20.80 (7.29)	9.65 (3.39)	20.20 (7.08)	40.40 (14.20)	24.00 (4.77)	11.20 (2.22)	21.20 (4.22)	42.50 (8.46)	-0.16 (0.29)	-1.14 (2.07)	-6.60 (11.90)	-12.80 (23.30)
18	30.60 (6.69)	14.20 (3.11)	29.60 (6.48)	59.40 (13.00)	22.00 (2.18)	10.20 (1.01)	19.40 (1.92)	38.90 (3.85)	0.03 (0.05)	0.24 (0.33)	1.39 (1.88)	2.68 (3.62)
19	36.60 (6.39)	17.00 (2.97)	35.50 (6.19)	71.20 (12.40)	25.40 (2.73)	11.80 (1.27)	22.40 (2.41)	44.90 (4.83)	0.09 (0.05)	0.67 (0.38)	3.85 (2.21)	7.35 (4.23)
20	33.70 (3.14)	15.70 (1.46)	32.60 (3.04)	65.40 (6.10)	27.10 (4.38)	12.60 (2.04)	23.90 (3.86)	47.90 (7.73)	0.09 (0.07)	0.67 (0.49)	3.89 (2.85)	7.37 (5.39)
21	38.40 (6.22)	17.80 (2.90)	37.10 (6.02)	74.40 (12.10)	31.60 (4.19)	14.70 (1.95)	27.90 (3.69)	55.80 (7.40)	0.17 (0.08)	1.23 (0.55)	7.10 (3.15)	13.30 (5.91)
22	31.70 (6.30)	14.70 (2.93)	30.60 (6.10)	61.40 (12.20)	26.90 (3.25)	12.50 (1.51)	23.70 (2.86)	47.50 (5.74)	0.08 (0.07)	0.59 (0.50)	3.41 (2.85)	6.35 (5.31)
23												
24					24.90 (2.33)	11.60 (1.08)	21.90 (2.05)	43.90 (4.10)	0.21 (0.12)	1.53 (0.90)	8.83 (5.18)	16.20 (9.47)
25									0.35 (0.22)	2.52 (1.56)	14.50 (9.02)	26.30 (16.40)
26	25.40 (2.99)	11.80 (1.39)	24.50 (2.88)	49.10 (5.78)	28.70 (3.80)	13.40 (1.77)	25.20 (3.33)	50.50 (6.67)	0.31 (0.22)	2.26 (1.60)	13.10 (9.24)	23.50 (16.60)
27	36.00 (7.05)	16.70 (3.28)	34.60 (6.79)	69.40 (13.60)	33.70 (6.59)	15.70 (3.06)	29.50 (5.78)	59.20 (11.60)	0.40 (0.17)	2.87 (1.23)	16.50 (7.10)	29.50 (12.70)
28	32.90 (2.95)	15.30 (1.37)	31.70 (2.84)	63.50 (5.69)	32.60 (4.79)	15.20 (2.23)	28.60 (4.20)	57.30 (8.41)	0.24 (0.05)	1.70 (0.33)	9.80 (1.92)	17.40 (3.40)
29	34.80 (4.66)	16.20 (2.17)	33.50 (4.48)	67.10 (8.98)	26.20 (3.85)	12.20 (1.79)	23.00 (3.37)	46.10 (6.76)	0.31 (0.25)	2.24 (1.77)	12.90 (10.20)	22.70 (17.90)
30	33.60 (3.69)	15.60 (1.72)	32.30 (3.55)	64.70 (7.11)	27.40 (4.35)	12.80 (2.02)	24.00 (3.80)	48.20 (7.62)	0.37 (0.21)	2.67 (1.49)	15.40 (8.60)	26.90 (15.00)
31												
Avg	28.30	13.20	27.40	55.00	27.00	12.50	23.90	47.80	0.25	1.79	10.50	18.40
n	18	18	18	18	25	25	25	25	22	22	20	20
SD	6.35	2.95	6.01	12.10	3.63	1.69	3.17	6.36	0.16	1.18	6.88	11.90
Min	20.00	9.28	19.50	39.10	20.40	9.49	18.20	36.50	-0.16	-1.14	-6.60	-12.80
Max	38.40	17.80	37.10	74.40	34.30	16.00	30.50	61.10	0.51	3.71	21.40	36.10

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for September, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	32.40 (5.58)	15.10 (2.59)	31.10 (5.35)	62.20 (10.70)	31.80 (3.27)	14.80 (1.52)	27.80 (2.85)	55.70 (5.72)	0.56 (0.26)	4.01 (1.86)	23.10 (10.70)	40.00 (18.60)
2	35.00 (4.09)	16.30 (1.90)	33.60 (3.92)	67.30 (7.85)	33.10 (4.58)	15.40 (2.13)	28.90 (3.99)	57.90 (8.00)	0.51 (0.29)	3.66 (2.08)	21.10 (12.00)	36.30 (20.60)
3	34.90 (2.21)	16.20 (1.03)	33.40 (2.12)	67.00 (4.26)	35.80 (4.92)	16.60 (2.29)	31.20 (4.29)	62.60 (8.60)	0.51 (0.26)	3.70 (1.88)	21.30 (10.80)	36.40 (18.50)
4	35.00 (6.64)	16.30 (3.09)	33.50 (6.36)	67.20 (12.80)	34.70 (5.33)	16.10 (2.48)	30.20 (4.64)	60.60 (9.30)	0.50 (0.23)	3.63 (1.68)	21.00 (9.69)	35.50 (16.40)
5	29.80 (5.12)	13.80 (2.38)	28.50 (4.91)	57.10 (9.83)	34.40 (4.22)	16.00 (1.96)	30.00 (3.67)	60.10 (7.36)				
6	29.30 (3.79)	13.60 (1.76)	28.00 (3.62)	56.10 (7.26)	32.00 (3.38)	14.90 (1.57)	27.90 (2.94)	55.80 (5.90)				
7												
8									0.12 (0.08)	0.84 (0.58)	4.87 (3.32)	9.50 (6.45)
9									0.09 (0.08)	0.63 (0.54)	3.66 (3.13)	7.05 (6.04)
10												
11									0.02 (0.02)	0.17 (0.16)	0.97 (0.95)	1.84 (1.79)
12									0.01 (0.02)	0.10 (0.13)	0.57 (0.74)	1.06 (1.39)
13									0.02 (0.02)	0.13 (0.12)	0.73 (0.70)	1.35 (1.30)
14									0.03 (0.03)	0.19 (0.20)	1.09 (1.14)	2.01 (2.11)
15									0.04 (0.04)	0.31 (0.29)	1.77 (1.68)	3.23 (3.07)
16									0.05 (0.03)	0.39 (0.24)	2.26 (1.39)	4.10 (2.53)
17									0.07 (0.05)	0.49 (0.35)	2.83 (2.04)	5.09 (3.68)
18												
19									0.11 (0.05)	0.77 (0.36)	4.44 (2.09)	7.87 (3.70)
20												
21									0.08 (0.04)	0.57 (0.28)	3.30 (1.62)	5.76 (2.83)
22									0.14 (0.08)	0.99 (0.56)	5.72 (3.22)	9.91 (5.58)
23									0.18 (0.10)	1.32 (0.73)	7.62 (4.19)	13.10 (7.20)
24									0.13 (0.03)	0.91 (0.25)	5.23 (1.44)	8.93 (2.45)
25									0.15 (0.06)	1.04 (0.45)	6.03 (2.62)	10.20 (4.44)
26									0.19 (0.07)	1.37 (0.49)	7.88 (2.81)	14.50 (5.15)
27												
28	52.70 (6.62)	24.50 (3.08)	50.70 (6.39)	102.00 (12.80)	26.00 (3.48)	12.10 (1.62)	22.90 (3.06)	45.80 (6.13)				
29	55.20 (4.61)	25.70 (2.14)	53.20 (4.44)	107.00 (8.90)	31.80 (2.85)	14.80 (1.32)	28.00 (2.50)	56.00 (5.02)	0.02 (0.03)	0.12 (0.20)	0.68 (1.12)	1.33 (2.19)
30	59.10 (5.12)	27.50 (2.38)	57.00 (4.94)	114.00 (9.90)	34.00 (4.02)	15.80 (1.87)	29.90 (3.54)	60.00 (7.09)	0.01 (0.03)	0.06 (0.19)	0.33 (1.10)	0.64 (2.12)
Avg	40.40	18.80	38.80	77.70	32.60	15.20	28.50	57.20	0.16	1.15	6.66	11.60
n	9	9	9	9	9	9	9	9	22	22	22	22
SD	11.10	5.16	10.80	21.60	2.68	1.25	2.30	4.61	0.18	1.28	7.40	12.60
Min	29.30	13.60	28.00	56.10	26.00	12.10	22.90	45.80	0.01	0.06	0.33	0.64
Max	59.10	27.50	57.00	114.00	35.80	16.60	31.20	62.60	0.56	4.01	23.10	40.00

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for October, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	65.80 (7.56)	30.60 (3.52)	63.40 (7.29)	127.00 (14.60)	34.70 (4.79)	16.20 (2.23)	30.50 (4.21)	61.20 (8.43)	0.01 (0.04)	0.08 (0.26)	0.44 (1.50)	0.92 (3.13)
2	67.50 (10.00)	31.40 (4.67)	65.10 (9.70)	130.00 (19.40)	33.30 (6.32)	15.50 (2.94)	29.30 (5.56)	58.70 (11.10)	0.06 (0.04)	0.40 (0.26)	2.32 (1.50)	4.82 (3.11)
3	54.00 (9.19)	25.10 (4.27)	52.20 (8.87)	105.00 (17.80)	30.90 (4.64)	14.40 (2.16)	27.20 (4.09)	54.50 (8.19)	0.04 (0.03)	0.26 (0.20)	1.47 (1.14)	3.02 (2.35)
4	49.70 (7.22)	23.10 (3.36)	48.00 (6.96)	96.20 (14.00)	37.20 (3.01)	17.30 (1.40)	32.80 (2.65)	65.60 (5.31)	0.03 (0.03)	0.22 (0.25)	1.29 (1.42)	2.63 (2.88)
5	39.50 (9.19)	18.40 (4.27)	38.20 (8.88)	76.60 (17.80)	33.10 (3.25)	15.40 (1.51)	29.10 (2.86)	58.40 (5.73)	0.08 (0.03)	0.59 (0.23)	3.41 (1.35)	6.88 (2.72)
6	32.80 (2.79)	15.20 (1.30)	31.70 (2.69)	63.50 (5.40)	31.70 (5.11)	14.70 (2.38)	27.90 (4.50)	55.90 (9.02)	0.12 (0.07)	0.88 (0.50)	5.07 (2.90)	10.10 (5.79)
7	35.10 (3.85)	16.30 (1.79)	34.00 (3.73)	68.10 (7.47)	33.00 (5.83)	15.30 (2.71)	29.10 (5.15)	58.30 (10.30)	0.06 (0.03)	0.45 (0.19)	2.62 (1.12)	5.19 (2.22)
8	47.40 (5.77)	22.00 (2.68)	45.80 (5.58)	91.90 (11.20)	32.60 (4.05)	15.20 (1.88)	28.80 (3.57)	57.60 (7.16)	0.27 (0.16)	1.92 (1.13)	11.10 (6.50)	21.70 (12.80)
9	49.60 (5.35)	23.10 (2.49)	48.00 (5.18)	96.20 (10.40)					0.26 (0.18)	1.89 (1.28)	10.90 (7.36)	21.20 (14.30)
10	48.00 (4.31)	22.30 (2.00)	46.50 (4.17)	93.10 (8.35)					0.18 (0.14)	1.29 (1.04)	7.44 (5.99)	14.30 (11.50)
11	48.80 (2.59)	22.70 (1.20)	47.20 (2.50)	94.60 (5.02)					0.26 (0.21)	1.85 (1.53)	10.60 (8.83)	20.30 (16.90)
12	42.90 (8.41)	20.00 (3.91)	41.60 (8.14)	83.30 (16.30)	17.90 (3.38)	8.35 (1.57)	15.80 (2.98)	31.70 (5.98)	0.39 (0.32)	2.79 (2.32)	16.10 (13.40)	30.50 (25.30)
13	27.40 (3.05)	12.80 (1.42)	26.50 (2.95)	53.20 (5.91)	17.40 (1.60)	8.09 (0.75)	15.30 (1.41)	30.80 (2.83)	0.31 (0.22)	2.24 (1.57)	12.90 (9.06)	24.30 (17.00)
14	23.90 (2.31)	11.10 (1.08)	23.20 (2.24)	46.40 (4.48)	15.90 (2.58)	7.39 (1.20)	14.00 (2.28)	28.10 (4.56)	0.31 (0.21)	2.23 (1.49)	12.80 (8.57)	24.00 (16.00)
15	25.50 (2.23)	11.90 (1.04)	24.70 (2.16)	49.50 (4.33)	21.90 (3.78)	10.20 (1.76)	19.30 (3.33)	38.70 (6.68)	0.54 (0.34)	3.87 (2.47)	22.30 (14.20)	41.30 (26.30)
16	26.80 (2.45)	12.40 (1.14)	25.90 (2.37)	51.90 (4.75)	26.90 (2.54)	12.50 (1.18)	23.70 (2.24)	47.50 (4.48)	0.25 (0.20)	1.81 (1.41)	10.40 (8.14)	19.10 (14.90)
17	27.10 (2.67)	12.60 (1.24)	26.20 (2.58)	52.50 (5.17)	22.20 (3.56)	10.30 (1.65)	19.60 (3.14)	39.30 (6.29)	0.54 (0.31)	3.89 (2.27)	22.40 (13.10)	40.90 (23.80)
18									0.47 (0.32)	3.39 (2.31)	19.60 (13.30)	35.40 (24.10)
19					20.90 (3.69)	9.72 (1.72)	18.40 (3.26)	36.90 (6.53)	0.06 (0.08)	0.43 (0.60)	2.50 (3.46)	4.74 (6.60)
20					18.50 (5.09)	8.58 (2.37)	16.30 (4.49)	32.60 (9.00)	0.05 (0.07)	0.40 (0.47)		
21					17.90 (3.72)	8.31 (1.73)	15.70 (3.28)	31.60 (6.57)	0.04 (0.05)	0.31 (0.34)		
22					24.60 (1.24)	11.40 (0.58)	21.70 (1.09)	43.40 (2.19)	0.08 (0.10)	0.54 (0.75)	3.14 (4.30)	6.14 (8.41)
23					21.70 (5.89)	10.10 (2.74)	19.10 (5.19)	38.30 (10.40)	0.06 (0.09)	0.46 (0.67)	2.64 (3.89)	5.09 (7.50)
24					26.40 (2.99)	12.30 (1.39)	23.30 (2.63)	46.70 (5.28)	0.02 (0.02)	0.15 (0.16)	0.86 (0.92)	1.65 (1.75)
25												
26					20.90 (2.30)	9.70 (1.07)	18.40 (2.02)	36.80 (4.05)	0.02 (0.02)	0.14 (0.14)	0.80 (0.82)	1.51 (1.54)
27												
28												
29					18.80 (5.50)	8.76 (2.56)	16.60 (4.84)	33.20 (9.70)	0.04 (0.03)	0.31 (0.23)	1.79 (1.33)	3.27 (2.43)
30					12.10 (4.65)	5.62 (2.16)	10.60 (4.09)	21.30 (8.21)	0.08 (0.05)	0.57 (0.33)	3.29 (1.89)	5.97 (3.43)
31					18.20 (4.86)	8.46 (2.26)	16.00 (4.28)	32.10 (8.58)	0.07 (0.04)	0.48 (0.31)	2.77 (1.80)	5.00 (3.25)
Avg	41.90	19.50	40.50	81.10	24.50	11.40	21.60	43.30	0.17	1.21	7.35	13.80
n	17	17	17	17	24	24	24	24	28	28	26	26
SD	13.30	6.17	12.80	25.60	7.00	3.26	6.16	12.30	0.16	1.16	6.77	12.40
Min	23.90	11.10	23.20	46.40	12.10	5.62	10.60	21.30	0.01	0.08	0.44	0.92
Max	67.50	31.40	65.10	130.00	37.20	17.30	32.80	65.60	0.54	3.89	22.40	41.30

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for November, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1												
2					21.50 (2.81)	10.00 (1.31)	19.00 (2.47)	38.00 (4.95)	0.11 (0.09)	0.80 (0.64)	4.60 (3.70)	8.18 (6.58)
3					21.70 (3.87)	10.10 (1.80)	19.10 (3.40)	38.30 (6.82)	0.11 (0.09)	0.79 (0.64)	4.54 (3.70)	8.01 (6.53)
4					19.00 (3.12)	8.84 (1.45)	16.70 (2.74)	33.50 (5.49)	0.14 (0.09)	0.99 (0.68)	5.69 (3.93)	9.96 (6.88)
5									0.12 (0.08)	0.86 (0.56)	4.99 (3.24)	8.66 (5.62)
6					24.50 (2.61)	11.40 (1.21)	21.60 (2.30)	43.20 (4.61)	0.12 (0.13)	0.90 (0.91)	5.16 (5.23)	8.89 (9.00)
7					20.80 (2.57)	9.67 (1.20)	18.30 (2.26)	36.60 (4.53)	0.14 (0.15)	1.04 (1.11)	6.01 (6.40)	10.30 (10.90)
8					22.60 (1.41)	10.50 (0.66)	19.90 (1.24)	39.90 (2.49)	0.14 (0.14)	1.02 (1.02)	5.86 (5.86)	9.93 (9.95)
9					21.50 (2.06)	10.00 (0.96)	19.00 (1.81)	38.00 (3.63)	0.11 (0.14)	0.82 (1.01)	4.71 (5.80)	7.93 (9.77)
10					18.80 (3.77)	8.77 (1.76)	16.60 (3.32)	33.20 (6.65)	0.10 (0.12)	0.73 (0.89)	4.19 (5.13)	7.01 (8.56)
11					13.00 (2.36)	6.04 (1.10)	11.40 (2.08)	22.90 (4.16)	0.17 (0.10)	1.21 (0.74)	6.95 (4.29)	11.60 (7.16)
12					19.70 (3.91)	9.16 (1.82)	17.30 (3.44)	34.70 (6.90)				
13					20.00 (4.88)	9.29 (2.27)	17.60 (4.29)	35.20 (8.59)	0.02 (0.03)	0.17 (0.21)		
14					21.70 (3.02)	10.10 (1.40)	19.10 (2.65)	38.30 (5.31)	0.03 (0.03)	0.19 (0.21)		
15					24.50 (1.84)	11.40 (0.86)	21.50 (1.61)	43.20 (3.24)	0.03 (0.04)	0.23 (0.29)	1.34 (1.68)	2.62 (3.29)
16					22.00 (2.40)	10.20 (1.12)	19.30 (2.11)	38.70 (4.23)	0.03 (0.04)	0.23 (0.26)	1.34 (1.51)	2.59 (2.92)
17					25.80 (1.48)	12.00 (0.69)	22.70 (1.30)	45.40 (2.61)	0.04 (0.05)	0.30 (0.36)	1.73 (2.07)	3.31 (3.96)
18					24.60 (2.23)	11.40 (1.03)	21.60 (1.95)	43.20 (3.92)	0.06 (0.07)	0.40 (0.49)	2.31 (2.82)	4.38 (5.34)
19					21.70 (3.99)	10.10 (1.86)	19.10 (3.50)	38.20 (7.02)	0.09 (0.08)	0.67 (0.56)	3.86 (3.23)	7.24 (6.05)
20					25.70 (2.71)	11.90 (1.26)	22.50 (2.38)	45.20 (4.78)	0.10 (0.09)	0.70 (0.64)	4.06 (3.69)	7.56 (6.87)
21					24.30 (1.97)	11.30 (0.92)	21.40 (1.73)	42.80 (3.46)	0.09 (0.10)	0.65 (0.75)	3.73 (4.31)	6.89 (7.96)
22												
23					25.00 (1.36)	11.60 (0.63)	21.90 (1.20)	44.00 (2.40)	0.12 (0.15)	0.87 (1.11)	4.99 (6.39)	9.06 (11.60)
24					24.10 (1.02)	11.20 (0.48)	21.20 (0.90)	42.40 (1.80)	0.14 (0.16)	0.99 (1.12)	5.69 (6.48)	10.20 (11.70)
25					23.20 (2.41)	10.80 (1.12)	20.40 (2.11)	40.80 (4.23)	0.15 (0.18)	1.09 (1.32)	6.26 (7.64)	11.20 (13.70)
26					27.20 (1.85)	12.60 (0.86)	23.80 (1.62)	47.70 (3.26)	0.18 (0.21)	1.27 (1.52)	7.30 (8.80)	12.90 (15.60)
27					26.20 (1.83)	12.20 (0.85)	23.00 (1.60)	46.10 (3.22)	0.18 (0.23)	1.30 (1.67)	7.49 (9.66)	13.20 (17.00)
28					25.30 (2.02)	11.80 (0.94)	22.20 (1.77)	44.50 (3.55)	0.21 (0.22)	1.49 (1.62)	8.58 (9.35)	15.00 (16.30)
29												
30					26.40 (1.91)	12.30 (0.89)	23.20 (1.68)	46.40 (3.36)	0.19 (0.25)	1.36 (1.81)	7.87 (10.40)	13.50 (18.00)
Avg					22.70	10.60	20.00	40.00	0.11	0.81	4.97	8.76
n	0	0	0	0	26	26	26	26	26	26	24	24
SD					3.04	1.42	2.66	5.33	0.05	0.37	1.94	3.27
Min					13.00	6.04	11.40	22.90	0.02	0.17	1.34	2.59
Max					27.20	12.60	23.80	47.70	0.21	1.49	8.58	15.00

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for December, 2007.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	17.60 (7.64)	8.16 (3.55)	16.90 (7.34)	33.80 (14.70)	12.10 (3.83)	5.63 (1.78)	10.60 (3.36)	21.30 (6.73)	0.24 (0.27)	1.72 (1.95)	9.92 (11.20)	16.60 (18.80)
2	16.20 (0.69)	7.54 (0.32)	15.60 (0.67)	31.20 (1.34)	12.70 (1.31)	5.91 (0.61)	11.10 (1.15)	22.30 (2.30)	0.19 (0.20)	1.36 (1.41)	7.82 (8.12)	13.10 (13.50)
3	16.90 (0.63)	7.87 (0.29)	16.30 (0.61)	32.60 (1.22)	10.00 (1.97)	4.67 (0.92)	8.81 (1.73)	17.70 (3.46)	0.21 (0.25)	1.48 (1.83)	8.55 (10.60)	15.70 (19.50)
4	17.10 (1.18)	7.97 (0.55)	16.50 (1.14)	33.00 (2.28)	10.00 (1.82)	4.65 (0.84)	8.76 (1.59)	17.60 (3.19)				
5	14.80 (1.39)	6.89 (0.65)	14.20 (1.34)	28.50 (2.68)	12.00 (1.55)	5.60 (0.72)	10.50 (1.36)	21.10 (2.73)				
6					13.70 (1.19)	6.36 (0.55)	12.00 (1.04)	24.00 (2.08)				
7	14.40 (0.66)	6.68 (0.31)	13.80 (0.64)	27.70 (1.28)	12.30 (0.47)	5.71 (0.22)	10.80 (0.41)	21.60 (0.83)	0.12 (0.14)	0.89 (1.04)	5.16 (5.97)	9.95 (11.50)
8												
9												
10	13.10 (1.69)	6.10 (0.79)	12.70 (1.63)	25.40 (3.27)	12.30 (1.34)	5.73 (0.62)	10.80 (1.18)	21.70 (2.36)	0.12 (0.16)	0.84 (1.15)	4.83 (6.64)	9.08 (12.50)
11	11.20 (1.98)	5.20 (0.92)	10.80 (1.92)	21.70 (3.84)	11.30 (1.64)	5.25 (0.76)	9.94 (1.45)	19.90 (2.90)	0.05 (0.07)	0.35 (0.47)	1.99 (2.73)	3.71 (5.09)
12	10.80 (2.14)	5.04 (0.99)	10.50 (2.07)	21.00 (4.15)					0.06 (0.09)	0.45 (0.67)	2.60 (3.84)	4.81 (7.11)
13	12.40 (2.71)	5.75 (1.26)	12.00 (2.63)	24.10 (5.27)	12.80 (2.19)	5.97 (1.02)	11.40 (1.95)	22.80 (3.90)	0.08 (0.11)	0.59 (0.77)	3.43 (4.42)	6.28 (8.11)
14												
15												
16												
17												
18	12.90 (2.49)	6.01 (1.16)	12.70 (2.45)	25.40 (4.90)	19.70 (2.61)	9.18 (1.22)	17.70 (2.35)	35.40 (4.71)	0.16 (0.21)	1.18 (1.51)	6.78 (8.72)	11.90 (15.30)
19	11.40 (1.73)	5.30 (0.81)	11.20 (1.71)	22.50 (3.42)	21.10 (2.40)	9.82 (1.11)	19.00 (2.15)	38.00 (4.31)	0.17 (0.24)	1.25 (1.72)	7.18 (9.93)	12.50 (17.30)
20												
21	12.40 (2.13)	5.77 (0.99)	12.30 (2.10)	24.60 (4.22)	21.00 (2.49)	9.77 (1.16)	18.90 (2.24)	38.00 (4.49)	0.23 (0.26)	1.69 (1.88)	9.75 (10.90)	16.80 (18.70)
22									0.20 (0.21)	1.48 (1.52)	8.52 (8.76)	14.50 (14.90)
23									0.16 (0.15)	1.14 (1.11)	6.59 (6.39)	11.20 (10.80)
24	11.80 (1.91)	5.50 (0.89)	11.80 (1.90)	23.60 (3.81)					0.24 (0.25)	1.72 (1.79)	9.91 (10.30)	16.70 (17.30)
25	13.40 (1.81)	6.22 (0.84)	13.40 (1.81)	26.80 (3.63)	24.20 (2.04)	11.30 (0.95)	22.10 (1.85)	44.30 (3.71)	0.19 (0.25)	1.40 (1.78)	8.05 (10.30)	14.70 (18.90)
26	12.30 (2.07)	5.72 (0.96)	12.30 (2.07)	24.70 (4.15)	24.60 (1.89)	11.50 (0.88)	22.50 (1.72)	45.10 (3.46)	0.08 (0.14)	0.58 (1.02)		
27												
28												
29					25.00 (2.01)	11.60 (0.94)	23.00 (1.86)	46.20 (3.72)	0.03 (0.04)	0.18 (0.30)	1.04 (1.75)	2.01 (3.38)
30	11.90 (1.59)	5.52 (0.74)	12.00 (1.61)	24.10 (3.22)	25.40 (2.74)	11.80 (1.27)	23.40 (2.52)	46.90 (5.05)	0.02 (0.01)	0.12 (0.06)	0.72 (0.33)	1.37 (0.62)
31	12.10 (1.41)	5.62 (0.66)	12.30 (1.43)	24.60 (2.87)					0.02 (0.02)	0.17 (0.17)	0.96 (1.00)	1.82 (1.89)
Avg	13.50	6.27	13.20	26.40	16.50	7.67	14.80	29.60	0.14	0.98	5.77	10.10
n	18	18	18	18	17	17	17	17	19	19	18	18
SD	2.11	0.98	1.91	3.83	5.70	2.65	5.39	10.80	0.08	0.54	3.17	5.35
Min	10.80	5.04	10.50	21.00	10.00	4.65	8.76	17.60	0.02	0.12	0.72	1.37
Max	17.60	8.16	16.90	33.80	25.40	11.80	23.40	46.90	0.24	1.72	9.92	16.80

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for January, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	10.50 (0.49)	4.88 (0.23)	10.70 (0.50)	21.40 (1.00)					0.03 (0.04)	0.19 (0.30)	1.10 (1.73)	2.08 (3.28)
2	11.10 (0.85)	5.18 (0.40)	11.40 (0.87)	22.80 (1.75)	22.70 (1.27)	10.60 (0.59)	21.10 (1.18)	42.30 (2.36)	0.02 (0.02)	0.12 (0.12)	0.67 (0.72)	1.25 (1.35)
3					22.70 (1.44)	10.50 (0.67)	21.10 (1.34)	42.30 (2.68)	0.02 (0.02)	0.16 (0.13)	0.95 (0.76)	1.76 (1.42)
4												
5	13.10 (1.57)	6.09 (0.73)	13.50 (1.61)	27.00 (3.22)	22.50 (2.93)	10.50 (1.36)	21.10 (2.73)	42.30 (5.48)	0.07 (0.10)	0.52 (0.75)	2.99 (4.30)	5.48 (7.87)
6	12.50 (1.72)	5.83 (0.80)	12.90 (1.77)	25.90 (3.54)	22.30 (3.15)	10.40 (1.47)	20.90 (2.96)	41.90 (5.94)	0.11 (0.13)	0.76 (0.92)	4.37 (5.32)	7.93 (9.67)
7	12.30 (1.12)	5.71 (0.52)	12.70 (1.15)	25.40 (2.31)	23.20 (2.98)	10.80 (1.39)	21.80 (2.80)	43.70 (5.61)	0.13 (0.16)	0.95 (1.17)	5.48 (6.74)	9.88 (12.10)
8	11.80 (1.78)	5.51 (0.83)	12.30 (1.84)	24.60 (3.69)	27.00 (3.42)	12.50 (1.59)	25.40 (3.23)	50.90 (6.47)	0.12 (0.16)	0.88 (1.15)	5.08 (6.64)	9.08 (11.90)
9	12.50 (2.11)	5.81 (0.98)	13.00 (2.19)	26.00 (4.39)	24.20 (2.77)	11.30 (1.29)	22.90 (2.61)	45.80 (5.24)	0.13 (0.19)	0.97 (1.34)	5.57 (7.74)	9.88 (13.70)
10												
11	12.50 (1.82)	5.83 (0.85)	13.00 (1.89)	26.10 (3.79)	25.50 (2.95)	11.80 (1.37)	24.20 (2.79)	48.40 (5.60)	0.12 (0.17)	0.88 (1.21)	5.08 (6.98)	8.88 (12.20)
12	12.40 (1.80)	5.76 (0.84)	12.90 (1.88)	25.90 (3.76)	26.80 (2.57)	12.50 (1.20)	25.40 (2.45)	51.00 (4.90)	0.14 (0.17)	0.97 (1.24)	5.61 (7.13)	9.73 (12.40)
13	12.10 (1.27)	5.63 (0.59)	12.70 (1.32)	25.40 (2.65)	28.40 (3.16)	13.20 (1.47)	27.10 (3.01)	54.30 (6.02)	0.13 (0.17)	0.95 (1.22)	5.47 (7.04)	9.40 (12.10)
14												
15					24.90 (3.45)	11.60 (1.61)	23.80 (3.30)	47.70 (6.61)	0.12 (0.18)	0.87 (1.29)	5.02 (7.45)	8.51 (12.60)
16					25.30 (2.76)	11.80 (1.28)	24.20 (2.65)	48.60 (5.31)	0.09 (0.15)	0.66 (1.06)	3.79 (6.11)	6.83 (10.90)
17	11.70 (1.00)	5.43 (0.47)	12.30 (1.06)	24.60 (2.12)					0.05 (0.09)	0.36 (0.68)		
18	12.20 (1.23)	5.66 (0.57)	12.80 (1.29)	25.70 (2.58)								
19	12.30 (0.76)	5.70 (0.35)	13.00 (0.80)	26.00 (1.60)								
20	12.40 (0.48)	5.78 (0.22)	13.20 (0.51)	26.40 (1.02)	24.00 (3.94)	11.20 (1.83)	23.20 (3.80)	46.40 (7.62)				
21	12.10 (0.86)	5.62 (0.40)	12.80 (0.92)	25.70 (1.84)	19.80 (2.28)	9.20 (1.06)	19.10 (2.20)	38.40 (4.42)				
22	12.00 (1.61)	5.57 (0.75)	12.70 (1.71)	25.50 (3.44)					0.02 (0.04)	0.13 (0.26)	0.74 (1.48)	1.41 (2.81)
23	11.90 (1.24)	5.54 (0.58)	12.70 (1.32)	25.40 (2.65)					0.02 (0.03)	0.13 (0.23)	0.73 (1.31)	1.36 (2.46)
24									0.02 (0.07)	0.17 (0.49)	0.99 (2.83)	1.84 (5.28)
25									0.02 (0.04)	0.16 (0.31)	0.91 (1.78)	1.68 (3.30)
26	13.90 (1.80)	6.45 (0.84)	14.90 (1.93)	29.80 (3.87)	19.40 (2.96)	9.02 (1.38)	19.00 (2.89)	38.00 (5.80)	0.04 (0.06)	0.27 (0.44)	1.57 (2.51)	2.89 (4.61)
27	13.80 (1.64)	6.43 (0.77)	14.80 (1.77)	29.80 (3.55)	17.50 (2.13)	8.15 (0.99)	17.20 (2.08)	34.40 (4.17)	0.05 (0.08)	0.38 (0.58)	2.20 (3.37)	4.00 (6.12)
28	14.30 (1.58)	6.64 (0.74)	15.40 (1.71)	30.80 (3.42)	12.70 (2.68)	5.93 (1.25)	12.50 (2.63)	25.10 (5.27)	0.10 (0.11)	0.75 (0.81)	4.30 (4.69)	7.76 (8.46)
29												
30	12.70 (0.82)	5.91 (0.38)	13.70 (0.89)	27.50 (1.78)					0.10 (0.18)	0.72 (1.30)	4.17 (7.50)	7.41 (13.30)
31	12.90 (1.00)	5.99 (0.47)	13.90 (1.08)	27.90 (2.17)	14.20 (2.24)	6.62 (1.04)	14.00 (2.21)	28.10 (4.43)	0.06 (0.09)	0.46 (0.66)	2.64 (3.83)	4.66 (6.74)
Avg	12.40	5.77	13.10	26.20	22.40	10.40	21.30	42.70	0.07	0.54	3.16	5.62
n	22	22	22	22	18	18	18	18	23	23	22	22
SD	0.83	0.39	1.04	2.08	4.12	1.92	3.76	7.53	0.04	0.32	1.89	3.28
Min	10.50	4.88	10.70	21.40	12.70	5.93	12.50	25.10	0.02	0.12	0.67	1.25
Max	14.30	6.64	15.40	30.80	28.40	13.20	27.10	54.30	0.14	0.97	5.61	9.88

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for February, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	12.50 (1.07)	5.79 (0.50)	13.50 (1.16)	27.10 (2.33)	17.00 (3.43)	7.89 (1.60)	16.80 (3.38)	33.60 (6.78)	0.09 (0.17)	0.63 (1.24)	3.66 (7.13)	6.44 (12.60)
2	13.10 (1.21)	6.10 (0.57)	14.30 (1.32)	28.60 (2.65)	14.70 (0.92)	6.83 (0.43)	14.60 (0.92)	29.20 (1.84)	0.12 (0.22)	0.88 (1.57)	5.06 (9.08)	8.96 (16.10)
3	12.20 (1.07)	5.68 (0.50)	13.30 (1.16)	26.70 (2.33)	14.40 (1.72)	6.70 (0.80)	14.30 (1.71)	28.70 (3.42)	0.09 (0.17)	0.67 (1.25)	3.85 (7.22)	6.91 (13.00)
4	11.90 (1.13)	5.54 (0.53)	13.00 (1.24)	26.10 (2.49)	14.40 (1.57)	6.69 (0.73)	14.30 (1.56)	28.70 (3.12)	0.12 (0.20)	0.83 (1.45)	4.78 (8.36)	8.70 (15.20)
5	10.70 (1.16)	4.99 (0.54)	11.70 (1.27)	23.50 (2.54)					0.11 (0.18)	0.76 (1.27)	4.36 (7.35)	7.97 (13.40)
6	9.87 (0.98)	4.59 (0.46)	10.80 (1.08)	21.70 (2.16)					0.07 (0.13)	0.52 (0.96)	2.99 (5.54)	5.48 (10.10)
7	10.10 (0.89)	4.68 (0.42)	11.00 (0.98)	22.10 (1.96)	15.30 (3.07)	7.10 (1.43)	15.30 (3.06)	30.60 (6.14)	0.02 (0.01)	0.12 (0.08)		
8	11.10 (1.18)	5.17 (0.55)	12.20 (1.30)	24.50 (2.60)	13.20 (2.86)	6.14 (1.33)	13.20 (2.87)	26.50 (5.75)	0.01 (0.01)	0.06 (0.05)		
9									0.01 (0.02)	0.11 (0.17)		
10	9.95 (1.28)	4.63 (0.60)	10.90 (1.40)	21.90 (2.81)					0.02 (0.02)	0.12 (0.17)	0.67 (0.96)	1.31 (1.89)
11	11.30 (0.84)	5.25 (0.39)	12.40 (0.92)	24.80 (1.85)	13.00 (3.20)	6.06 (1.49)	13.00 (3.20)	26.10 (6.42)	0.02 (0.00)	0.13 (0.03)	0.77 (0.19)	1.49 (0.37)
12	11.50 (0.76)	5.36 (0.35)	12.60 (0.83)	25.30 (1.67)					0.02 (0.04)	0.13 (0.30)	0.73 (1.70)	1.39 (3.25)
13	11.60 (0.77)	5.41 (0.36)	12.70 (0.83)	25.40 (1.67)	13.80 (3.23)	6.44 (1.50)	13.80 (3.22)	27.60 (6.46)	0.02 (0.05)	0.16 (0.34)	0.92 (1.94)	1.74 (3.68)
14												
15	11.10 (0.97)	5.14 (0.45)	12.00 (1.05)	24.10 (2.11)					0.02 (0.04)	0.14 (0.28)	0.79 (1.61)	1.47 (3.00)
16	12.60 (1.08)	5.87 (0.50)	13.70 (1.17)	27.50 (2.34)	14.10 (2.78)	6.54 (1.29)	13.90 (2.75)	27.90 (5.52)	0.04 (0.06)	0.26 (0.42)	1.52 (2.42)	2.81 (4.48)
17	11.10 (1.08)	5.18 (0.50)	12.10 (1.17)	24.20 (2.35)					0.04 (0.05)	0.30 (0.38)	1.73 (2.18)	3.19 (4.00)
18									0.08 (0.10)	0.60 (0.73)	3.49 (4.22)	6.35 (7.70)
19									0.04 (0.08)	0.32 (0.58)	1.83 (3.32)	3.31 (6.01)
20									0.03 (0.06)	0.22 (0.45)	1.27 (2.60)	2.28 (4.67)
21									0.04 (0.07)	0.30 (0.54)	1.72 (3.10)	3.07 (5.52)
22					17.10 (2.00)	7.93 (0.93)	16.70 (1.96)	33.40 (3.93)	0.08 (0.13)	0.57 (0.95)	3.30 (5.45)	5.83 (9.63)
23												
24												
25												
26												
27												
28												
29												
Avg	11.40	5.29	12.40	24.90	14.70	6.83	14.60	29.20	0.05	0.37	2.41	4.37
n	15	15	15	15	10	10	10	10	21	21	18	18
SD	0.95	0.44	1.00	2.00	1.32	0.61	1.23	2.47	0.04	0.26	1.47	2.62
Min	9.87	4.59	10.80	21.70	13.00	6.06	13.00	26.10	0.01	0.06	0.67	1.31
Max	13.10	6.10	14.30	28.60	17.10	7.93	16.80	33.60	0.12	0.88	5.06	8.96

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for March, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1					17.10 (2.27)	7.94 (1.06)	16.40 (2.19)	32.90 (4.39)				
2					15.60 (3.44)	7.27 (1.60)	15.00 (3.30)	30.10 (6.62)				
3												
4					21.80 (2.43)	10.20 (1.13)	20.90 (2.33)	41.90 (4.67)				
5									0.07 (0.11)	0.53 (0.77)	3.04 (4.44)	5.72 (8.34)
6									0.05 (0.09)	0.38 (0.63)	2.18 (3.64)	4.06 (6.78)
7									0.03 (0.05)	0.22 (0.39)	1.29 (2.22)	2.39 (4.11)
8					20.00 (2.07)	9.30 (0.96)	19.00 (1.97)	38.10 (3.94)	0.05 (0.08)	0.34 (0.57)	1.97 (3.31)	3.61 (6.06)
9					20.90 (1.12)	9.73 (0.52)	19.90 (1.06)	39.80 (2.13)	0.08 (0.10)	0.56 (0.73)	3.22 (4.23)	5.85 (7.68)
10					20.90 (1.46)	9.72 (0.68)	19.80 (1.39)	39.80 (2.79)	0.09 (0.11)	0.62 (0.82)	3.56 (4.73)	6.41 (8.52)
11					19.30 (1.54)	8.97 (0.72)	18.30 (1.46)	36.70 (2.92)	0.12 (0.13)	0.89 (0.97)	5.11 (5.59)	9.12 (9.97)
12					20.70 (3.46)	9.65 (1.61)	19.70 (3.28)	39.50 (6.58)	0.14 (0.15)	1.03 (1.07)	5.93 (6.18)	10.50 (10.90)
13					28.60 (2.97)	13.30 (1.38)	27.20 (2.82)	54.50 (5.65)	0.18 (0.16)	1.27 (1.14)	7.32 (6.57)	12.80 (11.50)
14									0.18 (0.17)	1.31 (1.19)	7.56 (6.88)	13.20 (12.00)
15									0.18 (0.19)	1.32 (1.38)	7.59 (7.93)	13.10 (13.70)
16									0.22 (0.24)	1.60 (1.75)	9.25 (10.10)	15.90 (17.40)
17									0.26 (0.28)	1.84 (2.00)	10.60 (11.50)	18.10 (19.70)
18					28.00 (1.89)	13.00 (0.88)	26.60 (1.80)	53.30 (3.61)	0.27 (0.25)	1.93 (1.77)	11.10 (10.20)	18.90 (17.30)
19					30.80 (4.63)	14.30 (2.15)	29.30 (4.40)	58.70 (8.83)	0.30 (0.24)	2.18 (1.76)	12.60 (10.10)	21.10 (17.10)
20									0.31 (0.22)	2.20 (1.58)	12.70 (9.10)	23.40 (16.80)
21					8.94 (3.95)	4.16 (1.84)	8.50 (3.76)	17.00 (7.53)				
22					8.66 (2.36)	4.03 (1.10)	8.23 (2.24)	16.50 (4.49)	0.04 (0.08)	0.27 (0.55)		
23									0.05 (0.09)	0.37 (0.67)	2.12 (3.88)	4.13 (7.55)
24					7.71 (2.32)	3.59 (1.08)	7.34 (2.21)	14.70 (4.42)	0.06 (0.09)	0.43 (0.68)	2.49 (3.90)	4.79 (7.48)
25					9.88 (2.45)	4.60 (1.14)	9.40 (2.33)	18.80 (4.67)	0.09 (0.09)	0.64 (0.65)	3.70 (3.77)	7.04 (7.16)
26					9.74 (3.12)	4.53 (1.45)	9.26 (2.97)	18.60 (5.95)	0.10 (0.11)	0.70 (0.76)	4.01 (4.39)	7.56 (8.26)
27					9.08 (2.60)	4.22 (1.21)	8.64 (2.47)	17.30 (4.96)	0.09 (0.10)	0.63 (0.75)	3.63 (4.32)	6.78 (8.06)
28					8.42 (2.97)	3.92 (1.38)	8.01 (2.83)	16.10 (5.66)	0.09 (0.09)	0.62 (0.65)	3.56 (3.77)	6.57 (6.97)
29					8.02 (1.95)	3.73 (0.91)	7.63 (1.86)	15.30 (3.72)	0.12 (0.12)	0.85 (0.86)	4.91 (4.98)	8.99 (9.11)
30	20.10 (3.68)	9.33 (1.71)	21.00 (3.84)	42.00 (7.69)	11.40 (2.45)	5.28 (1.14)	10.80 (2.33)	21.70 (4.67)	0.14 (0.10)	1.03 (0.74)	5.95 (4.26)	10.80 (7.73)
31	17.80 (2.34)	8.27 (1.09)	18.60 (2.44)	37.20 (4.90)	10.70 (2.67)	4.99 (1.24)	10.20 (2.54)	20.50 (5.09)	0.15 (0.13)	1.07 (0.91)	6.16 (5.23)	11.10 (9.40)
Avg	18.90	8.80	19.80	39.60	16.00	7.45	15.20	30.60	0.13	0.95	5.66	10.10
n	2	2	2	2	21	21	21	21	26	26	25	25
SD	1.15	0.53	1.19	2.39	7.32	3.40	6.95	13.90	0.08	0.58	3.32	5.64
Min	17.80	8.27	18.60	37.20	7.71	3.59	7.34	14.70	0.03	0.22	1.29	2.39
Max	20.10	9.33	21.00	42.00	30.80	14.30	29.30	58.70	0.31	2.20	12.70	23.40

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for April, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	19.40 (1.44)	9.03 (0.67)	20.30 (1.50)	40.70 (3.01)					0.14 (0.14)	1.01 (0.98)	5.80 (5.65)	10.30 (10.10)
2	21.30 (2.06)	9.88 (0.96)	22.20 (2.15)	44.50 (4.31)					0.17 (0.16)	1.22 (1.14)	7.03 (6.57)	12.40 (11.60)
3	22.20 (1.61)	10.30 (0.75)	23.20 (1.68)	46.40 (3.37)					0.17 (0.18)	1.19 (1.33)	6.86 (7.66)	12.00 (13.40)
4	28.80 (10.20)	13.40 (4.72)	30.10 (10.60)	60.30 (21.30)					0.22 (0.18)	1.59 (1.31)	9.15 (7.54)	15.90 (13.10)
5	31.00 (10.10)	14.40 (4.68)	32.40 (10.50)	64.90 (21.10)					0.17 (0.15)	1.23 (1.09)	7.08 (6.30)	12.20 (10.90)
6	27.90 (5.21)	13.00 (2.43)	29.10 (5.45)	58.40 (10.90)	9.37 (2.87)	4.36 (1.34)	8.93 (2.74)	17.90 (5.48)	0.23 (0.13)	1.64 (0.96)	9.49 (5.56)	16.30 (9.52)
7									0.20 (0.16)	1.46 (1.18)	8.40 (6.84)	14.30 (11.60)
8	25.50 (2.31)	11.90 (1.07)	26.70 (2.41)	53.50 (4.84)	7.15 (2.72)	3.33 (1.27)	6.82 (2.59)	13.70 (5.20)	0.23 (0.22)	1.62 (1.55)	9.37 (8.94)	15.80 (15.10)
9	27.70 (4.45)	12.90 (2.07)	29.00 (4.65)	58.00 (9.33)	6.86 (2.34)	3.19 (1.09)	6.54 (2.23)	13.10 (4.47)	0.26 (0.21)	1.84 (1.49)	10.60 (8.62)	17.80 (14.40)
10					3.66 (3.31)	1.70 (1.54)	3.48 (3.16)	6.98 (6.32)	0.28 (0.25)	2.05 (1.77)	11.90 (10.20)	19.70 (17.00)
11	26.60 (6.05)	12.40 (2.81)	27.80 (6.32)	55.70 (12.70)					0.23 (0.17)	1.65 (1.22)	9.51 (7.06)	15.70 (11.70)
12	23.80 (3.63)	11.10 (1.69)	24.90 (3.79)	49.90 (7.59)					0.25 (0.24)	1.77 (1.76)	10.20 (10.10)	16.70 (16.60)
13					25.90 (3.83)	12.10 (1.78)	24.60 (3.64)	49.40 (7.29)	0.23 (0.24)	1.69 (1.74)	9.76 (10.10)	15.90 (16.40)
14					24.80 (3.34)	11.50 (1.55)	23.60 (3.17)	47.30 (6.35)	0.28 (0.23)	2.03 (1.67)	11.70 (9.63)	19.00 (15.60)
15					18.00 (6.13)	8.38 (2.85)	17.10 (5.82)	34.30 (11.70)	0.26 (0.20)	1.88 (1.42)	10.90 (8.17)	17.40 (13.10)
16	42.50 (7.39)	19.80 (3.44)	44.20 (7.69)	88.70 (15.40)	20.40 (4.91)	9.49 (2.28)	19.40 (4.66)	38.80 (9.33)	0.17 (0.15)	1.19 (1.10)	6.88 (6.36)	12.20 (11.20)
17	36.20 (7.33)	16.90 (3.41)	37.70 (7.63)	75.60 (15.30)	27.90 (2.82)	13.00 (1.31)	26.40 (2.68)	53.00 (5.36)				
18	39.20 (8.46)	18.20 (3.94)	40.70 (8.81)	81.70 (17.60)	26.00 (3.04)	12.10 (1.42)	24.70 (2.88)	49.50 (5.78)				
19	38.20 (8.34)	17.70 (3.88)	39.70 (8.67)	79.50 (17.40)	31.10 (8.64)	14.50 (4.02)	29.50 (8.18)	59.10 (16.40)				
20	36.70 (5.25)	17.10 (2.44)	38.10 (5.46)	76.40 (10.90)	28.30 (3.53)	13.10 (1.64)	26.80 (3.34)	53.60 (6.70)	0.15 (0.13)	1.10 (0.90)	6.37 (5.20)	12.20 (10.00)
21	35.20 (5.82)	16.40 (2.71)	36.60 (6.04)	73.40 (12.10)					0.22 (0.13)	1.55 (0.91)	8.96 (5.26)	17.10 (10.00)
22	50.10 (13.50)	23.30 (6.29)	52.00 (14.00)	104.00 (28.10)					0.20 (0.14)	1.42 (1.01)	8.20 (5.82)	15.50 (11.00)
23	49.90 (11.30)	23.20 (5.24)	51.80 (11.70)	104.00 (23.40)					0.23 (0.13)	1.66 (0.92)	9.55 (5.29)	17.90 (9.90)
24	59.80 (9.48)	27.80 (4.41)	61.90 (9.83)	124.00 (19.70)	22.90 (2.99)	10.60 (1.39)	21.60 (2.82)	43.30 (5.66)	0.29 (0.12)	2.09 (0.86)	12.10 (4.98)	22.40 (9.23)
25									0.19 (0.15)	1.34 (1.11)	7.74 (6.42)	14.20 (11.80)
26												
27												
28												
29												
30												
Avg	33.80	15.70	35.20	70.50	19.40	9.03	18.40	36.90	0.22	1.56	8.98	15.60
n	19	19	19	19	13	13	13	13	22	22	22	22
SD	10.70	4.96	11.00	22.10	9.09	4.23	8.60	17.20	0.04	0.31	1.79	2.86
Min	19.40	9.03	20.30	40.70	3.66	1.70	3.48	6.98	0.14	1.01	5.80	10.30
Max	59.80	27.80	61.90	124.00	31.10	14.50	29.50	59.10	0.29	2.09	12.10	22.40

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for May, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16	33.90 (17.00)	15.80 (7.89)	34.60 (17.30)	69.20 (34.60)	16.00 (3.91)	7.43 (1.82)	14.80 (3.63)	29.80 (7.27)	0.19 (0.13)	1.36 (0.94)	7.82 (5.44)	15.10 (10.50)
17	41.70 (12.30)	19.40 (5.71)	42.50 (12.50)	85.20 (25.10)	16.20 (5.70)	7.52 (2.65)	15.00 (5.29)	30.10 (10.60)	0.23 (0.16)	1.65 (1.12)	9.52 (6.49)	18.20 (12.40)
18	30.50 (7.36)	14.20 (3.42)	31.00 (7.49)	62.20 (15.00)	14.30 (4.26)	6.64 (1.98)	13.20 (3.95)	26.50 (7.91)	0.21 (0.18)	1.51 (1.28)	8.70 (7.39)	16.50 (14.00)
19	32.40 (9.63)	15.10 (4.48)	32.90 (9.78)	66.00 (19.60)	14.40 (3.79)	6.70 (1.76)	13.30 (3.51)	26.70 (7.03)				
20	29.90 (7.59)	13.90 (3.53)	30.30 (7.70)	60.70 (15.40)	17.00 (5.35)	7.92 (2.49)	15.80 (4.94)	31.60 (9.91)	0.19 (0.16)	1.37 (1.14)	7.91 (6.58)	14.70 (12.30)
21	33.30 (9.37)	15.50 (4.36)	33.80 (9.50)	67.70 (19.00)	15.40 (3.70)	7.16 (1.72)	14.20 (3.42)	28.50 (6.85)	0.29 (0.22)	2.08 (1.55)	12.00 (8.97)	22.20 (16.60)
22	29.80 (5.63)	13.80 (2.62)	30.10 (5.70)	60.40 (11.40)								
23												
24												
25	51.40 (14.00)	23.90 (6.52)	51.90 (14.20)	104.00 (28.40)	21.40 (3.07)	9.96 (1.43)	19.70 (2.83)	39.50 (5.67)	0.58 (0.28)	4.19 (2.04)	24.20 (11.80)	43.20 (21.00)
26												
27												
28												
29	36.40 (10.80)	16.90 (5.00)	36.60 (10.80)	73.40 (21.70)								
30	51.60 (14.20)	24.00 (6.58)	51.90 (14.20)	104.00 (28.50)	19.50 (1.63)	9.07 (0.76)	17.90 (1.49)	35.80 (2.99)				
31	44.10 (10.20)	20.50 (4.75)	44.30 (10.20)	88.80 (20.50)	17.00 (2.72)	7.90 (1.27)	15.50 (2.49)	31.10 (4.99)				
Avg	37.70	17.50	38.20	76.50	16.80	7.81	15.50	31.10	0.28	2.03	11.70	21.70
n	11	11	11	11	9	9	9	9	6	6	6	6
SD	7.86	3.66	7.82	15.70	2.21	1.03	1.98	3.98	0.14	1.00	5.75	9.94
Min	29.80	13.80	30.10	60.40	14.30	6.64	13.20	26.50	0.19	1.36	7.82	14.70
Max	51.60	24.00	51.90	104.00	21.40	9.96	19.70	39.50	0.58	4.19	24.20	43.20

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for June, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	39.60 (8.77)	18.40 (4.08)	39.70 (8.79)	79.50 (17.60)	16.70 (2.40)	7.78 (1.12)	15.30 (2.20)	30.60 (4.40)				
2	37.50 (5.62)	17.40 (2.62)	37.60 (5.63)	75.30 (11.30)	16.10 (1.94)	7.47 (0.90)	14.70 (1.77)	29.40 (3.55)				
3	36.00 (8.03)	16.70 (3.73)	36.00 (8.03)	72.20 (16.10)	18.80 (4.09)	8.73 (1.90)	17.10 (3.73)	34.30 (7.47)				
4	43.90 (6.77)	20.40 (3.15)	43.90 (6.76)	87.90 (13.60)	21.70 (3.16)	10.10 (1.47)	19.80 (2.88)	39.70 (5.78)				
5												
6												
7												
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9												
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30												
Avg	39.20	18.30	39.30	78.70	18.30	8.52	16.70	33.50				
n	4	4	4	4	4	4	4	4	0	0	0	0
SD	2.97	1.38	2.95	5.91	2.21	1.03	2.00	4.00				
Min	36.00	16.70	36.00	72.20	16.10	7.47	14.70	29.40				
Max	43.90	20.40	43.90	87.90	21.70	10.10	19.80	39.70				

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for July, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1												
2												
3												
4					23.90 (3.30)	11.10 (1.54)	21.40 (2.95)	42.90 (5.91)				
5					21.00 (2.49)	9.79 (1.16)	18.80 (2.22)	37.70 (4.46)				
6					20.70 (1.75)	9.63 (0.82)	18.50 (1.56)	37.00 (3.13)				
7					21.40 (1.99)	9.97 (0.93)	19.10 (1.78)	38.30 (3.56)				
8					26.10 (3.47)	12.20 (1.61)	23.30 (3.09)	46.70 (6.20)				
9					26.00 (2.33)	12.10 (1.08)	23.20 (2.08)	46.40 (4.16)				
10												
11					28.10 (2.25)	13.10 (1.05)	25.00 (2.01)	50.10 (4.02)	0.28 (0.08)	2.03 (0.61)	11.70 (3.53)	20.40 (6.13)
12	49.80 (7.08)	23.10 (3.30)	48.60 (6.92)	97.40 (13.90)	24.40 (5.21)	11.30 (2.42)	21.70 (4.64)	43.40 (9.30)	0.56 (0.15)	4.06 (1.05)	23.40 (6.04)	40.40 (10.40)
13	48.90 (11.70)	22.80 (5.44)	47.80 (11.40)	95.70 (22.90)	23.90 (6.30)	11.10 (2.93)	21.20 (5.60)	42.50 (11.20)	0.47 (0.17)	3.41 (1.24)	19.70 (7.15)	33.70 (12.20)
14	50.60 (12.20)	23.60 (5.67)	49.40 (11.90)	99.00 (23.80)					0.49 (0.16)	3.52 (1.14)	20.30 (6.55)	34.50 (11.10)
15	55.20 (8.56)	25.70 (3.98)	53.80 (8.34)	108.00 (16.70)	28.70 (2.50)	13.40 (1.16)	25.50 (2.22)	51.10 (4.45)	0.45 (0.17)	3.27 (1.20)	18.80 (6.93)	31.80 (11.70)
16	55.30 (4.82)	25.70 (2.24)	53.90 (4.69)	108.00 (9.40)	29.50 (2.10)	13.70 (0.98)	26.20 (1.87)	52.40 (3.74)	0.25 (0.11)	1.82 (0.76)	10.50 (4.41)	19.00 (7.73)
17	51.00 (6.44)	23.70 (3.00)	49.70 (6.27)	99.60 (12.60)	27.00 (3.99)	12.50 (1.86)	23.90 (3.54)	48.00 (7.10)	0.09 (0.04)	0.65 (0.29)		
18	51.20 (8.29)	23.80 (3.86)	49.90 (8.07)	100.00 (16.20)	31.30 (4.35)	14.50 (2.02)	27.70 (3.86)	55.60 (7.73)	0.17 (0.08)	1.20 (0.57)		
19	54.00 (5.21)	25.10 (2.42)	52.60 (5.07)	105.00 (10.20)	33.00 (3.77)	15.30 (1.76)	29.30 (3.34)	58.60 (6.70)	0.44 (0.15)	3.18 (1.11)	18.30 (6.42)	29.80 (10.30)
20	55.70 (6.61)	25.90 (3.07)	54.20 (6.42)	109.00 (12.90)	36.70 (6.28)	17.10 (2.92)	32.60 (5.57)	65.30 (11.20)	0.41 (0.20)	2.97 (1.43)	17.20 (8.26)	30.50 (14.70)
21	58.40 (8.28)	27.20 (3.85)	56.80 (8.05)	114.00 (16.10)	28.40 (3.56)	13.20 (1.65)	25.20 (3.15)	50.50 (6.32)	0.57 (0.21)	4.09 (1.48)	23.60 (8.55)	45.10 (16.40)
22	54.20 (8.56)	25.20 (3.98)	52.70 (8.31)	106.00 (16.70)	27.50 (2.70)	12.80 (1.26)	24.30 (2.39)	48.80 (4.80)	0.46 (0.21)	3.32 (1.49)	19.10 (8.57)	36.30 (16.30)
23	48.10 (8.30)	22.40 (3.86)	46.70 (8.06)	93.60 (16.20)	25.30 (2.30)	11.80 (1.07)	22.40 (2.04)	44.90 (4.08)	0.58 (0.25)	4.19 (1.79)	24.20 (10.30)	45.50 (19.50)
24												
25												
26	58.70 (7.36)	27.30 (3.43)	56.90 (7.14)	114.00 (14.30)	29.40 (2.77)	13.70 (1.29)	26.00 (2.45)	52.10 (4.90)	0.51 (0.21)	3.68 (1.49)	21.20 (8.59)	39.00 (15.80)
27	52.40 (8.46)	24.40 (3.94)	50.70 (8.20)	102.00 (16.40)	26.60 (3.70)	12.40 (1.72)	23.50 (3.27)	47.10 (6.55)	0.70 (0.20)	5.02 (1.47)	28.90 (8.46)	52.70 (15.40)
28	62.70 (10.30)	29.20 (4.78)	60.70 (9.95)	122.00 (19.90)	28.40 (1.91)	13.20 (0.89)	25.10 (1.69)	50.30 (3.38)	0.74 (0.28)	5.32 (2.02)	30.70 (11.60)	55.40 (21.00)
29									0.52 (0.11)	3.72 (0.82)	21.50 (4.71)	38.50 (8.45)
30	66.10 (10.20)	30.80 (4.76)	64.00 (9.90)	128.00 (19.80)	28.00 (4.29)	13.00 (1.99)	24.70 (3.78)	49.50 (7.58)	0.52 (0.13)	3.79 (0.96)	21.80 (5.51)	38.90 (9.81)
31					30.90 (6.47)	14.40 (3.01)	27.20 (5.70)	54.50 (11.40)				
Avg	54.50	25.40	53.00	106.00	27.20	12.70	24.20	48.40	0.46	3.29	20.70	37.00
n	16	16	16	16	23	23	23	23	18	18	16	16
SD	4.84	2.25	4.59	9.21	3.73	1.74	3.26	6.54	0.16	1.18	5.04	9.64
Min	48.10	22.40	46.70	93.60	20.70	9.63	18.50	37.00	0.09	0.65	10.50	19.00
Max	66.10	30.80	64.00	128.00	36.70	17.10	32.60	65.30	0.74	5.32	30.70	55.40

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for August, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	57.40 (8.80)	26.70 (4.09)	55.50 (8.50)	111.00 (17.00)	35.80 (3.98)	16.60 (1.85)	31.50 (3.51)	63.20 (7.02)	0.53 (0.13)	3.80 (0.91)	21.90 (5.27)	38.40 (9.23)
2	57.70 (12.60)	26.80 (5.86)	55.70 (12.20)	112.00 (24.40)	35.00 (6.21)	16.30 (2.89)	30.90 (5.47)	61.90 (11.00)	0.54 (0.20)	3.87 (1.41)	22.30 (8.12)	38.80 (14.10)
3	59.80 (6.20)	27.80 (2.88)	57.80 (5.99)	116.00 (12.00)	35.30 (3.63)	16.40 (1.69)	31.10 (3.19)	62.40 (6.39)	0.65 (0.20)	4.71 (1.45)	27.20 (8.39)	46.90 (14.50)
4	70.60 (5.36)	32.80 (2.49)	68.10 (5.17)	136.00 (10.40)	34.60 (6.39)	16.10 (2.97)	30.40 (5.63)	61.00 (11.30)	0.39 (0.05)	2.81 (0.39)	16.20 (2.27)	27.90 (3.89)
5	68.50 (6.24)	31.90 (2.90)	66.10 (6.03)	132.00 (12.10)	28.10 (3.81)	13.10 (1.77)	24.70 (3.35)	49.50 (6.72)				
6	64.40 (15.50)	30.00 (7.22)	62.10 (15.00)	124.00 (30.00)	28.90 (6.82)	13.40 (3.17)	25.40 (6.00)	50.80 (12.00)				
7												
8												
9	67.10 (10.50)	31.20 (4.87)	64.60 (10.10)	129.00 (20.20)	30.80 (3.48)	14.30 (1.62)	27.00 (3.06)	54.20 (6.13)	0.13 (0.06)	0.96 (0.42)	5.55 (2.44)	10.80 (4.68)
10	65.00 (12.10)	30.20 (5.64)	62.60 (11.70)	125.00 (23.40)	28.20 (3.94)	13.10 (1.83)	24.70 (3.46)	49.60 (6.94)	0.21 (0.12)	1.50 (0.83)	8.64 (4.79)	16.70 (9.23)
11	64.60 (10.50)	30.00 (4.87)	62.20 (10.10)	125.00 (20.20)	27.90 (6.42)	13.00 (2.99)	24.50 (5.64)	49.10 (11.30)	0.20 (0.12)	1.48 (0.85)	8.51 (4.92)	16.30 (9.40)
12									0.26 (0.15)	1.88 (1.11)	10.80 (6.38)	20.50 (12.10)
13	72.00 (14.10)	33.50 (6.57)	69.40 (13.60)	139.00 (27.30)	32.10 (8.67)	14.90 (4.03)	28.20 (7.62)	56.50 (15.30)	0.32 (0.13)	2.30 (0.95)	13.30 (5.50)	24.90 (10.30)
14	77.40 (8.43)	36.00 (3.92)	74.60 (8.13)	150.00 (16.30)	26.70 (5.17)	12.40 (2.40)	23.50 (4.55)	47.10 (9.11)	0.33 (0.14)	2.36 (1.00)	13.60 (5.74)	25.30 (10.70)
15	76.20 (10.00)	35.50 (4.66)	73.50 (9.66)	147.00 (19.40)	25.40 (3.41)	11.80 (1.59)	22.30 (3.00)	44.70 (6.02)	0.40 (0.19)	2.86 (1.35)	16.50 (7.81)	30.40 (14.40)
16	79.30 (10.10)	36.90 (4.72)	76.50 (9.79)	153.00 (19.60)	24.50 (3.92)	11.40 (1.82)	21.60 (3.45)	43.20 (6.91)	0.39 (0.17)	2.78 (1.20)	16.00 (6.93)	29.30 (12.70)
17	82.30 (10.70)	38.30 (4.96)	79.40 (10.30)	159.00 (20.70)	25.20 (4.14)	11.70 (1.92)	22.20 (3.64)	44.40 (7.30)	0.35 (0.13)	2.52 (0.93)	14.50 (5.36)	26.30 (9.71)
18	86.40 (12.10)	40.20 (5.63)	83.50 (11.70)	167.00 (23.40)	25.20 (3.47)	11.70 (1.61)	22.20 (3.05)	44.50 (6.12)	0.42 (0.14)	3.02 (1.00)	17.40 (5.74)	31.30 (10.30)
19	87.90 (9.67)	40.90 (4.50)	84.90 (9.34)	170.00 (18.70)	27.50 (1.88)	12.80 (0.87)	24.20 (1.65)	48.50 (3.32)	0.45 (0.13)	3.26 (0.92)	18.80 (5.29)	33.50 (9.44)
20	88.00 (9.28)	40.90 (4.32)	85.00 (8.97)	170.00 (18.00)	29.30 (3.13)	13.60 (1.46)	25.80 (2.76)	51.70 (5.52)	0.40 (0.12)	2.92 (0.84)	16.80 (4.86)	29.70 (8.60)
21												
22												
23												
24	87.90 (12.80)	40.90 (5.96)	85.10 (12.40)	171.00 (24.90)	30.20 (7.42)	14.10 (3.45)	26.70 (6.55)	53.50 (13.10)	0.39 (0.17)	2.82 (1.23)	16.20 (7.08)	27.80 (12.10)
25	88.80 (18.40)	41.30 (8.55)	86.00 (17.80)	172.00 (35.70)	31.30 (8.07)	14.60 (3.75)	27.60 (7.12)	55.40 (14.30)	0.41 (0.18)	2.93 (1.32)	16.90 (7.63)	28.70 (13.00)
26	88.10 (18.60)	41.00 (8.67)	85.30 (18.10)	171.00 (36.20)	28.20 (7.39)	13.10 (3.44)	24.90 (6.53)	49.90 (13.10)	0.40 (0.18)	2.86 (1.29)	16.50 (7.41)	27.80 (12.50)
27									0.17 (0.21)	1.23 (1.49)	7.12 (8.60)	12.30 (14.70)
28	102.00 (10.60)	47.40 (4.91)	98.80 (10.20)	198.00 (20.50)	32.10 (3.42)	14.90 (1.59)	28.30 (3.02)	56.80 (6.06)	0.20 (0.23)	1.44 (1.62)		
29												
30	98.10 (15.70)	45.60 (7.31)	95.10 (15.20)	191.00 (30.60)	32.60 (3.25)	15.10 (1.51)	28.80 (2.88)	57.70 (5.76)	0.47 (0.29)	3.42 (2.08)	19.70 (12.00)	38.10 (23.20)
31	96.90 (16.50)	45.10 (7.68)	94.00 (16.00)	188.00 (32.10)	33.50 (3.39)	15.60 (1.58)	29.60 (2.99)	59.30 (6.00)	0.36 (0.16)	2.56 (1.14)	14.80 (6.57)	28.30 (12.60)
Avg	77.70	36.10	75.00	150.00	29.90	13.90	26.40	52.80	0.36	2.62	15.40	27.70
n	23	23	23	23	23	23	23	23	23	23	22	22
SD	13.10	6.09	12.80	25.60	3.42	1.59	3.03	6.08	0.12	0.89	5.05	8.59
Min	57.40	26.70	55.50	111.00	24.50	11.40	21.60	43.20	0.13	0.96	5.55	10.80
Max	102.00	47.40	98.80	198.00	35.80	16.60	31.50	63.20	0.65	4.71	27.20	46.90

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for September, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	102.00 (12.00)	47.50 (5.59)	99.10 (11.70)	199.00 (23.40)	33.40 (2.22)	15.60 (1.03)	29.60 (1.97)	59.30 (3.94)	0.34 (0.08)	2.44 (0.61)	14.10 (3.52)	26.70 (6.67)
2	109.00 (7.86)	50.80 (3.66)	106.00 (7.63)	212.00 (15.30)	34.90 (3.79)	16.20 (1.76)	30.90 (3.35)	61.90 (6.72)	0.25 (0.09)	1.83 (0.65)	10.60 (3.73)	19.90 (7.02)
3					24.00 (7.75)	11.20 (3.60)	21.30 (6.86)	42.60 (13.70)	0.21 (0.17)	1.48 (1.20)	8.54 (6.91)	15.90 (12.90)
4					17.50 (5.55)	8.15 (2.58)	15.50 (4.92)	31.10 (9.85)	0.21 (0.19)	1.48 (1.33)	8.53 (7.70)	15.80 (14.20)
5									0.16 (0.16)	1.19 (1.13)	6.84 (6.52)	12.60 (12.00)
6	80.80 (13.50)	37.60 (6.28)	78.60 (13.10)	157.00 (26.30)	17.70 (5.17)	8.23 (2.41)	15.70 (4.58)	31.40 (9.18)	0.23 (0.19)	1.65 (1.34)	9.53 (7.72)	17.40 (14.10)
7	95.70 (21.00)	44.50 (9.78)	93.10 (20.50)	187.00 (41.00)	18.80 (5.74)	8.73 (2.67)	16.60 (5.09)	33.30 (10.20)	0.27 (0.18)	1.96 (1.33)	11.30 (7.68)	20.40 (13.90)
8					16.50 (5.95)	7.68 (2.77)	14.60 (5.27)	29.30 (10.60)	0.24 (0.23)	1.75 (1.63)	10.10 (9.38)	18.10 (16.80)
9												
10					25.30 (7.78)	11.80 (3.62)	22.50 (6.91)	45.10 (13.90)	0.25 (0.19)	1.82 (1.37)	10.50 (7.89)	18.50 (13.90)
11	98.10 (19.50)	45.60 (9.07)	95.60 (19.00)	192.00 (38.10)	29.20 (3.63)	13.60 (1.69)	26.00 (3.23)	52.10 (6.48)	0.22 (0.08)	1.61 (0.60)	9.31 (3.43)	16.30 (6.01)
12	103.00 (9.76)	47.80 (4.54)	100.00 (9.51)	201.00 (19.10)	27.40 (3.65)	12.70 (1.70)	24.40 (3.24)	48.80 (6.50)	0.24 (0.06)	1.71 (0.42)	9.85 (2.43)	17.10 (4.23)
13	109.00 (12.80)	50.70 (5.95)	106.00 (12.50)	213.00 (25.00)	27.50 (2.16)	12.80 (1.00)	24.50 (1.92)	49.20 (3.85)	0.22 (0.05)	1.56 (0.33)	8.99 (1.93)	15.50 (3.33)
14									0.24 (0.12)	1.71 (0.84)	9.89 (4.85)	17.00 (8.32)
15									0.28 (0.17)	2.00 (1.24)	11.50 (7.14)	19.60 (12.20)
16									0.28 (0.15)	2.02 (1.08)	11.60 (6.25)	21.50 (11.30)
17	89.20 (16.10)	41.50 (7.47)	87.40 (15.70)	175.00 (31.50)	29.50 (6.32)	13.70 (2.94)	26.50 (5.67)	53.10 (11.40)	0.30 (0.13)	2.14 (0.93)		
18												
19												
20												
21												
22												
23												
24	92.60 (28.80)	43.10 (13.40)	91.20 (28.40)	183.00 (56.80)	33.00 (4.04)	15.40 (1.88)	29.90 (3.65)	60.00 (7.32)	0.52 (0.18)	3.76 (1.31)	21.70 (7.53)	40.20 (13.90)
25	96.30 (15.80)	44.80 (7.36)	94.90 (15.60)	190.00 (31.30)	27.90 (5.80)	13.00 (2.70)	25.30 (5.27)	50.70 (10.60)	0.55 (0.27)	3.97 (1.94)	22.90 (11.20)	41.90 (20.50)
26					30.50 (5.19)	14.20 (2.41)	27.80 (4.72)	55.60 (9.45)	0.76 (0.32)	5.47 (2.34)	31.60 (13.50)	57.30 (24.50)
27	101.00 (16.40)	47.20 (7.62)	100.00 (16.20)	201.00 (32.40)	30.90 (9.37)	14.40 (4.36)	28.10 (8.53)	56.30 (17.10)	0.53 (0.34)	3.82 (2.42)	22.00 (14.00)	39.70 (25.20)
28	92.40 (22.20)	43.00 (10.30)	91.20 (21.90)	183.00 (44.00)	25.40 (7.48)	11.80 (3.48)	23.10 (6.82)	46.30 (13.70)	0.91 (0.62)	6.60 (4.46)	38.10 (25.70)	67.90 (45.90)
29					26.20 (7.61)	12.20 (3.54)	23.90 (6.95)	48.00 (13.90)	0.93 (0.63)	6.72 (4.56)	38.80 (26.30)	68.70 (46.60)
30									0.78 (0.71)	5.60 (5.12)	32.30 (29.50)	56.90 (52.10)
Avg	97.50	45.30	95.30	191.00	26.40	12.30	23.70	47.50	0.39	2.80	16.30	29.30
n	12	12	12	12	18	18	18	18	23	23	22	22
SD	7.82	3.64	7.52	15.10	5.50	2.56	5.00	10.00	0.24	1.70	9.99	17.80
Min	80.80	37.60	78.60	157.00	16.50	7.68	14.60	29.30	0.16	1.19	6.84	12.60
Max	109.00	50.80	106.00	213.00	34.90	16.20	30.90	61.90	0.93	6.72	38.80	68.70

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for October, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	62.00 (6.88)	28.80 (3.20)	61.40 (6.80)	123.00 (13.60)	22.00 (5.97)	10.20 (2.78)	20.10 (5.46)	40.40 (10.90)	0.62 (0.53)	4.47 (3.82)	25.80 (22.00)	45.30 (38.70)
2	67.60 (16.60)	31.50 (7.72)	67.00 (16.40)	134.00 (33.00)	22.80 (6.59)	10.60 (3.06)	20.90 (6.04)	41.90 (12.10)	0.72 (0.60)	5.18 (4.31)	29.90 (24.80)	52.10 (43.30)
3	70.50 (17.20)	32.80 (7.98)	69.90 (17.00)	140.00 (34.10)	23.10 (5.99)	10.70 (2.78)	21.20 (5.49)	42.40 (11.00)	0.63 (0.44)	4.53 (3.17)	26.20 (18.30)	45.20 (31.60)
4	71.90 (15.90)	33.50 (7.41)	71.40 (15.80)	143.00 (31.70)	23.30 (7.24)	10.80 (3.37)	21.40 (6.65)	43.00 (13.30)	0.52 (0.35)	3.72 (2.50)	21.50 (14.40)	36.80 (24.70)
5												
6												
7												
8												
9												
10												
11	68.70 (10.80)	32.00 (5.00)	68.60 (10.70)	137.00 (21.50)	33.20 (4.03)	15.40 (1.87)	30.80 (3.73)	61.80 (7.48)	0.38 (0.20)	2.76 (1.43)	15.90 (8.27)	25.90 (13.40)
12	69.90 (6.54)	32.50 (3.04)	69.80 (6.53)	140.00 (13.10)	35.40 (3.02)	16.50 (1.40)	32.90 (2.81)	66.00 (5.63)	0.39 (0.21)	2.78 (1.53)	16.00 (8.81)	25.90 (14.20)
13					33.10 (4.36)	15.40 (2.03)	30.90 (4.05)	61.90 (8.12)	0.36 (0.16)	2.62 (1.14)	15.10 (6.55)	26.70 (11.50)
14												
15												
16												
17												
18					26.90 (4.38)	12.50 (2.04)	25.20 (4.11)	50.60 (8.24)	0.11 (0.12)	0.82 (0.86)	4.70 (4.97)	8.96 (9.47)
19					25.40 (5.77)	11.80 (2.69)	23.80 (5.43)	47.70 (10.90)	0.17 (0.13)	1.20 (0.95)	6.92 (5.51)	13.10 (10.40)
20	35.20 (6.44)	16.40 (2.99)	35.40 (6.47)	71.00 (13.00)					0.17 (0.15)	1.25 (1.11)	7.18 (6.42)	13.40 (12.00)
21												
22	23.60 (9.25)	11.00 (4.30)	23.80 (9.31)	47.60 (18.70)	14.00 (4.35)	6.53 (2.02)	13.30 (4.10)	26.60 (8.22)				
23	24.20 (5.64)	11.20 (2.62)	24.40 (5.69)	48.80 (11.40)	15.80 (2.64)	7.36 (1.23)	15.00 (2.50)	30.00 (5.00)	0.21 (0.25)	1.54 (1.79)	8.88 (10.30)	16.20 (18.80)
24												
25	31.50 (7.60)	14.60 (3.53)	31.60 (7.63)	63.40 (15.30)	17.00 (3.84)	7.89 (1.79)	16.00 (3.63)	32.00 (7.27)	0.28 (0.24)	2.04 (1.74)	11.80 (10.00)	21.10 (18.00)
26									0.20 (0.19)	1.46 (1.34)	8.42 (7.74)	15.00 (13.80)
27					18.00 (3.78)	8.37 (1.76)	16.80 (3.54)	33.70 (7.10)	0.19 (0.23)	1.35 (1.62)	7.81 (9.36)	13.80 (16.60)
28	21.90 (2.74)	10.20 (1.27)	21.90 (2.74)	43.80 (5.48)	15.20 (3.18)	7.05 (1.48)	14.10 (2.96)	28.20 (5.94)	0.19 (0.26)	1.39 (1.87)	8.03 (10.80)	14.10 (18.90)
29	26.30 (8.59)	12.20 (4.00)	26.20 (8.56)	52.60 (17.10)	14.50 (2.90)	6.74 (1.35)	13.40 (2.69)	26.90 (5.40)	0.33 (0.36)	2.40 (2.63)	13.90 (15.10)	24.20 (26.40)
30	32.90 (13.40)	15.30 (6.23)	32.70 (13.30)	65.50 (26.70)	13.70 (2.87)	6.37 (1.34)	12.60 (2.66)	25.30 (5.32)	0.36 (0.31)	2.59 (2.24)	15.00 (12.90)	25.90 (22.30)
31												
Avg	46.60	21.70	46.50	93.10	22.10	10.30	20.50	41.10	0.34	2.48	14.30	24.90
n	13	13	13	13	16	16	16	16	17	17	17	17
SD	20.60	9.59	20.40	40.90	6.99	3.25	6.49	13.00	0.18	1.28	7.37	12.50
Min	21.90	10.20	21.90	43.80	13.70	6.37	12.60	25.30	0.11	0.82	4.70	8.96
Max	71.90	33.50	71.40	143.00	35.40	16.50	32.90	66.00	0.72	5.18	29.90	52.10

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for November, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	38.70 (9.65)	18.00 (4.49)	38.40 (9.55)	76.90 (19.10)	16.60 (6.52)	7.71 (3.03)	15.20 (5.97)	30.40 (12.00)	0.50 (0.40)	3.58 (2.89)	20.70 (16.70)	35.20 (28.40)
2	43.10 (10.30)	20.10 (4.78)	42.60 (10.10)	85.50 (20.30)	14.90 (3.80)	6.92 (1.77)	13.60 (3.46)	27.20 (6.93)	0.44 (0.31)	3.17 (2.27)	18.30 (13.10)	31.00 (22.20)
3	49.60 (11.30)	23.10 (5.26)	48.90 (11.10)	98.00 (22.30)	21.50 (5.74)	10.00 (2.67)	19.50 (5.21)	39.10 (10.40)	0.42 (0.24)	3.03 (1.73)	17.50 (9.98)	29.30 (16.70)
4	44.00 (8.92)	20.40 (4.15)	43.30 (8.78)	86.80 (17.60)								
5	44.70 (12.60)	20.80 (5.86)	43.90 (12.40)	88.00 (24.80)	22.50 (6.45)	10.50 (3.00)	20.30 (5.83)	40.70 (11.70)	0.12 (0.18)	0.86 (1.26)		
6									0.01 (0.00)	0.07 (0.02)	0.43 (0.12)	0.85 (0.23)
7												
8									0.08 (0.10)	0.60 (0.74)	3.47 (4.24)	6.69 (8.19)
9									0.06 (0.10)	0.47 (0.71)	2.69 (4.06)	5.15 (7.77)
10	15.00 (5.05)	6.99 (2.35)	14.70 (4.93)	29.40 (9.87)	13.80 (2.65)	6.44 (1.23)	12.30 (2.36)	24.70 (4.72)	0.10 (0.16)	0.71 (1.17)	4.08 (6.75)	7.74 (12.80)
11												
12	19.40 (5.29)	9.01 (2.46)	18.90 (5.16)	37.80 (10.30)	14.80 (2.41)	6.89 (1.12)	13.20 (2.15)	26.40 (4.30)	0.22 (0.26)	1.57 (1.90)	9.07 (11.00)	16.90 (20.40)
13	20.00 (6.87)	9.30 (3.19)	19.50 (6.69)	39.10 (13.40)	12.30 (1.73)	5.74 (0.80)	11.00 (1.53)	22.00 (3.08)	0.25 (0.27)	1.84 (1.94)	10.60 (11.20)	19.60 (20.70)
14	14.40 (4.65)	6.68 (2.16)	14.00 (4.53)	28.00 (9.07)	14.40 (2.55)	6.71 (1.19)	12.80 (2.27)	25.70 (4.55)	0.24 (0.27)	1.70 (1.93)	9.78 (11.10)	17.90 (20.40)
15	11.00 (2.12)	5.10 (0.99)	10.70 (2.06)	21.40 (4.13)	13.30 (2.19)	6.17 (1.02)	11.80 (1.94)	23.60 (3.90)	0.18 (0.22)	1.30 (1.62)	7.49 (9.33)	13.60 (17.00)
16	12.20 (3.27)	5.69 (1.52)	11.90 (3.18)	23.80 (6.37)	12.40 (2.46)	5.79 (1.14)	11.10 (2.19)	22.20 (4.39)	0.20 (0.26)	1.46 (1.86)	8.41 (10.70)	15.20 (19.30)
17	11.50 (2.85)	5.36 (1.32)	11.20 (2.77)	22.50 (5.55)	12.50 (2.68)	5.81 (1.25)	11.10 (2.38)	22.30 (4.78)	0.20 (0.27)	1.41 (1.92)	8.11 (11.10)	14.50 (19.80)
18												
19	13.70 (5.27)	6.36 (2.45)	13.30 (5.12)	26.60 (10.30)	11.40 (2.28)	5.29 (1.06)	10.10 (2.02)	20.30 (4.06)	0.21 (0.27)	1.55 (1.91)	8.91 (11.00)	15.70 (19.40)
20					11.80 (2.49)	5.50 (1.16)	10.50 (2.21)	21.10 (4.43)	0.20 (0.25)	1.42 (1.82)	8.17 (10.50)	14.20 (18.40)
21					12.30 (1.02)	5.73 (0.48)	11.00 (0.91)	22.00 (1.82)	0.17 (0.25)	1.19 (1.83)	6.86 (10.60)	11.90 (18.30)
22					12.60 (1.70)	5.88 (0.79)	11.20 (1.51)	22.50 (3.03)	0.25 (0.32)	1.81 (2.30)	10.50 (13.20)	18.00 (22.80)
23	15.10 (4.04)	7.03 (1.88)	14.70 (3.92)	29.40 (7.86)	13.00 (1.68)	6.04 (0.78)	11.60 (1.50)	23.20 (3.00)	0.29 (0.32)	2.08 (2.27)	12.00 (13.10)	20.50 (22.40)
24	12.80 (3.97)	5.96 (1.85)	12.40 (3.86)	24.90 (7.73)	11.40 (2.93)	5.29 (1.36)	10.10 (2.60)	20.30 (5.22)	0.26 (0.24)	1.90 (1.75)	11.00 (10.10)	18.50 (17.10)
25	12.40 (2.81)	5.74 (1.31)	12.00 (2.72)	24.00 (5.46)	12.90 (2.42)	6.02 (1.13)	11.50 (2.16)	23.10 (4.32)	0.20 (0.25)	1.46 (1.83)	8.42 (10.50)	14.20 (17.70)
26	15.10 (3.93)	7.05 (1.83)	14.70 (3.81)	29.50 (7.64)	12.60 (2.53)	5.85 (1.18)	11.20 (2.25)	22.40 (4.52)	0.24 (0.29)	1.73 (2.09)	9.95 (12.00)	16.60 (20.10)
27	13.00 (2.45)	6.06 (1.14)	12.60 (2.38)	25.30 (4.77)	12.10 (1.91)	5.65 (0.89)	10.80 (1.70)	21.60 (3.41)	0.23 (0.23)	1.68 (1.64)	9.68 (9.46)	17.70 (17.20)
28	13.70 (5.11)	6.36 (2.37)	13.30 (4.95)	26.60 (9.92)	12.40 (1.93)	5.76 (0.90)	11.00 (1.72)	22.10 (3.44)	0.08 (0.14)	0.60 (1.00)		
29	12.20 (3.01)	5.65 (1.40)	11.80 (2.91)	23.60 (5.84)	12.80 (2.14)	5.94 (1.00)	11.40 (1.91)	22.80 (3.82)	0.06 (0.11)	0.44 (0.78)	2.52 (4.49)	4.98 (8.87)
30	11.40 (2.77)	5.29 (1.29)	11.00 (2.68)	22.10 (5.38)	12.60 (2.57)	5.84 (1.20)	11.20 (2.29)	22.40 (4.59)	0.01 (0.00)	0.10 (0.03)	0.60 (0.14)	1.15 (0.28)
Avg	21.10	9.81	20.70	41.40	13.80	6.41	12.30	24.70	0.20	1.45	8.71	15.30
n	21	21	21	21	23	23	23	23	26	26	24	24
SD	13.10	6.10	13.00	26.10	2.81	1.31	2.61	5.23	0.12	0.86	5.01	8.38
Min	11.00	5.10	10.70	21.40	11.40	5.29	10.10	20.30	0.01	0.07	0.43	0.85
Max	49.60	23.10	48.90	98.00	22.50	10.50	20.30	40.70	0.50	3.58	20.70	35.20

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for December, 2008.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	10.10 (2.36)	4.71 (1.10)	9.81 (2.29)	19.70 (4.59)					0.07 (0.08)	0.50 (0.60)	2.90 (3.44)	5.58 (6.62)
2												
3	9.92 (2.03)	4.62 (0.94)	9.61 (1.97)	19.30 (3.94)	10.90 (2.06)	5.08 (0.96)	9.70 (1.83)	19.50 (3.67)	0.06 (0.08)	0.42 (0.56)	2.44 (3.26)	4.61 (6.15)
4	9.82 (1.86)	4.57 (0.87)	9.51 (1.80)	19.10 (3.61)	10.40 (0.65)	4.86 (0.30)	9.29 (0.58)	18.60 (1.16)	0.07 (0.10)	0.54 (0.72)	3.10 (4.17)	5.79 (7.80)
5	10.10 (2.09)	4.71 (0.97)	9.81 (2.02)	19.70 (4.05)	10.00 (1.50)	4.67 (0.70)	8.93 (1.34)	17.90 (2.68)	0.17 (0.18)	1.21 (1.33)	6.97 (7.68)	12.90 (14.20)
6									0.17 (0.11)	1.22 (0.81)	7.05 (4.65)	13.00 (8.54)
7					10.80 (0.85)	5.03 (0.40)	9.61 (0.76)	19.30 (1.51)	0.19 (0.17)	1.36 (1.25)	7.84 (7.23)	14.30 (13.10)
8	11.70 (2.63)	5.46 (1.22)	11.30 (2.54)	22.70 (5.09)	13.30 (1.93)	6.19 (0.90)	11.80 (1.72)	23.70 (3.45)	0.28 (0.17)	2.00 (1.22)	11.50 (7.06)	20.80 (12.70)
9	9.04 (1.82)	4.21 (0.85)	8.74 (1.76)	17.50 (3.52)	7.72 (2.04)	3.59 (0.95)	6.86 (1.82)	13.70 (3.64)	0.25 (0.15)	1.82 (1.05)	10.50 (6.05)	18.70 (10.80)
10	11.30 (1.97)	5.27 (0.92)	10.90 (1.90)	21.90 (3.82)	8.50 (0.80)	3.95 (0.37)	7.55 (0.71)	15.10 (1.42)	0.26 (0.19)	1.89 (1.35)	10.90 (7.81)	19.30 (13.80)
11	12.00 (2.28)	5.60 (1.06)	11.60 (2.20)	23.30 (4.41)	10.30 (2.19)	4.78 (1.02)	9.14 (1.95)	18.30 (3.91)	0.24 (0.19)	1.72 (1.39)	9.92 (7.99)	17.40 (14.00)
12	12.00 (2.46)	5.57 (1.15)	11.60 (2.38)	23.20 (4.77)	8.61 (1.42)	4.01 (0.66)	7.66 (1.26)	15.30 (2.53)	0.19 (0.25)	1.35 (1.79)	7.81 (10.30)	13.60 (18.00)
13	12.90 (2.28)	6.01 (1.06)	12.50 (2.20)	25.00 (4.40)	11.50 (1.53)	5.35 (0.71)	10.20 (1.36)	20.50 (2.73)	0.25 (0.28)	1.77 (1.99)	10.20 (11.50)	17.70 (19.80)
14	12.50 (4.16)	5.82 (1.93)	12.10 (4.01)	24.20 (8.04)					0.19 (0.22)	1.35 (1.60)	7.78 (9.22)	13.30 (15.80)
15	8.98 (1.16)	4.18 (0.54)	8.66 (1.12)	17.40 (2.23)					0.20 (0.23)	1.43 (1.69)	8.26 (9.72)	14.00 (16.50)
16									0.17 (0.25)	1.19 (1.81)	6.87 (10.40)	11.50 (17.50)
17	10.60 (0.68)	4.93 (0.32)	10.20 (0.66)	20.50 (1.32)	7.38 (0.48)	3.43 (0.22)	6.56 (0.43)	13.20 (0.86)	0.13 (0.28)	0.92 (2.05)	5.31 (11.80)	8.86 (19.70)
18	10.80 (0.70)	5.01 (0.33)	10.40 (0.67)	20.80 (1.35)	7.26 (0.53)	3.38 (0.25)	6.45 (0.47)	12.90 (0.95)	0.13 (0.31)	0.97 (2.27)	5.60 (13.10)	9.27 (21.60)
19	10.40 (0.87)	4.83 (0.40)	10.00 (0.84)	20.10 (1.67)	6.63 (0.95)	3.08 (0.44)	5.90 (0.85)	11.80 (1.70)	0.16 (0.32)	1.18 (2.29)	6.83 (13.20)	11.20 (21.70)
20	10.20 (1.59)	4.74 (0.74)	9.81 (1.54)	19.70 (3.08)					0.23 (0.27)	1.63 (1.97)	9.38 (11.40)	15.30 (18.50)
21	8.14 (0.69)	3.78 (0.32)	7.83 (0.66)	15.70 (1.32)					0.27 (0.25)	1.94 (1.79)	11.20 (10.30)	18.10 (16.70)
22	10.70 (0.90)	4.99 (0.42)	10.30 (0.87)	20.70 (1.74)	7.32 (0.80)	3.41 (0.37)	6.51 (0.71)	13.00 (1.43)	0.36 (0.31)	2.61 (2.24)	15.00 (12.90)	24.10 (20.70)
23												
24	9.94 (1.05)	4.62 (0.49)	9.62 (1.02)	19.30 (2.05)	8.30 (0.92)	3.86 (0.43)	7.40 (0.81)	14.80 (1.63)	0.05 (0.10)	0.33 (0.69)		
25	12.20 (0.72)	5.67 (0.33)	11.80 (0.69)	23.70 (1.39)	6.43 (0.70)	2.99 (0.32)	5.75 (0.62)	11.50 (1.25)	0.12 (0.20)	0.89 (1.48)	5.11 (8.51)	9.99 (16.70)
26	10.80 (2.05)	5.00 (0.95)	10.50 (1.99)	21.00 (3.99)	7.78 (1.29)	3.62 (0.60)	6.97 (1.16)	14.00 (2.32)	0.15 (0.19)	1.05 (1.36)	6.05 (7.87)	11.60 (15.10)
27					7.89 (1.55)	3.67 (0.72)	7.08 (1.39)	14.20 (2.78)	0.09 (0.12)	0.63 (0.84)	3.63 (4.84)	6.98 (9.30)
28					6.28 (0.81)	2.92 (0.38)	5.65 (0.73)	11.30 (1.46)	0.10 (0.14)	0.71 (1.04)	4.11 (5.98)	7.83 (11.40)
29					7.59 (2.12)	3.53 (0.99)	6.85 (1.92)	13.70 (3.84)	0.09 (0.14)	0.68 (0.99)	3.93 (5.69)	7.42 (10.70)
30									0.08 (0.11)	0.58 (0.80)	3.37 (4.61)	6.29 (8.62)
31					5.59 (0.75)	2.60 (0.35)	5.07 (0.68)	10.20 (1.36)	0.09 (0.14)	0.64 (1.00)	3.70 (5.75)	6.85 (10.60)
Avg	10.70	4.97	10.30	20.70	8.60	4.00	7.67	15.40	0.17	1.19	7.05	12.40
n	21	21	21	21	21	21	21	21	29	29	28	28
SD	1.21	0.56	1.17	2.34	1.95	0.91	1.72	3.45	0.08	0.56	3.12	5.08
Min	8.14	3.78	7.83	15.70	5.59	2.60	5.07	10.20	0.05	0.33	2.44	4.61
Max	12.90	6.01	12.50	25.00	13.30	6.19	11.80	23.70	0.36	2.61	15.00	24.10

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for January, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1					5.38 (1.38)	2.50 (0.64)	4.89 (1.26)	9.79 (2.53)	0.13 (0.19)	0.91 (1.35)	5.23 (7.79)	9.60 (14.30)
2					7.59 (1.03)	3.53 (0.48)	6.91 (0.94)	13.90 (1.89)	0.16 (0.24)	1.14 (1.74)	6.58 (10.00)	12.00 (18.20)
3	10.40 (1.68)	4.83 (0.78)	10.40 (1.69)	20.90 (3.38)	11.70 (2.28)	5.46 (1.06)	10.70 (2.09)	21.50 (4.18)	0.23 (0.30)	1.67 (2.17)	9.66 (12.50)	17.40 (22.60)
4	8.77 (0.97)	4.08 (0.45)	8.85 (0.99)	17.70 (1.98)					0.19 (0.26)	1.34 (1.86)	7.71 (10.70)	13.80 (19.20)
5	11.70 (1.55)	5.44 (0.72)	11.90 (1.58)	23.80 (3.17)	6.08 (0.67)	2.83 (0.31)	5.57 (0.61)	11.20 (1.22)	0.31 (0.35)	2.23 (2.53)	12.90 (14.60)	22.80 (25.80)
6	11.00 (1.78)	5.09 (0.83)	11.10 (1.81)	22.30 (3.62)	6.78 (1.07)	3.15 (0.50)	6.23 (0.98)	12.50 (1.96)	0.35 (0.28)	2.50 (2.04)	14.40 (11.80)	25.30 (20.70)
7	8.76 (0.72)	4.07 (0.34)	8.94 (0.74)	17.90 (1.48)					0.35 (0.35)	2.55 (2.52)	14.70 (14.50)	25.60 (25.30)
8	9.89 (1.05)	4.60 (0.49)	10.10 (1.09)	20.30 (2.18)	8.58 (1.15)	3.99 (0.53)	7.92 (1.06)	15.90 (2.12)	0.39 (0.35)	2.78 (2.55)	16.10 (14.70)	27.70 (25.40)
9	10.50 (1.64)	4.87 (0.76)	10.80 (1.68)	21.60 (3.37)	8.94 (1.89)	4.16 (0.88)	8.27 (1.75)	16.60 (3.51)	0.41 (0.46)	2.95 (3.29)	17.00 (19.00)	29.20 (32.50)
10	8.74 (0.94)	4.07 (0.44)	9.03 (0.97)	18.10 (1.95)	5.78 (0.71)	2.69 (0.33)	5.36 (0.66)	10.80 (1.33)	0.30 (0.38)	2.17 (2.71)	12.50 (15.60)	21.20 (26.50)
11	10.00 (0.91)	4.65 (0.42)	10.40 (0.94)	20.80 (1.88)	6.91 (1.85)	3.22 (0.86)	6.43 (1.73)	12.90 (3.46)	0.33 (0.38)	2.40 (2.77)	13.80 (16.00)	23.30 (26.90)
12									0.31 (0.34)	2.26 (2.44)	13.00 (14.10)	21.80 (23.50)
13	10.10 (1.18)	4.69 (0.55)	10.50 (1.24)	21.10 (2.49)	6.35 (0.66)	2.95 (0.31)	5.94 (0.61)	11.90 (1.23)	0.36 (0.43)	2.60 (3.08)	15.00 (17.80)	24.90 (29.50)
14	10.40 (0.59)	4.85 (0.28)	10.90 (0.62)	21.90 (1.24)	6.17 (1.62)	2.87 (0.76)	5.78 (1.52)	11.60 (3.06)	0.38 (0.41)	2.76 (2.97)	15.90 (17.10)	26.30 (28.20)
15	10.00 (0.54)	4.67 (0.25)	10.60 (0.58)	21.20 (1.16)	7.80 (0.59)	3.63 (0.27)	7.32 (0.55)	14.70 (1.10)	0.32 (0.42)	2.29 (3.04)	13.20 (17.50)	23.70 (31.60)
16					6.18 (0.73)	2.87 (0.34)	5.81 (0.68)	11.60 (1.37)	0.19 (0.35)	1.38 (2.53)		
17									0.06 (0.12)	0.45 (0.83)		
18									0.08 (0.12)	0.56 (0.87)	3.20 (4.99)	6.36 (9.92)
19												
20									0.18 (0.36)	1.32 (2.57)	7.61 (14.80)	14.60 (28.40)
21	10.10 (1.32)	4.71 (0.62)	10.60 (1.42)	21.20 (2.84)	7.60 (1.27)	3.53 (0.59)	7.06 (1.17)	14.10 (2.35)	0.10 (0.16)	0.72 (1.15)	4.16 (6.65)	7.92 (12.70)
22	9.89 (1.09)	4.60 (0.51)	10.20 (1.13)	20.40 (2.26)	7.11 (1.11)	3.31 (0.52)	6.52 (1.01)	13.10 (2.02)	0.12 (0.18)	0.83 (1.30)	4.78 (7.49)	9.02 (14.10)
23									0.11 (0.14)	0.80 (1.02)	4.64 (5.89)	8.68 (11.00)
24	8.04 (0.45)	3.74 (0.21)	8.01 (0.44)	16.10 (0.88)	7.49 (1.00)	3.48 (0.46)	6.68 (0.88)	13.40 (1.76)	0.10 (0.17)	0.73 (1.25)	4.24 (7.23)	7.86 (13.40)
25	9.24 (0.60)	4.30 (0.28)	9.05 (0.55)	18.10 (1.10)	7.10 (0.72)	3.30 (0.33)	6.26 (0.64)	12.50 (1.28)	0.10 (0.17)	0.71 (1.19)	4.07 (6.88)	7.49 (12.70)
26	9.52 (0.63)	4.43 (0.29)	9.19 (0.61)	18.40 (1.22)	6.77 (0.67)	3.15 (0.31)	5.90 (0.59)	11.80 (1.18)	0.11 (0.18)	0.81 (1.31)	4.65 (7.55)	8.50 (13.80)
27	9.47 (0.86)	4.40 (0.40)	9.00 (0.80)	18.00 (1.61)	7.29 (1.18)	3.39 (0.55)	6.26 (1.00)	12.60 (2.01)	0.13 (0.20)	0.93 (1.46)	5.34 (8.42)	9.68 (15.30)
28	9.87 (1.08)	4.59 (0.50)	9.24 (1.01)	18.50 (2.02)	5.92 (0.51)	2.75 (0.24)	5.02 (0.44)	10.10 (0.88)	0.22 (0.29)	1.59 (2.12)	9.14 (12.30)	16.40 (22.00)
29	8.75 (0.57)	4.07 (0.26)	8.10 (0.54)	16.20 (1.07)	7.06 (0.87)	3.28 (0.40)	5.93 (0.72)	11.90 (1.45)	0.24 (0.27)	1.72 (1.96)	9.93 (11.30)	17.80 (20.30)
30	9.04 (0.76)	4.20 (0.35)	8.43 (0.72)	16.90 (1.44)	7.93 (0.80)	3.69 (0.37)	6.72 (0.69)	13.50 (1.38)	0.23 (0.31)	1.67 (2.26)	9.63 (13.00)	17.20 (23.30)
31	9.86 (1.95)	4.59 (0.91)	9.30 (1.84)	18.60 (3.68)	7.25 (0.97)	3.37 (0.45)	6.20 (0.84)	12.40 (1.68)	0.25 (0.27)	1.80 (1.92)	10.40 (11.10)	18.40 (19.60)
Avg	9.73	4.52	9.76	19.60	7.21	3.35	6.51	13.00	0.22	1.62	9.63	16.90
n	22	22	22	22	23	23	23	23	30	30	28	28
SD	0.82	0.38	1.03	2.06	1.29	0.60	1.20	2.41	0.11	0.77	4.37	7.17
Min	8.04	3.74	8.01	16.10	5.38	2.50	4.89	9.79	0.06	0.45	3.20	6.36
Max	11.70	5.44	11.90	23.80	11.70	5.46	10.70	21.50	0.41	2.95	17.00	29.20

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for February, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	8.97 (1.84)	4.17 (0.86)	8.56 (1.76)	17.20 (3.53)	8.21 (1.45)	3.82 (0.67)	7.10 (1.26)	14.20 (2.52)	0.23 (0.24)	1.63 (1.73)	9.38 (9.96)	16.60 (17.60)
2	8.16 (1.36)	3.80 (0.63)	7.87 (1.30)	15.80 (2.60)	7.46 (1.77)	3.47 (0.82)	6.51 (1.54)	13.10 (3.09)	0.23 (0.27)	1.63 (1.92)	9.40 (11.00)	16.50 (19.40)
3									0.24 (0.32)	1.71 (2.33)	9.88 (13.40)	17.30 (23.50)
4	8.88 (0.80)	4.13 (0.37)	8.76 (0.80)	17.60 (1.61)	7.94 (1.19)	3.69 (0.55)	7.09 (1.07)	14.20 (2.14)	0.22 (0.33)	1.60 (2.41)	9.22 (13.90)	16.10 (24.30)
5									0.15 (0.20)	1.05 (1.41)	6.03 (8.14)	10.40 (14.10)
6	11.90 (3.58)	5.51 (1.67)	11.80 (3.56)	23.70 (7.14)	7.47 (1.46)	3.47 (0.68)	6.75 (1.32)	13.50 (2.64)	0.26 (0.23)	1.85 (1.67)	10.70 (9.66)	18.30 (16.60)
7	13.80 (5.82)	6.43 (2.71)	13.70 (5.78)	27.50 (11.60)	6.89 (1.86)	3.20 (0.87)	6.24 (1.69)	12.50 (3.38)	0.28 (0.19)	2.01 (1.35)	11.60 (7.80)	19.80 (13.30)
8	8.42 (1.70)	3.92 (0.79)	8.34 (1.68)	16.70 (3.36)	7.28 (1.78)	3.38 (0.83)	6.60 (1.62)	13.20 (3.24)	0.30 (0.28)	2.16 (2.05)	12.50 (11.80)	21.60 (20.60)
9	12.90 (3.44)	6.02 (1.60)	12.80 (3.39)	25.60 (6.80)	7.42 (2.25)	3.45 (1.05)	6.74 (2.05)	13.50 (4.10)	0.27 (0.35)	1.92 (2.53)		
10	18.50 (7.50)	8.59 (3.49)	18.20 (7.38)	36.40 (14.80)	6.59 (1.46)	3.07 (0.68)	6.00 (1.33)	12.00 (2.67)	0.03 (0.05)	0.18 (0.36)		
11	8.18 (1.94)	3.80 (0.90)	8.03 (1.91)	16.10 (3.82)	7.72 (1.87)	3.59 (0.87)	7.05 (1.71)	14.10 (3.42)	0.05 (0.07)	0.36 (0.51)	2.05 (2.96)	4.04 (5.85)
12	8.48 (1.73)	3.94 (0.81)	8.30 (1.69)	16.60 (3.39)					0.06 (0.08)	0.43 (0.59)	2.45 (3.38)	4.76 (6.57)
13	8.34 (1.44)	3.88 (0.67)	8.17 (1.41)	16.40 (2.82)	6.65 (1.43)	3.09 (0.67)	6.08 (1.31)	12.20 (2.62)	0.05 (0.08)	0.34 (0.59)	1.94 (3.41)	3.75 (6.58)
14	8.02 (1.16)	3.73 (0.54)	7.87 (1.13)	15.80 (2.27)	6.39 (1.04)	2.97 (0.49)	5.83 (0.95)	11.70 (1.91)	0.04 (0.05)	0.27 (0.35)	1.53 (1.99)	2.92 (3.79)
15	7.98 (0.88)	3.71 (0.41)	7.83 (0.87)	15.70 (1.73)	6.55 (0.61)	3.05 (0.29)	5.97 (0.56)	12.00 (1.12)	0.04 (0.03)	0.27 (0.20)	1.58 (1.16)	2.99 (2.19)
16					6.94 (0.99)	3.23 (0.46)	6.33 (0.90)	12.70 (1.80)	0.07 (0.11)	0.49 (0.81)	2.84 (4.68)	5.33 (8.76)
17									0.10 (0.16)	0.73 (1.15)	4.21 (6.62)	7.84 (12.30)
18	7.17 (1.85)	3.33 (0.86)	7.06 (1.82)	14.20 (3.66)					0.13 (0.16)	0.91 (1.12)	5.22 (6.47)	9.66 (12.00)
19	7.28 (1.46)	3.39 (0.68)	7.18 (1.44)	14.40 (2.89)	7.31 (1.05)	3.40 (0.49)	6.65 (0.95)	13.30 (1.91)	0.15 (0.21)	1.07 (1.53)	6.18 (8.80)	11.30 (16.10)
20					6.44 (1.50)	3.00 (0.70)	5.84 (1.36)	11.70 (2.73)	0.14 (0.20)	0.98 (1.46)	5.67 (8.40)	10.30 (15.30)
21	6.10 (0.94)	2.84 (0.44)	6.05 (0.94)	12.10 (1.88)					0.12 (0.15)	0.87 (1.07)	5.03 (6.19)	9.08 (11.20)
22	7.66 (0.77)	3.56 (0.36)	7.62 (0.77)	15.30 (1.53)	6.47 (0.76)	3.01 (0.36)	5.85 (0.69)	11.70 (1.39)	0.13 (0.19)	0.91 (1.40)	5.26 (8.07)	9.42 (14.40)
23					7.00 (1.39)	3.26 (0.65)	6.32 (1.25)	12.70 (2.51)	0.16 (0.24)	1.12 (1.73)	6.46 (9.96)	11.50 (17.70)
24												
25	15.30 (7.03)	7.11 (3.27)	15.30 (7.05)	30.70 (14.10)	8.97 (2.62)	4.17 (1.22)	8.08 (2.36)	16.20 (4.73)	0.23 (0.22)	1.69 (1.57)	9.73 (9.06)	17.10 (15.90)
26												
27	6.51 (0.97)	3.03 (0.45)	6.58 (0.98)	13.20 (1.97)					0.18 (0.25)	1.32 (1.83)	7.59 (10.60)	13.10 (18.30)
28	7.45 (1.18)	3.47 (0.55)	7.56 (1.19)	15.10 (2.39)					0.19 (0.27)	1.37 (1.92)	7.88 (11.10)	13.60 (19.10)
Avg	9.50	4.42	9.38	18.80	7.21	3.35	6.50	13.00	0.15	1.11	6.43	11.40
n	20	20	20	20	18	18	18	18	26	26	24	24
SD	3.17	1.47	3.15	6.31	0.68	0.32	0.57	1.13	0.08	0.60	3.28	5.53
Min	6.10	2.84	6.05	12.10	6.39	2.97	5.83	11.70	0.03	0.18	1.53	2.92
Max	18.50	8.59	18.20	36.40	8.97	4.17	8.08	16.20	0.30	2.16	12.50	21.60

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for March, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	7.01 (0.81)	3.26 (0.38)	7.14 (0.83)	14.30 (1.67)	6.80 (0.98)	3.16 (0.45)	6.12 (0.88)	12.30 (1.76)	0.19 (0.29)	1.38 (2.09)	7.96 (12.10)	13.60 (20.60)
2	8.63 (1.08)	4.02 (0.50)	8.83 (1.10)	17.70 (2.20)	8.50 (1.39)	3.96 (0.65)	7.66 (1.26)	15.40 (2.52)	0.26 (0.33)	1.89 (2.38)	10.90 (13.70)	18.50 (23.30)
3												
4					7.74 (0.97)	3.60 (0.45)	6.98 (0.87)	14.00 (1.75)	0.15 (0.26)	1.08 (1.87)		
5												
6	12.60 (6.51)	5.84 (3.03)	13.00 (6.71)	26.00 (13.40)	10.70 (4.03)	4.98 (1.88)	9.67 (3.64)	19.40 (7.29)	0.08 (0.09)	0.55 (0.63)	3.19 (3.65)	6.15 (7.03)
7	8.25 (1.60)	3.83 (0.74)	8.47 (1.64)	17.00 (3.29)	8.41 (1.42)	3.91 (0.66)	7.59 (1.28)	15.20 (2.56)	0.08 (0.10)	0.56 (0.75)	3.21 (4.31)	6.17 (8.29)
8	7.81 (1.61)	3.63 (0.75)	7.99 (1.65)	16.00 (3.30)	9.64 (1.73)	4.48 (0.80)	8.69 (1.56)	17.40 (3.13)	0.08 (0.11)	0.57 (0.81)	3.27 (4.64)	6.26 (8.90)
9	8.53 (1.18)	3.97 (0.55)	8.71 (1.21)	17.40 (2.42)	10.10 (1.31)	4.72 (0.61)	9.14 (1.18)	18.30 (2.37)	0.13 (0.17)	0.90 (1.25)	5.20 (7.20)	9.87 (13.60)
10									0.11 (0.16)	0.78 (1.16)	4.52 (6.69)	8.51 (12.60)
11									0.08 (0.11)	0.59 (0.83)	3.38 (4.76)	6.30 (8.87)
12									0.10 (0.16)	0.74 (1.12)	4.28 (6.44)	7.88 (11.80)
13					9.48 (1.50)	4.41 (0.70)	8.53 (1.35)	17.10 (2.70)	0.15 (0.21)	1.10 (1.50)	6.34 (8.65)	11.60 (15.80)
14					10.70 (3.47)	4.97 (1.62)	9.60 (3.12)	19.20 (6.26)	0.21 (0.23)	1.54 (1.69)	8.89 (9.76)	16.10 (17.70)
15	14.40 (6.37)	6.71 (2.96)	14.50 (6.40)	29.10 (12.80)	11.90 (3.87)	5.55 (1.80)	10.70 (3.47)	21.50 (6.96)	0.27 (0.24)	1.92 (1.76)	11.10 (10.10)	19.90 (18.20)
16	21.90 (13.90)	10.20 (6.45)	22.00 (13.90)	44.00 (27.90)	12.00 (2.87)	5.56 (1.33)	10.70 (2.57)	21.50 (5.15)	0.24 (0.24)	1.75 (1.76)	10.10 (10.20)	18.00 (18.10)
17	20.50 (11.40)	9.54 (5.31)	20.60 (11.50)	41.30 (23.00)	12.20 (3.41)	5.68 (1.59)	10.90 (3.05)	21.90 (6.12)	0.30 (0.23)	2.15 (1.66)	12.40 (9.59)	21.90 (17.00)
18	11.70 (4.27)	5.44 (1.98)	11.70 (4.28)	23.50 (8.57)	11.10 (3.06)	5.16 (1.42)	9.92 (2.74)	19.90 (5.48)	0.30 (0.25)	2.13 (1.78)	12.30 (10.20)	21.60 (18.00)
19	10.60 (4.32)	4.92 (2.01)	10.60 (4.32)	21.20 (8.66)	10.60 (2.64)	4.94 (1.23)	9.48 (2.35)	19.00 (4.72)	0.26 (0.24)	1.90 (1.76)	10.90 (10.10)	19.10 (17.70)
20	10.10 (1.66)	4.69 (0.77)	10.10 (1.66)	20.20 (3.33)	10.60 (1.82)	4.91 (0.85)	9.42 (1.62)	18.90 (3.25)	0.29 (0.27)	2.10 (1.94)	12.10 (11.20)	21.00 (19.40)
21	20.00 (10.90)	9.31 (5.07)	20.10 (10.90)	40.20 (21.90)	11.80 (3.35)	5.51 (1.56)	10.60 (2.99)	21.20 (5.99)	0.32 (0.22)	2.34 (1.61)	13.50 (9.26)	23.20 (15.90)
22	14.00 (6.16)	6.52 (2.86)	14.10 (6.18)	28.20 (12.40)	10.50 (3.14)	4.86 (1.46)	9.32 (2.80)	18.70 (5.61)	0.33 (0.19)	2.36 (1.36)	13.60 (7.85)	23.20 (13.40)
23	17.50 (7.63)	8.13 (3.55)	17.60 (7.69)	35.30 (15.40)	11.50 (4.44)	5.37 (2.07)	10.30 (3.96)	20.60 (7.94)	0.29 (0.17)	2.07 (1.24)	11.90 (7.17)	20.20 (12.20)
24												
25	9.19 (2.24)	4.27 (1.04)	9.28 (2.27)	18.60 (4.54)	9.90 (2.27)	4.60 (1.06)	8.82 (2.03)	17.70 (4.06)	0.20 (0.18)	1.41 (1.32)	8.16 (7.64)	13.60 (12.80)
26					10.80 (3.31)	5.03 (1.54)	9.63 (2.95)	19.30 (5.92)	0.20 (0.21)	1.47 (1.50)	8.50 (8.66)	14.10 (14.40)
27	7.85 (1.46)	3.65 (0.68)	7.95 (1.48)	15.90 (2.96)	9.64 (2.01)	4.48 (0.94)	8.59 (1.79)	17.20 (3.59)	0.14 (0.19)	0.98 (1.38)	5.65 (7.98)	9.32 (13.20)
28	7.78 (1.31)	3.62 (0.61)	7.90 (1.33)	15.80 (2.66)	8.99 (2.05)	4.18 (0.95)	8.01 (1.83)	16.10 (3.66)	0.07 (0.06)	0.50 (0.46)	2.90 (2.66)	4.74 (4.34)
29	9.20 (1.80)	4.28 (0.84)	9.36 (1.83)	18.80 (3.67)	10.60 (2.27)	4.92 (1.06)	9.43 (2.02)	18.90 (4.06)	0.30 (0.16)	2.20 (1.15)	12.70 (6.65)	21.30 (11.30)
30	8.25 (2.78)	3.84 (1.29)	8.42 (2.83)	16.90 (5.67)	8.21 (3.40)	3.82 (1.58)	7.32 (3.03)	14.70 (6.08)	0.18 (0.22)	1.29 (1.57)		
31												
Avg	11.80	5.48	11.90	23.90	10.10	4.70	9.05	18.10	0.20	1.42	8.28	14.50
n	20	20	20	20	24	24	24	24	27	27	25	25
SD	4.61	2.14	4.58	9.18	1.40	0.65	1.24	2.49	0.09	0.62	3.70	6.22
Min	7.01	3.26	7.14	14.30	6.80	3.16	6.12	12.30	0.07	0.50	2.90	4.74
Max	21.90	10.20	22.00	44.00	12.20	5.68	10.90	21.90	0.33	2.36	13.60	23.20

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for April, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	12.80 (3.53)	5.93 (1.64)	13.10 (3.61)	26.20 (7.24)	10.40 (2.06)	4.83 (0.96)	9.26 (1.83)	18.50 (3.67)	0.08 (0.08)	0.59 (0.56)	3.39 (3.24)	6.65 (6.35)
2												
3	14.20 (6.38)	6.62 (2.97)	14.60 (6.52)	29.20 (13.10)	11.20 (2.42)	5.21 (1.12)	10.00 (2.16)	20.00 (4.33)	0.12 (0.13)	0.86 (0.95)	4.95 (5.50)	9.46 (10.50)
4	11.10 (3.53)	5.17 (1.64)	11.30 (3.59)	22.70 (7.20)	9.64 (4.17)	4.48 (1.94)	8.62 (3.73)	17.30 (7.48)	0.17 (0.18)	1.19 (1.32)	6.88 (7.61)	13.00 (14.40)
5	8.02 (1.85)	3.73 (0.86)	8.15 (1.88)	16.30 (3.77)					0.17 (0.19)	1.23 (1.36)	7.07 (7.86)	13.30 (14.80)
6	8.55 (1.29)	3.98 (0.60)	8.67 (1.31)	17.40 (2.62)	10.10 (1.86)	4.72 (0.87)	9.12 (1.68)	18.30 (3.36)	0.14 (0.16)	1.02 (1.13)	5.88 (6.53)	10.90 (12.10)
7									0.16 (0.20)	1.14 (1.41)	6.59 (8.14)	12.10 (15.00)
8	11.80 (2.58)	5.48 (1.20)	11.90 (2.59)	23.80 (5.20)	11.30 (1.42)	5.27 (0.66)	10.20 (1.29)	20.50 (2.58)	0.21 (0.21)	1.53 (1.51)	8.84 (8.70)	16.10 (15.90)
9												
10	15.40 (4.45)	7.15 (2.07)	15.50 (4.49)	31.00 (8.99)	11.70 (2.91)	5.42 (1.35)	10.60 (2.64)	21.20 (5.28)	0.29 (0.24)	2.10 (1.69)	12.10 (9.78)	21.70 (17.50)
11	18.40 (11.20)	8.55 (5.20)	18.60 (11.30)	37.20 (22.60)	12.50 (4.57)	5.83 (2.13)	11.40 (4.14)	22.80 (8.30)	0.31 (0.24)	2.27 (1.73)	13.10 (9.95)	23.30 (17.70)
12					10.40 (1.99)	4.84 (0.93)	9.42 (1.80)	18.90 (3.61)	0.28 (0.26)	2.02 (1.86)	11.70 (10.70)	20.50 (18.90)
13	6.95 (2.32)	3.23 (1.08)	7.07 (2.37)	14.20 (4.75)	10.20 (1.76)	4.73 (0.82)	9.21 (1.59)	18.50 (3.19)	0.27 (0.27)	1.93 (1.97)	11.10 (11.40)	19.50 (19.90)
14												
15	21.90 (12.30)	10.20 (5.74)	22.40 (12.60)	45.00 (25.40)	11.40 (4.13)	5.29 (1.92)	10.30 (3.75)	20.70 (7.51)	0.38 (0.29)	2.72 (2.06)	15.70 (11.90)	26.90 (20.30)
16	16.40 (7.98)	7.63 (3.71)	16.80 (8.20)	33.70 (16.40)	12.00 (4.36)	5.58 (2.03)	10.90 (3.95)	21.80 (7.91)	0.29 (0.23)	2.08 (1.64)	12.00 (9.48)	20.40 (16.20)
17	19.20 (8.04)	8.95 (3.74)	19.70 (8.24)	39.50 (16.50)	11.40 (3.19)	5.30 (1.48)	10.30 (2.89)	20.70 (5.79)	0.33 (0.17)	2.38 (1.21)	13.70 (7.00)	23.20 (11.90)
18	19.70 (5.85)	9.15 (2.72)	20.10 (5.97)	40.30 (12.00)	12.50 (3.61)	5.83 (1.68)	11.30 (3.27)	22.70 (6.55)	0.30 (0.13)	2.15 (0.94)	12.40 (5.40)	20.80 (9.08)
19	16.10 (4.95)	7.48 (2.30)	16.40 (5.04)	32.90 (10.10)	13.00 (3.05)	6.06 (1.42)	11.80 (2.75)	23.60 (5.52)	0.22 (0.13)	1.56 (0.97)	9.00 (5.59)	15.00 (9.31)
20	10.40 (3.75)	4.84 (1.74)	10.60 (3.81)	21.20 (7.64)	9.81 (2.29)	4.56 (1.06)	8.87 (2.06)	17.80 (4.14)	0.17 (0.12)	1.22 (0.89)	7.06 (5.12)	11.90 (8.66)
21												
22	23.10 (10.60)	10.70 (4.91)	23.30 (10.70)	46.70 (21.40)	12.00 (3.59)	5.56 (1.67)	10.80 (3.24)	21.60 (6.49)	0.12 (0.12)	0.83 (0.84)		
23									0.18 (0.12)	1.30 (0.90)	7.50 (5.16)	14.50 (10.00)
24	34.70 (17.80)	16.10 (8.29)	34.90 (17.90)	69.90 (35.90)					0.23 (0.12)	1.67 (0.84)	9.65 (4.85)	18.60 (9.34)
25	9.67 (4.47)	4.50 (2.08)	9.72 (4.49)	19.50 (9.00)					0.17 (0.19)	1.19 (1.33)	6.87 (7.70)	13.20 (14.80)
26	30.10 (14.60)	14.00 (6.79)	30.30 (14.70)	60.60 (29.40)	19.20 (4.59)	8.94 (2.14)	17.40 (4.16)	34.90 (8.34)	0.37 (0.25)	2.67 (1.82)	15.40 (10.50)	29.20 (19.90)
27									0.20 (0.19)	1.42 (1.36)	8.18 (7.84)	15.40 (14.80)
28	14.60 (5.12)	6.81 (2.38)	14.70 (5.13)	29.40 (10.30)					0.40 (0.36)	2.87 (2.60)	16.50 (15.00)	30.70 (27.90)
29	17.00 (4.08)	7.92 (1.90)	17.00 (4.08)	34.20 (8.19)	14.80 (3.48)	6.88 (1.62)	13.50 (3.17)	27.10 (6.36)	0.39 (0.35)	2.80 (2.54)	16.20 (14.70)	29.80 (27.00)
30												
Avg	16.20	7.53	16.40	32.90	11.90	5.52	10.70	21.50	0.24	1.71	10.10	18.20
n	21	21	21	21	18	18	18	18	25	25	24	24
SD	6.88	3.20	6.92	13.90	2.18	1.01	2.01	4.02	0.09	0.66	3.71	6.53
Min	6.95	3.23	7.07	14.20	9.64	4.48	8.62	17.30	0.08	0.59	3.39	6.65
Max	34.70	16.10	34.90	69.90	19.20	8.94	17.40	34.90	0.40	2.87	16.50	30.70

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for May, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1									0.44 (0.36)	3.17 (2.63)	18.30 (15.10)	33.30 (27.60)
2									0.48 (0.31)	3.49 (2.27)	20.10 (13.10)	36.70 (23.80)
3	25.30 (10.80)	11.80 (5.02)	25.40 (10.90)	50.90 (21.80)	18.00 (4.73)	8.38 (2.20)	16.50 (4.33)	33.00 (8.67)	0.67 (0.42)	4.84 (3.02)	27.90 (17.40)	50.80 (31.70)
4												
5	35.80 (16.60)	16.60 (7.73)	36.10 (16.80)	72.30 (33.60)	18.40 (5.45)	8.54 (2.53)	16.80 (4.98)	33.60 (9.99)	0.82 (0.37)	5.92 (2.67)	34.10 (15.40)	62.40 (28.20)
6	32.20 (12.20)	15.00 (5.69)	32.60 (12.40)	65.20 (24.80)	14.70 (4.15)	6.86 (1.93)	13.50 (3.79)	27.00 (7.60)	0.86 (0.33)	6.22 (2.41)	35.90 (13.90)	65.90 (25.50)
7	25.00 (6.98)	11.60 (3.25)	25.30 (7.07)	50.60 (14.20)	19.90 (4.68)	9.27 (2.18)	18.20 (4.28)	36.50 (8.58)	0.77 (0.41)	5.57 (2.99)	32.10 (17.20)	59.20 (31.70)
8									0.91 (0.50)	6.56 (3.59)	37.80 (20.70)	69.50 (38.00)
9									0.58 (0.37)	4.21 (2.66)	24.30 (15.40)	44.50 (28.10)
10	15.50 (5.98)	7.20 (2.78)	15.60 (6.00)	31.20 (12.00)					0.67 (0.46)	4.84 (3.31)	27.90 (19.10)	50.80 (34.80)
11	20.80 (7.80)	9.70 (3.63)	20.90 (7.81)	41.90 (15.70)	12.40 (2.84)	5.79 (1.32)	11.30 (2.57)	22.60 (5.16)	0.76 (0.47)	5.49 (3.36)	31.70 (19.40)	57.50 (35.10)
12	28.60 (15.20)	13.30 (7.07)	28.60 (15.20)	57.30 (30.50)	13.80 (2.95)	6.40 (1.37)	12.40 (2.67)	24.90 (5.34)	0.68 (0.37)	4.91 (2.68)	28.30 (15.50)	51.90 (28.40)
13												
14					12.80 (2.72)	5.97 (1.27)	11.50 (2.45)	23.10 (4.92)	0.25 (0.19)	1.78 (1.34)		
15												
16									0.19 (0.18)	1.35 (1.28)	7.77 (7.38)	15.00 (14.30)
17	14.30 (4.40)	6.65 (2.05)	14.00 (4.29)	28.00 (8.60)	12.60 (3.03)	5.84 (1.41)	11.50 (2.79)	23.10 (5.59)	0.24 (0.25)	1.71 (1.78)	9.84 (10.30)	19.00 (19.90)
18									0.37 (0.25)	2.65 (1.82)	15.30 (10.50)	29.50 (20.30)
19												
20												
21	26.40 (7.45)	12.30 (3.47)	25.50 (7.21)	51.10 (14.40)					0.36 (0.36)	2.59 (2.56)	14.90 (14.80)	28.50 (28.20)
22	28.40 (7.22)	13.20 (3.36)	27.50 (7.01)	55.20 (14.10)	28.20 (4.30)	13.10 (2.00)	26.30 (4.02)	52.80 (8.05)	0.46 (0.31)	3.30 (2.22)	19.00 (12.80)	36.20 (24.40)
23	31.50 (8.05)	14.60 (3.74)	30.60 (7.84)	61.30 (15.70)	23.40 (6.45)	10.90 (3.00)	21.90 (6.01)	43.80 (12.00)	0.50 (0.44)	3.59 (3.16)	20.70 (18.20)	39.30 (34.50)
24	27.70 (4.64)	12.90 (2.16)	27.00 (4.54)	54.20 (9.10)	25.00 (7.35)	11.60 (3.42)	23.30 (6.84)	46.70 (13.70)	0.50 (0.45)	3.62 (3.28)	20.90 (18.90)	39.40 (35.70)
25	24.80 (8.15)	11.50 (3.79)	24.30 (7.99)	48.80 (16.00)	22.90 (6.83)	10.70 (3.18)	21.30 (6.35)	42.70 (12.70)				
26	23.40 (6.80)	10.90 (3.16)	23.10 (6.69)	46.20 (13.40)	25.20 (6.31)	11.70 (2.93)	23.40 (5.86)	46.90 (11.70)	0.30 (0.31)	2.15 (2.26)	12.40 (13.00)	23.30 (24.50)
27	19.90 (3.52)	9.25 (1.64)	19.60 (3.48)	39.40 (6.97)					0.18 (0.20)	1.26 (1.45)	7.30 (8.34)	13.60 (15.60)
28									0.21 (0.24)	1.49 (1.74)	8.61 (10.00)	16.10 (18.70)
29	26.00 (8.49)	12.10 (3.95)	25.80 (8.40)	51.70 (16.80)	23.50 (7.43)	10.90 (3.46)	21.80 (6.90)	43.70 (13.80)	0.44 (0.40)	3.20 (2.91)	18.40 (16.80)	34.20 (31.10)
30	27.20 (8.36)	12.60 (3.89)	26.90 (8.26)	53.80 (16.60)	21.80 (6.07)	10.10 (2.82)	20.30 (5.65)	40.60 (11.30)	0.33 (0.30)	2.39 (2.15)	13.80 (12.40)	25.40 (22.90)
31	33.40 (10.80)	15.60 (5.01)	33.00 (10.60)	66.10 (21.30)	21.70 (5.25)	10.10 (2.44)	20.30 (4.91)	40.70 (9.84)	0.51 (0.45)	3.70 (3.26)	21.30 (18.80)	39.20 (34.50)
Avg	25.90	12.00	25.60	51.40	19.60	9.14	18.10	36.40	0.50	3.60	21.20	39.20
n	18	18	18	18	16	16	16	16	25	25	24	24
SD	5.56	2.59	5.56	11.10	4.95	2.30	4.75	9.52	0.22	1.57	8.97	16.20
Min	14.30	6.65	14.00	28.00	12.40	5.79	11.30	22.60	0.18	1.26	7.30	13.60
Max	35.80	16.60	36.10	72.30	28.20	13.10	26.30	52.80	0.91	6.56	37.80	69.50

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for June, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1	33.00 (5.32)	15.30 (2.47)	32.50 (5.23)	65.10 (10.50)	27.40 (4.10)	12.70 (1.91)	25.60 (3.83)	51.40 (7.67)	0.20 (0.10)	1.41 (0.72)	8.12 (4.12)	14.90 (7.55)
2	20.40 (4.27)	9.49 (1.99)	20.10 (4.21)	40.20 (8.43)								
3												
4												
5	36.60 (16.10)	17.00 (7.49)	35.80 (15.70)	71.70 (31.50)	20.80 (3.27)	9.69 (1.52)	19.50 (3.05)	39.00 (6.11)	0.96 (0.61)	6.92 (4.40)	39.90 (25.40)	71.90 (45.60)
6	33.40 (12.60)	15.50 (5.88)	32.50 (12.30)	65.20 (24.70)	20.80 (5.41)	9.70 (2.52)	19.40 (5.03)	38.90 (10.10)	1.42 (0.58)	10.20 (4.16)	59.00 (24.00)	106.00 (43.00)
7	34.00 (10.20)	15.80 (4.73)	33.10 (9.89)	66.30 (19.80)	22.00 (2.87)	10.20 (1.34)	20.40 (2.67)	41.00 (5.36)	1.74 (0.29)	12.60 (2.06)	72.70 (11.90)	130.00 (21.10)
8	23.50 (6.97)	10.90 (3.24)	22.80 (6.77)	45.70 (13.60)					1.03 (0.49)	7.46 (3.56)	43.10 (20.50)	76.90 (36.80)
9	25.20 (6.66)	11.70 (3.10)	24.40 (6.44)	48.90 (12.90)	19.40 (5.82)	9.01 (2.71)	17.80 (5.35)	35.70 (10.70)	0.67 (0.59)	4.82 (4.26)	27.80 (24.60)	50.00 (44.00)
10	29.70 (10.90)	13.80 (5.08)	28.70 (10.50)	57.50 (21.10)	24.30 (4.65)	11.30 (2.16)	22.30 (4.26)	44.60 (8.54)	0.32 (0.24)	2.34 (1.75)		
11												
12												
13												
14												
15												
16												
17	48.60 (9.09)	22.60 (4.23)	47.90 (8.97)	95.90 (18.00)	24.40 (8.44)	11.30 (3.92)	21.90 (7.58)	43.90 (15.20)	0.38 (0.25)	2.76 (1.78)	16.60 (10.70)	33.20 (21.40)
18												
19	42.80 (4.88)	19.90 (2.27)	42.30 (4.82)	84.80 (9.65)	39.90 (3.88)	18.60 (1.80)	35.80 (3.49)	71.80 (6.99)	0.06 (0.09)	0.44 (0.65)	2.67 (3.92)	5.21 (7.67)
20	43.90 (9.49)	20.40 (4.41)	43.50 (9.40)	87.10 (18.80)	36.30 (5.26)	16.90 (2.45)	32.60 (4.73)	65.40 (9.49)	0.10 (0.09)	0.69 (0.62)	4.17 (3.73)	8.14 (7.29)
21	48.80 (4.60)	22.70 (2.14)	48.30 (4.56)	96.80 (9.15)	39.80 (5.07)	18.50 (2.36)	35.80 (4.56)	71.80 (9.14)	0.15 (0.19)	1.09 (1.38)	6.59 (8.28)	12.90 (16.20)
22	45.50 (3.36)	21.20 (1.56)	45.10 (3.33)	90.40 (6.67)	38.90 (4.28)	18.10 (1.99)	35.00 (3.85)	70.20 (7.71)	0.01 (0.07)	0.09 (0.49)	0.52 (2.95)	1.01 (5.71)
23	41.60 (3.34)	19.30 (1.55)	41.20 (3.31)	82.60 (6.63)					0.11 (0.26)	0.80 (1.84)	4.81 (11.10)	9.22 (21.30)
24	37.70 (5.50)	17.60 (2.56)	37.40 (5.45)	75.10 (10.90)	32.20 (3.40)	15.00 (1.58)	29.00 (3.07)	58.20 (6.15)	0.20 (0.21)	1.44 (1.48)	8.66 (8.92)	16.60 (17.10)
25									0.04 (0.06)	0.28 (0.41)	1.68 (2.44)	3.19 (4.63)
26	52.60 (2.33)	24.50 (1.08)	52.20 (2.31)	105.00 (4.63)	29.00 (3.68)	13.50 (1.71)	26.20 (3.33)	52.50 (6.67)	0.16 (0.09)	1.14 (0.65)	6.88 (3.91)	13.00 (7.44)
27	47.00 (6.76)	21.90 (3.14)	46.50 (6.69)	93.30 (13.40)	25.80 (4.36)	12.00 (2.03)	23.30 (3.93)	46.70 (7.88)	0.26 (0.12)	1.85 (0.89)	11.10 (5.38)	20.90 (10.10)
28	41.10 (8.08)	19.10 (3.76)	40.60 (7.99)	81.40 (16.00)					0.41 (0.21)	2.98 (1.55)	17.90 (9.31)	33.50 (17.40)
29	43.60 (6.87)	20.30 (3.20)	43.10 (6.79)	86.30 (13.60)					0.66 (0.31)	4.74 (2.26)	28.60 (13.60)	53.00 (25.30)
30	36.80 (6.96)	17.10 (3.24)	36.30 (6.86)	72.70 (13.70)					0.63 (0.32)	4.53 (2.33)	27.30 (14.00)	50.40 (25.90)
Avg	38.30	17.80	37.70	75.60	28.60	13.30	26.10	52.20	0.48	3.43	20.40	37.40
n	20	20	20	20	14	14	14	14	20	20	19	19
SD	8.68	4.04	8.75	17.50	7.20	3.35	6.26	12.50	0.47	3.40	20.00	35.70
Min	20.40	9.49	20.10	40.20	19.40	9.01	17.80	35.70	0.01	0.09	0.52	1.01
Max	52.60	24.50	52.20	105.00	39.90	18.60	35.80	71.80	1.74	12.60	72.70	130.00

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for August, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1												
2												
3												
4												
5												
6												
7	68.70 (8.31)	32.00 (3.87)										
8					40.00 (6.66)	18.60 (3.10)			0.50 (0.17)	3.59 (1.26)		
9					44.70 (6.85)	20.80 (3.19)			0.31 (0.11)	2.23 (0.76)		
10					47.10 (4.10)	21.90 (1.90)			0.41 (0.10)	2.97 (0.75)		
11					45.30 (4.64)	21.10 (2.16)			0.44 (0.11)	3.18 (0.81)		
12					45.40 (4.89)	21.10 (2.28)			0.39 (0.09)	2.79 (0.62)		
13												
14	89.40 (9.91)	41.60 (4.61)			49.40 (5.20)	23.00 (2.42)			0.41 (0.14)	2.95 (1.00)		
15	88.50 (8.38)	41.20 (3.90)			44.40 (3.22)	20.60 (1.50)			0.32 (0.07)	2.34 (0.48)		
16					48.20 (7.04)	22.40 (3.28)			0.28 (0.14)	2.05 (1.04)		
17					48.70 (4.13)	22.60 (1.92)			0.45 (0.13)	3.26 (0.96)		
18	77.20 (16.90)	35.90 (7.87)			48.20 (4.62)	22.40 (2.15)			0.54 (0.18)	3.91 (1.30)		
19	71.30 (16.00)	33.20 (7.42)			51.50 (6.32)	24.00 (2.94)			0.44 (0.11)	3.17 (0.76)		
20									0.37 (0.08)	2.64 (0.57)		
21									0.40 (0.14)	2.89 (1.01)		
22	80.30 (20.70)	37.40 (9.64)							0.44 (0.20)	3.21 (1.47)		
23	81.80 (13.60)	38.10 (6.33)							0.48 (0.20)	3.47 (1.47)		
24	79.10 (12.60)	36.80 (5.85)			52.20 (7.52)	24.30 (3.50)			0.52 (0.18)	3.72 (1.27)		
25	91.50 (8.43)	42.60 (3.92)			55.50 (4.18)	25.80 (1.95)			0.46 (0.16)	3.31 (1.12)		
26	104.00 (8.45)	48.50 (3.93)			59.00 (7.57)	27.50 (3.52)			0.25 (0.07)	1.80 (0.51)		
27	84.70 (8.56)	39.40 (3.98)							0.45 (0.10)	3.28 (0.75)		
28												
29												
30												
31									0.13 (0.19)	0.93 (1.40)		
Avg	83.40	38.80			48.50	22.60			0.40	2.88		
n	11	11	0	0	14	14	0	0	20	20	0	0
SD	9.53	4.43			4.70	2.19			0.10	0.70		
Min	68.70	32.00			40.00	18.60			0.13	0.93		
Max	104.00	48.50			59.00	27.50			0.54	3.91		

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Table E11. Daily mean (SD) of NH3 emissions at site IA4B for September, 2009.

Day	Barn 1				Barn 2				Farrowing room 9			
	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$	$kg \cdot d^{-1}$	$g \cdot d^{-1} hd^{-2}$	$g \cdot d^{-1} AU^{-1}$	$g \cdot d^{-1} m^{2}$
1												
2									0.55 (0.34)	3.95 (2.42)		
3									0.64 (0.40)	4.64 (2.88)		
4									0.65 (0.40)	4.66 (2.92)		
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
Avg									0.61	4.42		
n	0	0	0	0	0	0	0	0	3	3	0	0
SD									0.05	0.33		
Min									0.55	3.95		
Max									0.65	4.66		

Table E12. Completeness of airflow and emission data.

Table E12. Airflow and emission data completeness (%) at site IA4B for July, 2007.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	49.7	49.7	49.7	27	27	27	49.3	49.3	49.3	0	0	0	0	0	0	0	0	0
21	100	100	99	100	100	99	100	100	99	0	0	0	0	0	0	0	0	0
22	65.9	65.6	65.9	63.1	58.6	62.4	63.1	58.6	62.4	0	0	0	0	0	0	0	0	0
23	0	58.3	58.3	0	24.5	30.1	0	24.7	30.2	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	35.8	35.8	0	15.2	0	0	15.3	0	0	0	0	0	0	0	0	0	0
27	100	100	100	100	100	0	100	100	0	0	0	0	0	0	0	0	0	0
28	100	100	100	100	100	0	100	100	0	0	0	0	0	0	0	0	0	0
29	100	100	100	100	100	0	100	100	0	0	0	0	0	0	0	0	0	0
30	97.6	97.6	97.6	97.6	97.6	0	97.6	97.6	0	54.8	0	0	0	0	0	0	0	0
31	100	100	100	78	77.3	0.1	78.1	77.4	0.1	100	0	0	0	0	0	0	0	0
Avg	23	26	26	21.5	22.6	7.1	22.2	23.3	7.8	5	0	0	0	0	0	0	0	0
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	40.1	40.2	40.1	38.5	38	21.1	38.8	38.3	22.1	19.9	0	0	0	0	0	0	0	0
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	99	100	100	99	100	0	0	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for August, 2007.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	100	100	100	100	0	100	100	0	100	0	0	0	0	0	0	0	0
2	83.4	83.4	83.4	69.2	71.3	0	69.3	71.4	0	83.4	0	0	0	0	0	0	0	0
3	100	100	100	100	100	0.1	100	100	0.1	100	0	0	0	0	0	0	0	0
4	97.7	97.7	97.7	93.6	91.5	0	93.6	91.5	0	97.7	0	0	0	0	0	0	0	0
5	64.4	64.4	64.4	61.2	58.4	0	61.3	58.5	0	33.3	0	0	0	0	0	0	0	0
6	99	99	99	95.1	95.1	27.2	95.1	95.1	27.3	90.8	0	0	0	0	0	0	0	0
7	100	99.9	100	100	99.9	100	100	99.9	100	79.2	0	0	0	0	0	0	0	0
8	100	100	100	67.6	69	76.6	67.7	69.1	76.7	81.3	0	0	0	0	0	0	0	0
9	100	100	100	100	100	100	100	100	100	75.1	0	0	0	0	0	0	0	0
10	100	100	100	100	100	100	100	68.4	100	79	0	0	0	0	0	0	0	0
11	0	100	100	0	100	100	0	76.6	100	0	0	0	0	0	0	0	0	0
12	0	100	100	0	100	100	0	100	100	0	0	0	0	0	0	0	0	0
13	0	100	100	0	100	100	0	100	100	0	0	0	0	0	0	0	0	0
14	0	100	100	0	100	100	0	100	100	0	0	0	0	0	0	0	0	0
15	0	100	79.1	0	100	79.1	0	100	79.1	0	0	0	0	0	0	0	0	0
16	43.1	100	36.9	43.1	100	36.9	43.1	100	36.9	43.1	0	0	0	0	0	0	0	0
17	100	100	99	100	100	99	100	100	99	94.3	46.7	39.4	0	0	0	0	0	0
18	100	100	89.1	100	100	89.1	100	100	89.1	100	100	71.3	0	0	0	0	0	0
19	100	99.8	100	100	99.8	100	100	99.8	100	84.7	82.8	60	0	0	0	0	0	0
20	100	99.4	99.9	100	99.4	99.9	100	99.4	99.9	87.3	87.8	71.9	0	0	0	0	0	0
21	99.8	99.9	100	99.8	99.9	100	99.8	99.9	100	65.1	62	49.2	0	0	0	0	0	0
22	100	100	100	100	100	100	100	100	100	95.1	92.3	81.7	0	0	0	0	0	0
23	98.8	98.8	98.8	71	69	71	71.2	69.1	98.8	98.8	98.8	83.8	0	0	0	0	0	0
24	100	100	100	74.5	75.2	100	74.7	75.3	100	100	100	100	0	0	0	0	0	0
25	100	100	100	74.5	69	75.9	74.7	69.1	76	100	100	100	0	0	0	0	0	0
26	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
27	100	100	100	100	100	100	100	100	100	69.7	67.4	62.1	0	0	0	0	0	0
28	100	100	100	100	100	100	100	100	100	68.1	67.6	60	0	0	0	0	0	0
29	100	100	80.5	100	100	80.5	100	100	80.5	100	100	80.5	0	0	0	0	0	0
30	84.2	84.8	85.6	79.2	82.5	79.1	56.7	82.5	79.1	84.2	84.8	85.6	0	0	0	0	0	0
31	68.5	68.5	68.5	64.6	61.8	67.4	64.7	61.9	67.5	68.5	68.5	68.5	0	0	0	0	0	0
Avg	78.7	96.6	93	74	91.7	73.6	73.3	89.9	74.5	70.3	40.6	35.9	0	0	0	0	0	0
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	36.8	8.9	14.1	35.8	13.6	36.8	35.9	14.2	37.1	34.7	43.5	39.1	0	0	0	0	0	0
Min	0	64.4	36.9	0	58.4	0	0	58.5	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for September, 2007.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	100	98.2	100	100	98.2	100	100	98.2	100	100	98.2	0	0	0	0	0	0
2	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
3	100	100	100	100	100	100	100	100	100	93.1	100	80.8	0	0	0	0	0	0
4	100	100	100	100	100	100	100	100	100	83.8	82.7	66	0	0	0	0	0	0
5	100	100	100	100	100	59.2	100	100	59.2	95.6	77.4	44.3	0	0	0	0	0	0
6	92.3	92.3	76.8	87	89.8	23.1	87	89.8	23.3	92.3	90.8	28.8	0	0	0	0	0	0
7	0	0	41.6	0	0	41.6	0	0	41.6	0	0	41.6	0	0	0	0	0	0
8	0	0	99.8	0	0	99.8	0	0	99.8	0	0	99.8	0	0	0	0	0	0
9	0	0	100	0	0	100	0	0	100	0	0	100	0	0	0	0	0	0
10	0	0	99.7	0	0	68.3	0	0	68.3	0	0	99.7	0	0	0	0	0	0
11	0	0	100	0	0	100	0	0	100	0	0	100	0	0	0	0	0	0
12	0	0	94.7	0	0	94.7	0	0	94.7	0	0	89.7	0	0	0	0	0	0
13	0	0	100	0	0	100	0	0	100	0	0	87.3	0	0	0	0	0	0
14	0	0	99.7	0	0	99.7	0	0	52.8	0	0	99.7	0	0	0	0	0	0
15	0	0	94.2	0	0	94.2	0	0	94.2	0	0	94.2	0	0	0	0	0	0
16	0	0	99.7	0	0	99.7	0	0	99.7	0	0	99.7	0	0	0	0	0	0
17	0	0	99.9	0	0	99.9	0	0	99.9	0	0	69.1	0	0	0	0	0	0
18	0	0	100	0	0	67.6	0	0	67.7	0	0	94.7	0	0	0	0	0	0
19	0	0	98.9	0	0	98.9	0	0	98.9	0	0	98.9	0	0	0	0	0	0
20	0	0	90.8	0	0	67.7	0	0	67.8	0	0	76.4	0	0	0	0	0	0
21	0	0	100	0	0	98.1	0	0	98.1	0	0	71.7	0	0	0	0	0	0
22	0	0	96	0	0	96	0	0	96	0	0	96	0	0	0	0	0	0
23	0	0	93.3	0	0	93.3	0	0	93.3	0	0	71	0	0	0	0	0	0
24	0	0	100	0	0	100	0	0	100	0	0	71.9	0	0	0	0	0	0
25	0	0	97.8	0	0	97.8	0	0	97.8	0	0	97.8	0	0	0	0	0	0
26	33.8	33.9	88.8	33.8	33.9	88.8	33.8	33.9	88.8	33.8	33.9	88.8	0	0	0	0	0	0
27	100	99.9	99.4	67.6	66.9	41.4	74.7	67.7	41.4	96.9	96.5	56.7	0	0	0	0	0	0
28	99.9	99.9	79	99.9	99.9	29.8	99.9	99.9	29.9	96.5	96.5	24.8	0	0	0	0	0	0
29	99.9	87.6	86.6	99.9	87.6	86.6	99.9	87.6	86.6	99.9	87.6	86.6	0	0	0	0	0	0
30	100	87.6	98.5	100	87.6	98.5	100	87.6	98.5	100	87.6	95.9	0	0	0	0	0	0
Avg	34.2	33.4	94.4	32.9	32.2	84.8	33.2	32.2	83.2	33.1	31.8	81	0	0	0	0	0	0
n	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
SD	46.4	45.3	11.5	45	43.9	23	45.2	44	23.5	44.9	43.2	21.9	0	0	0	0	0	0
Min	0	0	41.6	0	0	23.1	0	0	23.3	0	0	24.8	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for October, 2007.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	92.8	98.7	100	92.8	98.7	100	92.8	98.7	100	92.8	98.7	0	0	0	0	0	0
2	100	96.5	89.7	100	96.5	89.7	100	96.5	89.7	100	96.5	73.1	0	0	0	0	0	0
3	100	100	99	100	100	99	100	100	99	100	100	99	0	0	0	0	0	0
4	100	99.9	95.3	100	99.9	95.3	100	99.9	95.3	97.2	98.5	76.6	0	0	0	0	0	0
5	100	99.6	100	100	99.6	100	100	99.6	100	79.9	78.2	73.6	0	0	0	0	0	0
6	100	99.4	100	100	99.4	100	100	99.4	100	78.8	76.4	70.6	0	0	0	0	0	0
7	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
8	100	77.2	99.9	100	77.2	99.9	100	77.2	99.9	100	77.2	99.9	0	0	0	0	0	0
9	100	59.2	100	100	59.2	100	100	59.2	100	100	59.2	100	0	0	0	0	0	0
10	97.6	69.2	100	97.6	69.2	100	97.6	69.2	100	97.6	69.2	100	0	0	0	0	0	0
11	96.9	96.9	99.9	96.9	72.8	99.9	96.9	73	99.9	94.4	94.7	96.4	0	0	0	0	0	0
12	98.6	100	100	98.6	100	100	98.6	100	100	98.6	100	100	0	0	0	0	0	0
13	89.2	100	99.9	89.2	100	99.9	89.2	100	99.9	89.2	100	99.9	0	0	0	0	0	0
14	99.7	100	99.9	99.7	100	99.9	99.7	100	99.9	99.7	100	99.9	0	0	0	0	0	0
15	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
16	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
17	100	100	99.9	97.6	100	99.9	97.6	100	99.9	100	92.3	82.6	0	0	0	0	0	0
18	100	100	100	0	66.2	76.7	0	66.3	76.9	75.5	19.4	0	0	0	0	0	0	0
19	100	100	100	0	97.4	100	0	97.4	100	100	100	42.8	0	0	0	0	0	0
20	100	100	99.3	0	100	99.3	0	100	99.3	81.7	76.9	99.3	0	0	0	0	0	0
21	100	100	100	0	100	100	0	100	100	96.9	78.6	100	0	0	0	0	0	0
22	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
23	99.4	100	98.3	0	100	98.3	0	100	98.3	99.4	100	98.3	0	0	0	0	0	0
24	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
25	100	100	99.9	0	67.6	73.3	0	67.7	73.4	96.7	96.9	95.1	0	0	0	0	0	0
26	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
27	22.4	22.4	22.4	0	14.3	17.1	0	15	17.1	22.4	22.4	22.4	0	0	0	0	0	0
28	51.8	51.8	51.8	0	45.1	50	0	45.3	50.1	51.8	51.8	51.8	0	0	0	0	0	0
29	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
30	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
31	99.9	100	100	0	100	100	0	100	100	99.9	100	100	0	0	0	0	0	0
Avg	95.3	92.4	95.3	54.2	88.9	93.4	54.2	89	93.5	92.2	86.5	86.5	0	0	0	0	0	0
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	15.9	17.8	15.9	49.2	20.2	17.4	49.2	20.1	17.4	16.5	21.6	24.8	0	0	0	0	0	0
Min	22.4	22.4	22.4	0	14.3	17.1	0	15	17.1	22.4	19.4	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for November, 2007.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	100	100	0	67.6	68.5	0	67.7	73.3	99.1	99.4	99.3	0	0	0	0	0	0
2	95.8	95.8	95.8	0	95.8	95.8	0	95.8	95.8	95.8	95.8	93.1	0	0	0	0	0	0
3	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
4	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
5	92.3	70.8	100	0	70.8	100	0	70.8	100	88.9	66.4	96.6	0	0	0	0	0	0
6	86.1	99.7	100	0	99.7	100	0	99.7	100	86.1	99.7	100	0	0	0	0	0	0
7	35	99.4	100	0	99.4	100	0	99.4	100	35	99.4	100	0	0	0	0	0	0
8	87.8	98.6	98.6	0	75	98.6	0	75.3	98.6	85	95.8	90.9	0	0	0	0	0	0
9	89.9	99.8	99.8	0	99.8	99.8	0	99.8	99.8	89.9	99.8	99.8	0	0	0	0	0	0
10	99	99.4	100	0	99.4	100	0	99.4	100	99	99.4	100	0	0	0	0	0	0
11	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
12	99.4	99.4	99.4	0	99.4	70.3	0	99.4	70.5	99.4	99.4	71.5	0	0	0	0	0	0
13	99.3	100	100	0	100	100	0	100	100	99.3	100	100	0	0	0	0	0	0
14	99.9	98.8	100	0	98.8	100	0	98.8	100	99.9	98.8	100	0	0	0	0	0	0
15	99.4	99.4	99.4	0.1	99.4	99.4	0.1	99.4	99.4	95.1	93.5	97.7	0	0	0	0	0	0
16	99.5	100	100	0	100	100	0	100	100	99.5	100	100	0	0	0	0	0	0
17	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
18	96.3	100	99.9	0	100	99.9	0	100	99.9	96.3	100	99.9	0	0	0	0	0	0
19	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
20	100	99.2	99.5	0	99.2	99.5	0	99.2	99.5	100	99.2	99.5	0	0	0	0	0	0
21	81.1	96.9	96.9	0	89.5	93	0	90.2	93	79.9	94.3	92.7	0	0	0	0	0	0
22	63.1	63.1	63.1	0	56.5	61.9	0	56.6	61.9	63.1	63.1	63.1	0	0	0	0	0	0
23	99.9	99.9	99.9	0	99.9	99.9	0	99.9	99.9	99.9	99.9	99.9	0	0	0	0	0	0
24	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
25	100	100	100	0	100	100	0	100	100	100	100	100	0	0	0	0	0	0
26	96.3	99.4	99.4	0	99.4	99.4	0	99.4	99.4	96.3	99.4	99.4	0	0	0	0	0	0
27	95.9	100	98.2	0	100	98.2	0	100	98.2	95.9	100	98.2	0	0	0	0	0	0
28	87.3	100	100	0	100	100	0	100	100	87.3	100	100	0	0	0	0	0	0
29	100	100	100	0	74.5	73.5	0	74.7	73.6	49.7	49.7	49.7	0	0	0	41.5	42.2	42.6
30	92.2	99.8	100	0	99.8	100	0	99.8	100	0	0	0	0	0	0	92.2	99.8	100
Avg	93.2	97.3	98.3	0	94.1	95.3	0	94.2	95.4	88	91.8	91.7	0	0	0	4.5	4.7	4.8
n	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
SD	13.3	8.2	6.6	0	11.8	10.7	0	11.7	10.3	22.4	20.9	20.7	0	0	0	17.9	19.2	19.3
Min	35	63.1	63.1	0	56.5	61.9	0	56.6	61.9	0	0	0	0	0	0	0	0	0
Max	100	100	100	0.1	100	100	0.1	100	100	100	100	100	0	0	0	92.2	99.8	100

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Table E12. Airflow and emission data completeness (%) at site IA4B for December, 2007.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	91.3	98.8	97	86	98.8	97	86.2	98.8	97	0	0	0	0	0	0	91.3	98.8	97
2	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	100	100	100
3	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	99.7	99.7	99.7
4	100	100	99	100	100	33.2	100	100	33.2	0	0	0	0	0	0	100	100	36.2
5	100	100	100	100	100	49	100	100	49.1	0	0	0	0	0	0	100	100	43.5
6	99.6	100	100	59.2	75.2	60.5	59.4	75.3	60.6	0	0	0	31.8	26.3	31.9	51	51.3	51.3
7	100	100	99.8	100	100	99.8	100	100	99.8	0	0	0	100	100	99.8	0	0	0
8	45	43	45	37.4	36.7	42.9	37.4	36.7	42.9	0	0	0	45	43	45	0	0	0
9	41	41	41	37.2	34.4	40.3	37.3	34.5	40.6	0	0	0	41	29.4	41	0	0	0
10	94.8	99.8	98.7	94.8	99.8	98.7	94.8	99.8	98.7	0	0	0	91.6	29.6	88.1	0	0	0
11	98.8	98.3	100	98.8	98.3	100	98.8	98.3	100	0	0	0	98.8	0	100	0	0	0
12	96	93.3	96.3	96	67.3	96.3	96	68.1	96.3	0	0	0	89.7	0	91.1	0	0	0
13	96.8	95.6	100	96.8	95.6	100	96.8	95.6	100	0	0	0	96.8	0	100	0	0	0
14	97.1	89.7	99.7	27.8	23.2	28.4	69.3	89.7	68	0	0	0	97.1	0	99.7	0	0	0
15	95.9	85.2	100	0	0	0	95.9	85.2	100	0	0	0	95.9	0	100	0	0	0
16	98.5	83	100	0	0	0	98.5	83	100	0	0	0	98.5	0	100	0	0	0
17	70.1	91.8	100	12.5	36.7	41	70.1	91.8	100	0	0	0	70.1	22.5	100	0	0	0
18	82	94.2	100	82	94.2	100	82	94.2	100	0	0	0	73.8	84.3	87.9	0	0	0
19	97.8	96	100	97.8	96	100	97.8	96	100	0	0	0	97.8	96	100	0	0	0
20	99.4	100	98	66.2	68.3	66.5	66.2	68.4	66.5	0	0	0	99.4	100	98	0	0	0
21	98.8	100	99.7	98.8	100	99.7	98.8	100	99.7	0	0	0	98.8	100	99.7	0	0	0
22	60.6	66.2	100	60.6	66.2	100	60.6	66.2	100	0	0	0	60.6	66.2	100	0	0	0
23	45.9	0	100	45.9	0	100	45.9	0	100	0	0	0	45.9	0	100	0	0	0
24	92.4	70.3	100	92.4	70.3	100	92.4	70.3	100	0	0	0	92.4	70.3	100	0	0	0
25	80.3	97.4	100	80.3	97.4	100	80.3	97.4	100	0	0	0	80.3	97.4	100	0	0	0
26	94.4	99.9	100	94.4	99.9	100	94.4	99.9	100	0	0	0	94.4	99.9	100	0	0	0
27	90.1	94.9	100	28.1	35.9	28.5	28.1	35.9	28.5	0	0	0	49.7	53.1	36.6	0	0	0
28	98.3	89.7	99.8	45.5	35.9	46.2	45.5	35.9	46.2	37.2	35.1	29.6	0	0	0	0	0	0
29	58.5	99	99.9	58.5	99	99.9	58.5	99	99.9	58.5	95.3	99.9	0	0	0	0	0	0
30	89.1	95.2	99.7	89.1	95.2	99.7	89.1	95.2	99.7	89.1	95.2	99.7	0	0	0	0	0	0
31	98.9	58.1	100	98.9	58.1	100	98.9	58.1	100	98.9	56.4	100	0	0	0	0	0	0
Avg	87.5	86.5	95.9	70.5	70.4	75.1	80	79.8	84.7	9.2	9.1	10.6	56.4	32.8	61.9	17.5	17.7	13.8
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	17.9	22.6	13.9	32.2	34	33.1	22.4	26	24.3	25.4	25.4	29.7	40.8	39.9	44.2	36.5	37.1	30.7
Min	41	0	41	0	0	0	28.1	0	28.5	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	98.9	95.3	100	100	100	100	100	100	100

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Table E12. Airflow and emission data completeness (%) at site IA4B for January, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	77	13.7	100	77	13.7	100	77	13.7	100	77	13.7	99	0	0	0	0	0	0
2	85.2	93	100	85.2	93	100	85.2	93	100	85.2	93	100	0	0	0	0	0	0
3	5.7	82.8	100	5.7	82.8	100	5.7	82.8	100	5.7	82.8	100	0	0	0	0	0	0
4	23.4	65.8	69.6	17.1	50.7	58.5	17.1	50.8	58.6	18.4	55.1	17.4	0	0	0	0	0	0
5	77.2	100	100	77.2	100	100	77.2	100	100	77.2	100	0	0	0	0	0	0	0
6	97.7	100	100	97.7	100	100	97.7	100	100	97.7	100	0	0	0	0	0	0	0
7	100	100	100	100	100	100	100	100	100	100	100	28.8	0	0	0	0	0	0
8	98	95.7	100	98	95.7	100	98	95.7	100	98	95.7	100	0	0	0	0	0	0
9	88.2	96.8	100	88.2	96.8	100	88.2	96.8	100	88.2	96.8	100	0	0	0	0	0	0
10	99.5	93.4	99.9	62.6	60.3	68.6	62.7	60.4	68.8	96.5	90.1	92.8	0	0	0	0	0	0
11	93.4	91.5	100	93.4	91.5	100	93.4	91.5	100	93.4	91.5	100	0	0	0	0	0	0
12	97	94.2	100	97	94.2	100	97	94.2	100	97	94.2	100	0	0	0	0	0	0
13	95.9	82.8	100	95.9	82.8	100	95.9	82.8	100	95.9	82.8	100	0	0	0	0	0	0
14	94.1	39.9	100	62.6	38.3	74	62.7	38.3	74.1	94.1	39.9	100	0	0	0	0	0	0
15	53.4	88.1	100	53.4	88.1	100	53.4	88.1	100	53.4	88.1	99.8	0	0	0	0	0	0
16	55.8	92.1	100	55.8	92.1	100	55.8	92.1	100	55.8	92.1	100	0	0	0	0	0	0
17	81.5	36.1	99.8	75.8	33.9	99.8	75.8	33.9	99.8	78.5	35.7	93.4	0	0	0	0	0	0
18	80.6	37.4	99.2	80.6	37.4	29	80.6	37.4	29	80.6	37.4	58.9	0	0	0	0	0	0
19	100	49	100	100	49	23.8	100	49	24	100	49	100	0	0	0	0	0	0
20	100	86.9	100	100	86.9	0	100	86.9	0	100	86.9	100	0	0	0	0	0	0
21	98.3	82	97.2	95.7	82	57.3	95.7	82	57.4	98.3	82	97.2	0	0	0	0	0	0
22	92.6	27.9	100	92.6	27.9	100	92.6	27.9	100	92.6	27.9	100	0	0	0	0	0	0
23	93.3	49.2	100	93.3	49.2	100	93.3	49.2	100	93.1	49.2	100	0	0	0	0	0	0
24	98.1	57.8	100	72.1	41	100	72.2	41	100	91.9	54.2	94.2	0	0	0	0	0	0
25	71.7	66.5	99.8	71.7	66.5	99.8	71.7	66.5	99.8	71.7	66.5	99.8	0	0	0	0	0	0
26	100	78	99.9	100	78	99.9	100	78	99.9	100	78	99.9	0	0	0	0	0	0
27	96.5	95.4	100	96.5	95.4	100	96.5	95.4	100	96.5	95.4	100	0	0	0	0	0	0
28	92.9	97.2	100	92.9	97.2	100	92.9	97.2	100	92.9	97.2	57	0	0	0	0	0	0
29	82.6	24	27.8	60	23.3	27.8	64.9	23.3	27.8	82.6	24	23.8	0	0	0	0	0	0
30	94.6	44.9	83.6	94.6	44.9	83.6	94.6	44.9	83.6	94.6	44.4	83.6	0	0	0	0	0	0
31	100	82.8	98.4	100	82.8	98.4	100	82.8	98.4	94.4	79.5	43.8	0	0	0	0	0	0
Avg	84.7	72.4	96	80.4	70.2	84.5	80.6	70.2	84.6	83.9	71.7	80.3	0	0	0	0	0	0
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	22.1	26.1	13.8	23.2	26.7	27.9	23	26.7	27.9	22.3	26.2	32.5	0	0	0	0	0	0
Min	5.7	13.7	27.8	5.7	13.7	0	5.7	13.7	0	5.7	13.7	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for February, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	99.6	85.3	100	99.6	85.3	100	99.6	85.3	100	99.6	85.3	0	0	0	0	0	0	0
2	98.9	88.7	100	98.9	88.7	100	98.9	88.7	100	98.9	88.7	0	0	0	0	0	0	0
3	100	97.6	100	100	97.6	100	100	97.6	100	100	97.6	0	0	0	0	0	0	0
4	99.7	86.2	99.4	99.7	86.2	99.4	99.7	86.2	99.4	99.7	86.2	0	0	0	0	0	0	0
5	87.2	50.6	87.2	82.1	42.2	87.2	82.8	42.2	87.2	87.2	50.6	0	0	0	0	0	0	0
6	90.6	54	90.6	82	47.4	90.6	82	47.4	90.6	90.6	54	0	0	0	0	0	0	0
7	100	91.1	99.9	100	91.1	75.2	100	91.1	75.3	96.7	86.9	0	0	0	0	0	0	0
8	99.8	86.5	100	99.8	86.5	100	99.8	86.5	100	99.8	86.5	0	0	0	0	0	0	0
9	83	21.9	83.1	74.4	10.2	76.7	74.6	10.8	76.8	83	21.9	0	0	0	0	0	0	0
10	89.6	16.5	100	89.6	16.5	100	89.6	16.5	100	89.6	16.5	0	0	0	0	0	0	0
11	100	80.6	98.3	100	80.6	98.3	100	80.6	98.3	100	80.6	0	0	0	0	0	0	0
12	99.7	65.6	100	99.7	65.6	100	99.7	65.6	100	99.7	65.6	0	0	0	0	0	0	0
13	87	79.1	100	87	79.1	100	87	79.1	100	87	79.1	0	0	0	0	0	0	0
14	56	37.5	72.6	38.1	22.5	62.2	38.2	22.6	62.4	52.6	23.8	0	0	0	0	0	0	0
15	99.9	71.3	99.9	99.9	71.3	99.9	99.9	71.3	99.9	99.9	71.3	0	0	0	0	0	0	0
16	96.1	87.7	99.9	96.1	87.7	99.9	96.1	87.7	99.9	96.1	87.7	0	0	0	0	0	0	0
17	94.9	43.3	100	94.9	43.3	100	94.9	43.3	100	94.9	43.3	0	0	0	0	0	0	0
18	40.4	1.3	100	40.4	1.3	100	40.4	1.3	100	40.4	1.3	0	0	0	0	0	0	0
19	0	48.8	100	0	48.8	100	0	48.8	100	0	48.8	0	0	0	0	0	0	0
20	0	57.4	100	0	57.4	100	0	57.4	100	0	57.4	0	0	0	0	0	0	0
21	0	92	99.9	0	66.9	75.1	0	67.1	75.2	0	89.1	34.7	0	0	0	0	0	0
22	0	90.1	98.5	0	90.1	98.5	0	90.1	98.5	0	81.7	93.8	0	0	0	0	0	0
23	0	76.2	82.4	0	31.5	37.6	0	31.5	37.6	0	76.2	82.4	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	54	57.2	0	0	0	0	0	0	0	31.2	40.2	0	0	0	0	0	0
29	0	48.1	99.9	0	34.9	25.6	0	34.9	25.6	0	48.1	43.3	0	0	0	0	0	0
Avg	55.9	55.6	81.7	54.6	49.4	73.3	54.6	49.4	73.3	55.7	53.8	10.2	0	0	0	0	0	0
n	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
SD	45.5	32.7	34.1	45.2	34.3	38.2	45.2	34.3	38.2	45.4	32.8	24.4	0	0	0	0	0	0
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	97.6	100	100	97.6	100	100	97.6	100	100	97.6	93.8	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for March, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	0	99	100	0	99	0	0	99	0	0	99	0	0	0	0	0	0	0
2	0	91.6	100	0	91.6	0	0	91.6	0	0	91.6	0	0	0	0	0	0	0
3	0	38.1	100	0	38.1	0	0	38.1	0	0	38.1	0	0	0	0	0	0	0
4	0	92.6	100	0	92.6	52.4	0	92.6	52.6	0	92.6	54.4	0	0	0	0	0	0
5	0	68.1	100	0	68.1	100	0	68.1	100	0	6.3	6.3	0	0	0	0	0	0
6	0	80.8	99.5	0	58.2	99.5	0	58.3	99.5	0	48.1	13.2	0	0	0	0	0	0
7	0	47.3	99.9	0	47.3	99.9	0	47.3	99.9	0	47.3	0	0	0	0	0	0	0
8	0	85.9	99.9	0	85.9	99.9	0	85.9	99.9	0	85.9	0	0	0	0	0	0	0
9	0	81.5	100	0	81.5	100	0	81.5	100	0	81.5	0	0	0	0	0	0	0
10	0	87	100	0	87	100	0	87	100	0	87	0	0	0	0	0	0	0
11	0	86.7	100	0	86.7	100	0	86.7	100	0	86.7	0	0	0	0	0	0	0
12	0	94.9	100	0	94.9	100	0	94.9	100	0	94.9	0	0	0	0	0	0	0
13	0	94.7	99	0	94.7	99	0	94.7	99	0	46.5	8.4	0	0	0	0	44.1	44
14	0	97.9	100	0	29.4	100	0	29.4	100	0	0	0	0	0	0	0	97.9	100
15	0	88.4	100	0	0	100	0	0	100	0	0	0	0	0	0	0	88.4	100
16	0	97.3	100	0	0	100	0	0	100	0	0	0	0	0	0	0	97.3	100
17	0	100	98.5	0	41.2	98.5	0	41.3	98.5	0	0	0	0	0	0	0	100	98.5
18	0	98.8	100	0	98.8	100	0	98.8	100	0	0	0	0	0	0	0	98.8	100
19	0	93.1	100	0	93.1	100	0	93.1	100	0	0	0	0	0	0	0	93.1	100
20	0	99.9	99.1	0	31.3	76	0	31.3	76.1	0	61.4	61.7	0	0	0	0	33.9	33.7
21	0	96.5	94	0	96.5	61.5	0	96.5	61.6	0	96.5	66.5	0	0	0	0	0	0
22	0	97.7	100	0	97.7	100	0	97.7	100	0	97.7	100	0	0	0	0	0	0
23	0	13.4	100	0	13.4	100	0	13.4	100	0	13.4	100	0	0	0	0	0	0
24	0	85.8	100	0	85.8	91.3	0	85.8	91.3	0	85.8	100	0	0	0	0	0	0
25	0	90.7	99.9	0	90.7	99.9	0	90.7	99.9	0	90.7	99.9	0	0	0	0	0	0
26	0	96.3	99.9	0	96.3	99.9	0	96.3	99.9	0	96.3	99.9	0	0	0	0	0	0
27	0	81.8	99.2	0	81.8	99.2	0	81.8	99.2	0	81.8	99.2	0	0	0	0	0	0
28	0	95.6	99.9	0	95.6	99.9	0	95.6	99.9	0	95.6	99.9	0	0	0	0	0	0
29	56.3	98.3	97.8	42.6	98.3	97.8	42.8	98.3	97.8	55.3	93.9	93.6	0	0	0	0	0	0
30	100	86	99.7	100	86	99.7	100	86	99.7	100	86	99.7	0	0	0	0	0	0
31	100	82.8	99.8	100	82.8	99.8	100	82.8	99.8	100	82.8	99.8	0	0	0	0	0	0
Avg	8.3	85.4	99.6	7.8	72.4	86.3	7.8	72.4	86.3	8.2	60.9	38.8	0	0	0	0	21.1	21.8
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	26.1	19.1	1.1	25.3	30.4	30.4	25.4	30.4	30.3	26	38	45.2	0	0	0	0	37.9	39.4
Min	0	13.4	94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	99	100	100	99	100	100	99	100	0	0	0	0	100	100

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Table E12. Airflow and emission data completeness (%) at site IA4B for April, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	99.6	0	100	99.6	0	100	99.6	0	100	58.6	0	100	0	0	0	0	0	0
2	99.4	0	100	99.4	0	100	99.4	0	100	0	0	100	0	0	0	0	0	0
3	100	0	100	100	0	100	100	0	100	0	0	100	0	0	0	0	0	0
4	99.5	0	99.7	99.5	0	99.7	99.5	0	99.7	0	0	99.7	0	0	0	0	0	0
5	100	36	100	100	36	100	100	36	100	26.3	32.8	96.8	0	0	0	0	0	0
6	87.5	83.9	92.3	87.5	83.9	92.3	87.5	83.9	92.3	6.9	7.7	7.7	0	0	0	0	0	0
7	95.4	46.2	100	71.3	46.2	80.6	71.5	46.2	80.8	0	0	0	0	0	0	0	0	0
8	99.7	96.5	99.7	99.7	96.5	99.7	99.7	96.5	99.7	19.4	21.1	14.2	0	0	0	0	0	0
9	100	98.9	100	100	98.9	100	100	98.9	100	100	98.9	100	0	0	0	0	0	0
10	54.9	99	94.4	54.9	99	94.4	54.9	99	94.4	54.9	99	94.4	0	0	0	0	0	0
11	94.1	53.8	100	94.1	43.5	100	94.1	43.5	100	94.1	53.8	100	0	0	0	0	0	0
12	98.8	68.1	100	98.8	42.9	100	98.8	47.2	100	97.6	67.6	98.9	0	0	0	0	0	0
13	22.2	99.1	100	22.2	99.1	100	22.2	99.1	100	22.2	99.1	100	0	0	0	0	0	0
14	0	99.2	100	0	99.2	100	0	99.2	100	0	99.2	100	0	0	0	0	0	0
15	55.1	99.5	100	55.1	99.5	100	55.1	99.5	100	55.1	99.5	100	0	0	0	0	0	0
16	98.5	100	100	98.5	100	100	98.5	100	100	98.5	100	100	0	0	0	0	0	0
17	100	87.3	100	100	87.3	25.5	100	87.3	25.5	100	87.3	72.8	0	0	0	0	0	0
18	100	99.9	99.9	100	99.9	49	100	99.9	49.2	100	99.9	99.9	0	0	0	0	0	0
19	99.9	99.9	99.9	99.9	75.8	74.5	99.9	99.9	99.9	36.5	44.9	42.4	0	0	0	0	0	0
20	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	0	0	0	0	0	0	0	0	0
21	100	100	100	100	44.4	100	100	100	100	0	0	0	0	0	0	0	0	0
22	87.2	100	99.9	87.2	0	99.9	87.2	24.2	99.9	0	0	0	0	0	0	0	0	0
23	88	99.6	99.9	88	10.7	99.9	88	10.8	99.9	0	0	0	0	0	0	0	0	0
24	99.7	100	100	99.7	100	100	99.7	100	100	0	0	0	0	0	0	0	0	0
25	44.7	68	100	44.7	68	100	44.7	68	100	0	0	0	0	0	0	0	0	0
26	22.1	69	100	0	7.2	33.3	0	7.2	33.3	0	0	0	0	0	0	0	0	0
27	87.6	99.2	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	91	96.7	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	100	99.1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	99.8	100	98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg	84.2	76.6	99.5	70	51.3	78.3	70	54.9	79.1	29	33.7	50.9	0	0	0	0	0	0
n	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
SD	27.4	34.7	1.7	39.8	42.4	36.3	39.8	43.1	36.5	38.8	42.3	47.5	0	0	0	0	0	0
Min	0	0	92.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for May, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	81.4	87.8	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	94.9	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	57.7	100	100	0	0	0	0	0	0	35.8	7.1	44.7	0	0	0	0	0	0
4	99.3	99.7	99.7	0	0	0	0	0	0	99.3	0	99.7	0	0	0	0	0	0
5	100	100	100	0	0	0	0	0	0	100	0	100	0	0	0	0	0	0
6	100	99.9	99.4	0	0	0	0	0	0	100	0	99.4	0	0	0	0	0	0
7	100	99.4	98.5	0	0	0	0	0	0	100	0	98.5	0	0	0	0	0	0
8	100	99.4	85.7	0	0	0	0	0	0	100	0	85.7	0	0	0	0	0	0
9	100	100	87.2	0	0	0	0	0	0	84.9	0	85.2	0	0	0	0	0	0
10	100	86	62.8	0	0	0	0	0	0	100	0	62.8	0	0	0	0	0	0
11	53.1	30.3	100	0	0	0	0	0	0	53.1	0	100	0	0	0	0	0	0
12	92.9	97.1	67	0	0	0	0	0	0	92.9	0	67	0	0	0	0	0	0
13	95	75.6	84.9	0	0	0	0	0	0	95	0	49.7	0	0	0	0	0	0
14	96.3	67.5	100	0	0	0	0	0	0	55.6	0	58.4	0	0	0	0	0	0
15	84.7	84.7	66.1	50.3	50.3	50.3	50.3	50.3	50.3	0	0	0	0	0	0	0	0	0
16	99.5	99.5	100	99.5	99.5	100	99.5	99.5	100	0	0	0	0	0	0	0	0	0
17	97.6	94.5	100	97.6	94.5	100	97.6	94.5	100	0	0	0	0	0	0	0	0	0
18	89.3	92.8	99.3	89.3	92.8	99.3	89.3	92.8	99.3	0	0	0	0	0	0	0	0	0
19	100	100	72.4	100	100	72.4	100	100	72.4	0	0	0	0	0	0	0	0	0
20	92.2	82.9	99.9	92.2	82.9	99.9	92.2	82.9	99.9	0	0	0	0	0	0	0	0	0
21	98	92.2	99.9	98	92.2	99.9	98	92.2	99.9	0	0	0	0	0	0	0	0	0
22	99.7	98.3	60	99.7	66	60	99.7	66.9	60	0	0	0	0	0	0	0	0	0
23	95.5	98.6	12.7	42	44	5.9	46.8	44	5.9	0	0	0	0	0	0	0	0	0
24	93.2	99.9	34.7	48.8	57.2	26	49.1	57.3	26	0	0	0	0	0	0	0	0	0
25	93.1	92.4	94.4	93.1	92.4	94.4	93.1	92.4	94.4	0	0	0	0	0	0	0	0	0
26	100	93.8	100	16.7	16.7	16.7	16.7	16.7	16.7	0	0	0	0	0	0	0	0	0
27	96.5	75.6	71.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	100	97.3	72.7	57.5	56	52.4	57.5	56	52.4	0	0	0	0	0	0	49.7	0	49.4
29	99.2	96.7	48.2	75.3	68.1	25.4	75.4	68.2	27.2	0	0	0	0	0	0	95	0	48.2
30	96	99.9	0	96	99.9	0	96	99.9	0	43.4	0	0	0	0	0	46.5	0	0
31	100	99.4	0	100	99.4	0	100	99.4	0	100	0	0	0	0	0	0	0	0
Avg	93.7	91.7	78	40.5	39.1	29.1	40.7	39.1	29.2	37.4	0.2	30.7	0	0	0	6.2	0	3.2
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	11.1	14	29.9	43.4	41.7	39.4	43.4	41.8	39.4	44.1	1.3	40.7	0	0	0	20.1	0	12
Min	53.1	30.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	7.1	100	0	0	0	95	0	49.4

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Table E12. Airflow and emission data completeness (%) at site IA4B for June, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	87.8	99.8	0	75.1	99.8	0	75.2	99.8	0	87.8	0	0	0	0	0	0	0	0
2	100	100	0	100	100	0	100	100	0	100	0	0	0	0	0	0	0	0
3	94.9	99.4	0	94.9	99.4	0	94.9	99.4	0	87.6	0	0	0	0	0	0	0	0
4	100	100	0	100	100	0	100	100	0	100	0	0	0	0	0	0	0	0
5	90.6	84.6	57	41	38.6	5.8	41	38.6	5.8	39.1	0	3	0	0	0	0	0	0
6	88.2	78.8	91.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	100	63.1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	34	32.3	34.1	0	0	3.2	0	0	3.2	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg	23.2	21.9	9.4	13.7	14.6	0.3	13.7	14.6	0.3	13.8	0	0.1	0	0	0	0	0	0
n	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
SD	39.9	38.2	25.9	32	34.1	1.2	32	34.1	1.2	32.2	0	0.5	0	0	0	0	0	0
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	5.8	100	100	5.8	100	0	3	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for July, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	52.2	0	51	32.6	0	34.2	32.8	0	34.3	52	0	49.3	0	0	0	0	0	0
3	0	50.3	0	0	50.3	0	0	50.3	0	0	50.3	0	0	0	0	0	0	0
4	0	100	0	0	100	0	0	100	0	0	100	0	0	0	0	0	0	0
5	0	100	0	0	100	0	0	100	0	0	100	0	0	0	0	0	0	0
6	0	100	0	0	100	0	0	100	0	0	100	0	0	0	0	0	0	0
7	0	97.7	0	0	97.7	0	0	97.7	0	0	97.7	0	0	0	0	0	0	0
8	0	99.9	0	0	99.9	0	0	99.9	0	0	99.9	0	0	0	0	0	0	0
9	0	100	0	0	100	0	0	100	0	0	100	0	0	0	0	0	0	0
10	49.2	99.9	41.8	37.4	73.7	38.2	37.6	73.8	38.3	26.7	96.8	38.5	0	0	0	0	0	0
11	90.8	89.1	91.8	69.5	89.1	91.8	90.8	89.1	91.8	66.9	85.3	86.4	0	0	0	0	0	0
12	96.5	99.8	100	96.5	99.8	100	96.5	99.8	100	96.5	99.8	99.5	0	0	0	0	0	0
13	98.5	95.3	100	98.5	95.3	100	98.5	95.3	100	98.5	95.3	100	0	0	0	0	0	0
14	100	100	100	78.8	73.9	77.4	100	100	100	99.9	100	100	0	0	0	0	0	0
15	100	100	100	90.9	93.7	91.6	100	100	100	100	100	100	0	0	0	0	0	0
16	100	100	100	100	100	100	100	100	100	100	100	69.4	0	0	0	0	0	0
17	95.6	95.6	95.2	95.6	76.8	95.2	95.6	76.9	95.2	92.1	93.9	90.3	0	0	0	0	0	0
18	100	100	99.6	100	100	99.6	100	100	99.6	99.7	100	99.6	0	0	0	0	0	0
19	100	100	100	100	100	100	100	100	100	97.8	100	99.4	0	0	0	0	0	0
20	100	100	100	100	100	100	100	100	100	96.1	100	100	0	0	0	0	0	0
21	99	99.4	99.7	99	99.4	99.7	99	99.4	99.7	93.4	99.4	99.7	0	0	0	0	0	0
22	95.3	95.8	95.8	95.3	95.8	95.8	95.3	95.8	95.8	91.1	92.9	93.7	0	0	0	0	0	0
23	100	98.9	99.9	100	98.9	99.9	100	98.9	99.9	100	98.9	99.9	0	0	0	0	0	0
24	36.5	37.8	37.4	36.5	32	27.6	36.5	32.7	27.6	36.5	37.8	37.4	0	0	0	0	0	0
25	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0	42.2	42.2	0	0	0	0	0	0
26	100	100	100	100	100	100	100	100	100	0	100	100	0	0	0	0	0	0
27	99.4	100	100	99.4	100	100	99.4	100	100	0	100	100	0	0	0	0	0	0
28	100	100	100	100	100	100	100	100	100	0	100	100	0	0	0	0	0	0
29	100	100	100	66.9	66.2	77.3	67	66.3	77.4	0	99.7	99.7	0	0	0	0	0	0
30	100	100	100	100	100	100	100	100	100	0	100	100	0	0	0	0	0	0
31	99.4	99.4	99.4	68.1	75.1	68.8	68.3	75.2	69	0	56.5	56.5	0	0	0	0	38.3	38.3
Avg	66.3	87.1	66.2	61.5	82.6	62.6	63.2	83.7	63.6	43.5	85.4	63.3	0	0	0	0	1.2	1.2
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	42.9	28.2	43.2	41.6	28.3	42.3	42.5	28.5	42.9	45.4	28.6	42.1	0	0	0	0	6.8	6.8
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	38.3	38.3

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Table E12. Airflow and emission data completeness (%) at site IA4B for August, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	100	100
2	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	100	100
3	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	100	100
4	100	100	100	96	96	96	96	96	96	0	0	0	0	0	0	28.1	96	96
5	97.6	97.6	97.6	97.6	97.6	59.5	97.6	97.6	59.5	0	0	0	0	0	0	97.6	97.6	97.3
6	100	100	100	100	100	63.4	100	100	63.5	0	0	0	0	0	0	100	100	100
7	57.8	57.8	57.8	50	52.8	56.3	50	52.8	56.3	0	0	0	0	0	0	57.8	57.8	25.6
8	61.5	61.5	61.5	42.8	46.3	44.7	43	46.5	44.9	48.2	47	48	0	0	0	0	0	0
9	99.9	100	99.7	99.9	100	99.7	99.9	100	99.7	99.9	100	99.7	0	0	0	0	0	0
10	100	100	97.2	100	100	97.2	100	100	97.2	100	100	97.2	0	0	0	0	0	0
11	100	100	99.4	100	100	99.4	100	100	99.4	100	100	99.4	0	0	0	0	0	0
12	100	100	100	67.6	66.2	76.7	67.7	66.3	76.9	75.2	75.2	75.2	0	0	0	0	0	0
13	100	99.8	100	100	99.8	100	100	99.8	100	100	99.8	100	0	0	0	0	0	0
14	100	99.9	99.9	100	99.9	99.9	100	99.9	99.9	100	99.9	99.9	0	0	0	0	0	0
15	99.9	99.9	98.6	75.1	75.1	75.5	75.3	75.3	75.6	39.1	39.5	38.4	55.8	51.4	53.8	0	0	0
16	99.2	100	100	99.2	100	100	99.2	100	100	0	0	0	99.2	100	100	0	0	0
17	100	100	100	100	100	100	100	100	100	0	0	0	100	100	100	0	0	0
18	100	100	100	100	100	100	100	100	100	0	0	0	100	100	100	0	0	0
19	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	0	0	0	99.9	99.9	99.9	0	0	0
20	99.4	99.9	99.9	99.4	99.9	99.9	99.4	99.9	99.9	0	0	0	99.4	99.9	99.9	0	0	0
21	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	0	0	0	55	54	54.5	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	41.3	43.8	43.8	41.3	43.8	43.8	41.3	43.8	43.8	0	0	0	41.3	43.8	43.8	0	0	0
24	77.8	100	100	77.8	100	100	77.8	100	100	0	0	0	77.8	76.6	100	0	0	0
25	98.3	100	99.9	98.3	100	99.9	98.3	100	99.9	0	0	0	98.3	98.5	99.9	0	0	0
26	99.5	100	98.1	99.5	100	98.1	99.5	100	98.1	0	0	0	99.5	100	98.1	0	0	0
27	97.3	100	99.7	63.5	68.3	78.3	63.6	68.4	78.3	0	0	0	97.3	100	70.7	0	0	0
28	94.1	100	93.9	94.1	100	93.9	94.1	100	93.9	0	0	0	91.8	97.7	91.6	0	0	0
29	88.1	100	100	53.5	59.2	66.9	53.7	59.4	67	35.6	36.2	28.8	41.6	53.5	53.5	0	0	0
30	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	0	0	0	0	0	0
31	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	0	0	0	0	0	0
Avg	89.3	90.9	90.4	84.3	85.9	84.1	84.3	85.9	84.1	29	28.9	28.6	37.3	37.9	37.6	9.1	21	20
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	22.5	22.5	22.4	24.8	24.3	24	24.8	24.3	24	42	42	41.8	43.9	44.3	43.9	26.1	39.5	38.9
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

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Table E12. Airflow and emission data completeness (%) at site IA4B for September, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
2	80.1	100	100	80.1	100	100	80.1	100	100	80.1	100	100	0	0	0	0	0	0
3	51	84.2	100	51	84.2	100	51	84.2	100	1.9	84.2	100	0	0	0	0	0	0
4	44.2	97	98.1	44.2	97	98.1	44.2	97	98.1	0	97	98.1	0	0	0	0	0	0
5	70.1	93.2	100	47.2	61.9	76	47.2	62.8	76	0	82.3	89.1	0	0	0	0	0	0
6	95.3	94.2	99.9	95.3	94.2	99.9	95.3	94.2	99.9	0	94.2	99.9	0	0	0	0	0	0
7	95.1	92.4	100	95.1	92.4	100	95.1	92.4	100	0	92.4	100	0	0	0	0	0	0
8	32.6	85.8	100	32.6	85.8	100	32.6	85.8	100	0	85.8	100	0	0	0	0	0	0
9	61.6	93.6	100	30.2	54.2	70.7	30.3	54.4	70.8	0	85.2	91.6	0	0	0	0	0	0
10	66.9	99.1	100	66.9	99.1	100	66.9	99.1	100	0	99.1	100	0	0	0	0	0	0
11	89.4	97.8	100	89.4	97.8	100	89.4	97.8	100	0	97.5	99.7	0	0	0	0	0	0
12	100	100	100	100	100	100	100	100	100	0	95.4	95.6	0	0	0	0	0	0
13	95.7	99.7	99.7	95.7	99.7	99.7	95.7	99.7	99.7	0	99.7	99.7	0	0	0	0	0	0
14	6.4	22.8	99.9	6.4	22.8	99.9	6.4	22.8	99.9	0	22.8	99.9	0	0	0	0	0	0
15	29.6	52.6	99.9	29.6	52.6	99.9	29.6	52.6	99.9	0	52.6	99.9	0	0	0	0	0	0
16	74	66.7	100	74	66.7	100	74	66.7	100	0	66.7	100	0	0	0	0	0	0
17	98.9	89.7	100	98.9	89.7	100	98.9	89.7	100	0	89.7	100	0	0	0	0	0	0
18	100	100	100	33.5	33.5	33.5	33.5	33.5	33.5	0	33.5	31.5	0	0	0	0	0	0
19	100	98.1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	50.1	50.1	50.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	97.2	99.9	99.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	99	99.7	99.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	100	97.1	100	41.8	39.9	41.8	41.8	39.9	41.8	41.7	39.9	41.8	0	0	0	0	0	0
24	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
25	99	100	100	99	100	100	99	100	100	99	100	100	0	0	0	0	0	0
26	99.7	99.7	100	72.8	99.7	75.2	72.9	99.7	75.3	94.3	95.2	61.6	0	0	0	0	0	0
27	90.8	99.8	99.8	90.8	99.8	99.8	90.8	99.8	99.8	90.8	99.8	0	0	0	0	0	0	0
28	83.1	99.9	99.9	83.1	99.9	99.9	83.1	99.9	99.9	83.1	99.9	0	0	0	0	0	0	0
29	71.9	85.3	100	71.9	85.3	100	71.9	85.3	100	71.9	85.3	0	0	0	0	0	0	0
30	48.5	30.1	100	48.5	30.1	100	48.5	30.1	100	48.5	30.1	0	0	0	0	0	0	0
Avg	77.7	87.6	98.2	59.3	69.6	79.8	59.3	69.6	79.8	27	70.9	66.9	0	0	0	0	0	0
n	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
SD	25.7	20.9	8.9	34.8	36	35.4	34.8	36	35.4	39.8	35.8	43.6	0	0	0	0	0	0
Min	6.4	22.8	50.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for October, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	88.8	90.4	100	88.8	90.4	100	88.8	90.4	100	88.8	90.4	0	0	0	0	0	0	0
2	94	99.9	100	94	99.9	100	94	99.9	100	94	99.9	0	0	0	0	0	0	0
3	96.8	99.8	99.4	96.8	99.8	99.4	96.8	99.8	99.4	89.8	94.7	36.5	0	0	0	0	0	0
4	93.3	99.9	99.4	93.3	99.9	99.4	93.3	99.9	99.4	91.4	99.9	99.4	0	0	0	0	0	0
5	91.8	96.7	96.6	6.7	6.7	6.7	91.8	67.4	96.6	71.7	96.7	96.6	0	0	0	0	0	0
6	100	100	100	0	0	0	100	100	100	98.1	100	100	0	0	0	0	0	0
7	52.2	90.7	100	0	0	0	52.2	90.7	100	52.2	90.7	100	0	0	0	0	0	0
8	46.3	98.7	100	0	0	0	46.3	98.7	100	46.3	98.7	100	0	0	0	0	0	0
9	61.7	100	99.7	0	0	0	61.7	100	99.7	61.7	100	99.7	0	0	0	0	0	0
10	82.7	94.2	92.8	0.6	2.2	2.2	82.7	71.4	64.4	78.1	92.8	92.8	0	0	0	0	0	0
11	89.7	100	100	89.7	100	100	89.7	100	100	89.7	100	100	0	0	0	0	0	0
12	100	100	100	100	100	100	100	100	100	97.7	100	100	0	0	0	0	0	0
13	69.7	100	100	69.7	100	100	69.7	100	100	69.7	100	100	0	0	0	0	0	0
14	11.4	36.7	36.6	4.2	30.4	34.5	4.2	30.4	34.5	11.4	36.7	33.8	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	64.7	65.7	65.7	26.9	26.9	26.9	26.9	26.9	26.9	64.7	65.7	65.7	0	0	0	0	0	0
17	100	100	100	66.9	66.9	74.9	67.7	67	75.1	47.2	52.7	51.9	0	0	0	40.8	40.8	40.8
18	40.6	100	100	40.6	100	100	40.6	100	100	0	0	0	0	0	0	37.5	100	100
19	19.9	89.7	100	19.9	89.7	100	19.9	89.7	100	0	0	0	0	0	0	19.9	89.7	100
20	100	54.7	100	100	54.7	100	100	54.7	100	0	0	0	0	0	0	97.2	54.7	100
21	100	97.2	98.7	66.2	66.2	72.4	66.3	66.3	72.4	0	0	0	0	0	0	78	97.2	98.7
22	99.9	100	71	99.9	100	71	99.9	100	71	0	0	0	0	0	0	97.6	100	71
23	100	100	93.6	100	100	93.6	100	100	93.6	0	0	0	0	0	0	100	100	93.6
24	93.1	93.4	93.4	63.1	54.7	69.2	63.3	55.5	93.4	39.2	39.6	39.6	0	0	0	47	47.8	48.6
25	96.2	100	100	96.2	100	100	96.2	100	100	87.8	100	100	0	0	0	0	0	0
26	42.2	70.6	80.4	42.2	70.6	80.4	42.2	70.6	80.4	40.5	70.6	80.4	0	0	0	0	0	0
27	49.6	99.9	100	49.6	99.9	100	49.6	99.9	100	49.6	99.9	100	0	0	0	0	0	0
28	85.8	100	100	85.8	100	100	85.8	100	100	74.8	100	100	0	0	0	0	0	0
29	100	100	100	100	100	100	100	100	100	95.8	100	100	0	0	0	0	0	0
30	99.4	100	100	99.4	100	100	99.4	100	100	99.4	100	100	0	0	0	0	0	0
31	99.1	99.1	99.4	57.3	51.9	59.4	57.4	59.7	59.5	95.8	96.1	96.1	0	0	0	0	0	0
Avg	76.4	89.6	91.2	56.7	64.9	67.4	70.5	81.9	86	56	68.5	61.1	0	0	0	16.7	20.3	21.1
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	29.1	22.1	21.4	39.2	40.1	40.3	29.6	26	24.9	36.7	40.8	43.6	0	0	0	32.2	36.6	37.6
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	99.4	100	100	0	0	0	100	100	100

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Table E12. Airflow and emission data completeness (%) at site IA4B for November, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	100	100	100	100	100	100	100	100	95.3	100	100	0	0	0	0	0	0
2	100	100	100	100	100	100	100	100	100	79.6	100	100	0	0	0	0	0	0
3	100	100	100	100	100	100	100	100	100	98.9	100	100	0	0	0	0	0	0
4	100	100	100	75.9	68.3	69.9	76	68.4	70.1	90.6	100	100	0	0	0	0	0	0
5	98.1	99.9	100	98.1	99.9	100	98.1	99.9	100	98.1	99.9	32.4	0	0	0	0	0	0
6	42.2	38.4	100	42.2	38.4	100	42.2	38.4	100	42.2	38.4	63.8	0	0	0	0	0	0
7	1.7	2.9	99.7	0.1	2.2	74.7	0.1	2.9	74.8	1.6	2.8	95.4	0	0	0	0	0	0
8	39	1	100	39	1	100	39	1	100	39	1	100	0	0	0	0	0	0
9	62.2	45.3	100	62.2	45.3	100	62.2	45.3	100	62.2	45.3	15.6	0	0	0	0	0	0
10	96.9	97.2	99.5	96.9	97.2	99.5	96.9	97.2	99.5	96.9	97.2	0	0	0	0	0	0	0
11	100	100	89	67.6	66.2	58.1	74	66.3	58.2	100	100	0	0	0	0	0	0	0
12	98.1	100	100	98.1	100	100	98.1	100	100	95.4	100	0	0	0	0	0	0	0
13	95.1	99.9	100	95.1	99.9	100	95.1	99.9	100	74.4	99.9	0	0	0	0	0	0	0
14	98.8	100	100	91	92.3	92.3	91	92.3	92.3	81.6	92.3	29.2	0	0	0	0	0	0
15	92.2	99.2	100	92.2	99.2	100	92.2	99.2	100	89.4	99.2	100	0	0	0	0	0	0
16	99.7	100	100	99.7	100	100	99.7	100	100	97.2	100	100	0	0	0	0	0	0
17	95.3	98.8	100	95.3	98.8	100	95.3	98.8	100	90.7	98.8	100	0	0	0	0	0	0
18	94.2	100	100	61.1	66.2	74	61.3	66.3	74.1	94.2	100	100	0	0	0	0	0	0
19	90.7	92.6	100	90.7	92.6	100	90.7	92.6	100	90.3	92.6	100	0	0	0	0	0	0
20	70.3	82.6	100	70.3	82.6	100	70.3	82.6	100	68.8	82.6	100	0	0	0	0	0	0
21	97.3	99.9	99.9	61.7	77.3	77.3	61.7	77.3	77.3	67.8	72.3	72.9	0	0	0	0	0	0
22	72.9	97.1	100	72.9	97.1	100	72.9	97.1	100	72.9	97.1	100	0	0	0	0	0	0
23	92.5	100	100	92.5	100	100	92.5	100	100	92.5	100	100	0	0	0	0	0	0
24	99	94.6	100	99	94.6	100	99	94.6	100	99	94.6	51	0	0	0	0	0	0
25	99.9	99.9	100	99.9	99.9	100	99.9	99.9	100	96	99.9	0	0	0	0	0	0	0
26	100	98.8	100	100	98.8	100	100	98.8	100	91	89.8	0	0	0	0	0	0	0
27	99.6	99.8	100	99.6	99.8	100	99.6	99.8	100	99.6	99.8	0	0	0	0	0	0	0
28	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	52.8	0	0	0	0	0	0
29	100	100	100	100	100	100	100	100	100	100	100	73.5	0	0	0	0	0	0
30	92.4	80.9	100	92.4	80.9	100	92.4	80.9	100	92.4	80.9	100	0	0	0	0	0	0
Avg	87.6	87.6	99.6	83.1	83.3	94.8	83.3	83.3	94.9	83.2	86.1	62.9	0	0	0	0	0	0
n	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
SD	22.7	27.2	2	23.5	27.3	11.2	23.4	27.2	11.2	22.1	27.1	41.9	0	0	0	0	0	0
Min	1.7	1	89	0.1	1	58.1	0.1	1	58.2	1.6	1	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for December, 2008.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	76.5	64.4	100	76.5	64.4	100	76.5	64.4	100	76.5	64.4	100	0	0	0	0	0	0
2	89.4	99.7	100	68.9	66.9	67.6	69	67	67.7	83	99.7	99.7	0	0	0	0	0	0
3	87.4	87.3	100	87.4	87.3	100	87.4	87.3	100	85.6	87.3	100	0	0	0	0	0	0
4	99	86.1	100	99	86.1	100	99	86.1	100	99	86.1	100	0	0	0	0	0	0
5	82.6	87.4	99.7	82.6	87.4	99.7	82.6	87.4	99.7	79	84.1	95.6	0	0	0	0	0	0
6	70.6	64.2	100	70.6	64.2	100	70.6	64.2	100	70.6	64.2	100	0	0	0	0	0	0
7	62.9	99.6	99.8	62.9	99.6	99.8	62.9	99.6	99.8	62.9	99.6	99.8	0	0	0	0	0	0
8	100	99.2	99	100	99.2	99	100	99.2	99	100	99.2	99	0	0	0	0	0	0
9	88.3	85	100	88.3	85	100	88.3	85	100	88.3	85	100	0	0	0	0	0	0
10	94	100	100	94	100	100	94	100	100	92.1	100	100	0	0	0	0	0	0
11	99.6	99.9	100	99.6	99.9	100	99.6	99.9	100	99.2	99.6	99.7	0	0	0	0	0	0
12	82.6	98.4	99.9	82.6	95	99.9	82.6	95.1	99.9	41.9	46.9	48.5	0	0	0	33.8	44.6	45.6
13	81.3	99.7	100	81.3	99.7	100	81.3	99.7	100	0	0	0	0	0	0	81.3	99.7	100
14	77	48.3	100	77	48.3	100	77	48.3	100	0	0	0	0	0	0	77	48.3	100
15	97.4	43.5	100	97.4	43.5	100	97.4	43.5	100	0	0	0	0	0	0	97.4	43.5	100
16	100	100	92.7	73.8	73.8	76.6	74	74	76.6	0	0	0	0	0	0	100	100	92.7
17	100	100	100	80.4	100	100	80.4	100	100	0	0	0	0	0	0	100	100	100
18	100	100	96.8	88.8	100	96.8	88.8	100	96.8	0	0	0	0	0	0	99	99	93.3
19	99.7	88.6	98.8	99.7	88.6	98.8	99.7	88.6	98.8	0	0	0	0	0	0	99.7	88.6	98.8
20	100	57.1	99.3	100	57.1	99.3	100	57.1	99.3	0	0	0	0	0	0	100	57.1	99.3
21	98.3	9.4	100	98.3	9.4	100	98.3	9.4	100	0	0	0	0	0	0	98.3	9.4	100
22	92.4	99.2	97.3	92.4	99.2	97.3	92.4	99.2	97.3	0	0	0	0	0	0	92.4	99.2	97.3
23	66.5	94.2	99.8	41.9	70.9	67.4	42.1	71	67.5	29.9	31.9	0	0	0	0	27.6	55.6	34.7
24	99.6	80.1	100	99.6	80.1	100	99.6	80.1	100	89.4	80.1	0	0	0	0	0	0	0
25	79.2	99.4	98.8	79.2	99.4	98.8	79.2	99.4	98.8	79.2	99.4	0	0	0	0	0	0	0
26	78.8	96.7	100	78.8	96.7	100	78.8	96.7	100	78.8	96.7	0	0	0	0	0	0	0
27	0.6	83	100	0.6	83	100	0.6	83	100	0.6	83	0	0	0	0	0	0	0
28	0	90.6	100	0	90.6	100	0	90.6	100	0	90.6	0	0	0	0	0	0	0
29	0	92.3	100	0	92.3	100	0	92.3	100	0	92.3	0	0	0	0	0	0	0
30	0	67.3	93	0	67.3	93	0	67.3	93	0	67.3	0	0	0	0	0	0	0
31	0	81.1	100	0	81.1	100	0	81.1	100	0	81.1	0	0	0	0	0	0	0
Avg	74.3	83.9	99.2	71	81.2	96.6	71	81.2	96.6	40.5	56.1	36.8	0	0	0	32.5	27.3	34.2
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	34.2	21	1.8	33.6	20.7	8.8	33.6	20.7	8.7	41.5	41.5	47.2	0	0	0	43.7	39	45.2
Min	0	9.4	92.7	0	9.4	67.4	0	9.4	67.5	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	100	100	100

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Table E12. Airflow and emission data completeness (%) at site IA4B for January, 2009.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	0	89.6	100	0	89.6	100	0	89.6	100	0	89.6	0	0	0	0	0	0	0
2	30.6	99.9	96.7	30.6	99.2	96	30.6	99.2	96	29.7	84.8	27.3	0	0	0	0	0	0
3	99.9	96.9	87.2	99.9	96.9	87.2	99.9	96.9	87.2	99.9	96.9	87.2	0	0	0	0	0	0
4	86.5	49.2	100	86.5	49.2	100	86.5	49.2	100	86.5	49.2	100	0	0	0	0	0	0
5	95.1	96.9	100	95.1	96.9	100	95.1	96.9	100	95.1	96.9	100	0	0	0	0	0	0
6	100	99.9	99.7	100	99.9	99.7	100	99.9	99.7	100	99.9	99.7	0	0	0	0	0	0
7	82.8	48.1	100	82.8	48.1	100	82.8	48.1	100	82.8	45.1	95.7	0	0	0	0	0	0
8	92.7	97.5	99	92.7	97.5	99	92.7	97.5	99	92.7	97.5	99	0	0	0	0	0	0
9	83.2	81.1	87.4	83.2	81.1	87.4	27.3	27.5	18.7	74.3	79.2	85	0	0	0	0	0	0
10	99.9	91.3	99.7	99.9	91.3	99.7	0	0	0	99.9	91.3	99.7	0	0	0	0	0	0
11	99.7	91.4	100	99.7	91.4	100	0	0	0	99.7	91.4	100	0	0	0	0	0	0
12	63.4	64.4	99.8	63.4	64.4	99.8	0	0	0	63.4	64.4	99.8	0	0	0	0	0	0
13	92.4	76.2	87.2	92.4	76.2	87.2	0	0	0	92.4	76.2	87.2	0	0	0	0	0	0
14	89.9	78.5	92.2	89.9	78.5	92.2	0	0	0	89.9	78.5	92.2	0	0	0	0	0	0
15	100	100	100	100	100	100	0	0	0	100	100	100	0	0	0	0	0	0
16	40.4	92.3	99.6	40.4	92.3	99.6	0	0	0	40.4	92.3	71.5	0	0	0	0	0	0
17	4.5	58.3	100	4.5	58.3	75.2	0	0	0	4.5	58.3	100	0	0	0	0	0	0
18	0	0	100	0	0	100	0	0	0	0	0	100	0	0	0	0	0	0
19	9.2	27	92.8	0.6	19.2	65.9	0	16.2	16.2	8.5	0.8	81.5	0	0	0	0	0	0
20	64	100	100	34.5	68.3	77.6	34.7	68.4	77.6	64	0	100	0	0	0	0	0	0
21	99.8	100	100	99.8	100	100	99.8	100	100	99.8	0	100	0	0	0	0	0	0
22	90.6	90.8	95.1	90.6	90.8	95.1	90.6	90.8	95.1	86.2	35.3	91.5	0	0	0	0	0	0
23	65.8	25.6	100	65.8	25.6	100	65.8	25.6	100	65.8	25.6	100	0	0	0	0	0	0
24	96.9	98.1	100	96.9	98.1	100	96.9	98.1	100	96.9	98.1	100	0	0	0	0	0	0
25	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
26	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
27	100	100	100	100	100	100	100	100	100	99.7	99.7	99.7	0	0	0	0	0	0
28	98.3	100	100	98.3	100	100	98.3	100	100	98.3	100	100	0	0	0	0	0	0
29	99.9	79.9	100	76.6	79.9	91	76.7	79.9	100	54.4	55.6	54.9	38.5	19.2	38.5	0	0	0
30	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	0	0	0	99.7	99.7	99.7	0	0	0
31	100	98	100	100	98	100	100	98	100	0	0	0	100	98	100	0	0	0
Avg	76.9	81.6	97.9	75	80.3	95.2	54.1	57.5	64.2	68.5	64.7	83	7.7	7	7.7	0	0	0
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	33.2	26	4	34.3	26.4	8.5	44.5	43.5	45.6	37.1	37.5	31.2	25.1	24.4	25.1	0	0	0
Min	0	0	87.2	0	0	65.9	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	100	99.7	100	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for February, 2009.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	99.9	100	100	99.9	100	100	99.9	100	0	0	0	100	99.9	100	0	0	0
2	94	86.5	100	94	86.5	100	94	86.5	100	0	0	0	94	86.5	100	0	0	0
3	99.2	74.7	99.4	69.4	51.7	76.8	69.6	51.8	76.9	0	0	0	99.2	74.7	99.4	0	0	0
4	85.6	99.3	99.7	85.6	99.3	99.7	85.6	99.3	99.7	0	0	0	85.6	99.3	99.7	0	0	0
5	59.7	87.2	99.9	38.1	62.6	76.9	38.2	62.8	76.9	0	0	0	57.9	84.8	97.3	0	0	0
6	99.7	99.7	99.6	99.7	99.7	99.6	99.7	99.7	99.6	0	0	0	99.7	99.7	99.6	0	0	0
7	99.4	95.7	99.4	99.4	95.7	99.4	99.4	95.7	99.4	0	0	0	99.4	95.7	99.4	0	0	0
8	99.7	100	99.8	99.7	100	99.8	99.7	100	99.8	0	0	0	99.7	100	99.8	0	0	0
9	76.7	99.9	96.1	76.7	99.9	96.1	76.7	99.9	96.1	0	0	0	76.7	99.9	60.6	0	0	0
10	92.8	98.8	100	92.8	98.8	100	92.8	98.8	100	0	0	0	92.8	98.8	100	0	0	0
11	100	87.4	100	100	87.4	100	100	87.4	100	0	0	0	100	87.4	100	0	0	0
12	99.8	99.7	100	75.1	72.8	100	99.8	73	100	0	0	0	64.9	67.9	63	19.4	24	18.9
13	100	98.8	100	100	98.8	100	100	98.8	100	0	0	0	0	0	0	99.7	98.5	99.7
14	100	95.4	100	100	95.4	100	100	95.4	100	0	0	0	0	0	0	100	95.4	100
15	90.7	100	100	90.7	100	100	90.7	100	100	0	0	0	0	0	0	90.7	100	100
16	9.9	99.7	100	9.9	99.7	100	9.9	99.7	100	0	0	0	0	0	0	9.9	99.7	100
17	44.6	98.9	100	25	65.4	75.9	25.1	65.4	76	0	0	0	0	0	0	44.6	98.9	100
18	99.2	45.6	99.2	99.2	45.6	99.2	99.2	45.6	99.2	0	0	0	0	0	0	98.8	45.2	97.5
19	86.7	91.3	100	86.7	87.9	100	86.7	87.9	100	5.9	19.2	20.8	0	0	0	58.3	49.6	58.3
20	40.6	98.5	99.8	40.6	98.5	99.8	40.6	98.5	99.8	40.6	98.5	99.8	0	0	0	0	0	0
21	100	23.4	100	100	23.4	100	100	23.4	100	100	23.4	100	0	0	0	0	0	0
22	99.9	95	100	99.9	95	100	99.9	95	100	99.9	88.9	100	0	0	0	0	0	0
23	40.7	99.5	99.9	40.7	99.5	99.9	40.7	99.5	99.9	40.6	99.2	99.6	0	0	0	0	0	0
24	49.2	99.6	100	20.6	65.8	71	20.8	65.9	71.1	49.2	99.6	100	0	0	0	0	0	0
25	86.9	97.9	100	86.9	97.9	100	86.9	97.9	100	86.8	93.9	99.6	0	0	0	0	0	0
26	99.4	80.7	99.6	68.8	50.2	69	68.9	50.3	69.2	95.1	77.2	95	0	0	0	0	0	0
27	99.8	59.6	99.8	99.8	59.6	99.8	99.8	59.6	99.8	99.5	59.3	99.5	0	0	0	0	0	0
28	100	71.8	100	100	71.8	100	100	71.8	100	100	71.8	100	0	0	0	0	0	0
Avg	84.1	88.7	99.7	78.5	82.5	95.1	79.4	82.5	95.1	25.6	26.1	32.7	38.2	39.1	40	18.6	21.8	24.1
n	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
SD	24.4	18.3	0.7	27.9	21.1	10	28.2	21.1	10	39.6	39	46	45.1	45.7	47.1	34.9	37.9	41
Min	9.9	23.4	96.1	9.9	23.4	69	9.9	23.4	69.2	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	99.6	100	100	100	100	100	100	100

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Table E12. Airflow and emission data completeness (%) at site IA4B for March, 2009.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	80.8	100	100	80.8	100	100	80.8	100	100	80.8	100	0	0	0	0	0	0
2	84.8	100	99.7	84.8	100	99.7	84.8	100	99.7	84.8	100	99.7	0	0	0	0	0	0
3	7.8	87.2	98.4	7.8	63.3	73.6	7.8	63.4	73.8	7.8	86.9	98.1	0	0	0	0	0	0
4	53	98.9	99.1	53	98.9	99.1	53	98.9	99.1	53	98.9	69.1	0	0	0	0	0	0
5	85.3	99.4	100	52.2	65.6	74.3	52.4	65.7	74.4	81	63.9	95.5	0	0	0	0	0	0
6	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	0	98.7	0	0	0	0	0	0
7	100	98.5	100	100	98.5	100	100	98.5	100	100	0	100	0	0	0	0	0	0
8	96.3	92.7	100	96.3	92.7	100	96.3	92.7	100	96.3	0	100	0	0	0	0	0	0
9	93.4	100	99.9	93.4	100	99.9	93.4	100	99.9	93.4	0	99.9	0	0	0	0	0	0
10	69.1	59.4	95.8	38.9	32.5	75.5	39.7	32.5	75.6	69.1	0	95.8	0	0	0	0	0	0
11	33.5	30.9	100	33.5	30.9	100	33.5	30.9	100	33.5	0	99.7	0	0	0	0	0	0
12	14.8	97.3	100	6.8	73.9	100	7.4	74.7	100	14	0	96.5	0	0	0	0	0	0
13	50.2	99.7	99.7	50.2	99.7	99.7	50.2	99.7	99.7	50.2	0	99.7	0	0	0	0	0	0
14	66.7	100	100	66.7	100	100	66.7	100	100	66.7	0	100	0	0	0	0	0	0
15	84.9	100	100	84.9	100	100	84.9	100	100	84.6	0	99.7	0	0	0	0	0	0
16	94	100	100	94	100	100	94	100	100	93.7	0	99.7	0	0	0	0	0	0
17	100	100	100	100	100	100	100	100	100	100	0	100	0	0	0	0	0	0
18	99.9	100	100	99.9	100	100	99.9	100	100	99.9	0	100	0	0	0	0	0	0
19	100	100	100	100	100	100	100	100	100	99.7	0	99.7	0	0	0	0	0	0
20	92.7	99.7	99.7	92.7	99.7	99.7	92.7	99.7	99.7	90	0	96.7	0	0	0	0	0	0
21	100	100	100	100	100	100	100	100	100	99.7	0	99.7	0	0	0	0	0	0
22	100	100	100	100	100	100	100	100	100	100	0	100	0	0	0	0	0	0
23	98.1	100	100	98.1	100	100	98.1	100	100	97.8	0	99.7	0	0	0	0	0	0
24	89.7	99.9	100	49.7	61.9	63.6	49.9	62.1	63.7	89.7	0	100	0	0	0	0	0	0
25	89	99.7	100	89	99.7	100	89	99.7	100	89	0	100	0	0	0	0	0	0
26	98.1	98.3	100	73.3	98.3	100	73.5	98.3	100	93.9	0	95.4	0	0	0	0	0	0
27	98.3	95.6	99.7	98.3	95.6	99.7	98.3	95.6	99.7	98.3	0	94.7	0	0	0	0	0	0
28	100	84	100	100	84	100	100	84	100	100	0	100	0	0	0	0	0	0
29	99.7	93.3	100	99.7	93.3	100	99.7	93.3	100	99.7	0	100	0	0	0	0	0	0
30	99.3	100	96.8	99.3	100	90.6	99.3	100	90.6	99.3	0	66.5	0	0	0	0	0	0
31	58.7	88	100	34.7	65.6	67.6	34.9	65.8	67.7	58.3	0	99.7	0	0	0	0	0	0
Avg	82.5	93.6	99.6	77.3	88.2	94.9	77.4	88.3	94.9	82	13.9	96.9	0	0	0	0	0	0
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	25.5	14.2	0.9	28.8	19.4	10.8	28.7	19.3	10.8	25.5	32.1	7.8	0	0	0	0	0	0
Min	7.9	30.9	95.8	6.8	30.9	63.6	7.4	30.9	63.7	7.9	0	66.5	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for April, 2009.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	78.1	95.3	100	78.1	95.3	100	78.1	95.3	100	78.1	0	100	0	0	0	0	0	0
2	97.9	97.6	97.9	68.5	73.7	68.5	75.6	73.8	76	94.2	37.2	95	0	0	0	0	0	0
3	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
4	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
5	90.6	67.8	99.1	90.6	67.8	99.1	90.6	67.8	99.1	90.2	67.8	98.7	0	0	0	0	0	0
6	87.5	81.1	100	87.5	81.1	100	87.5	81.1	100	87.5	81.1	100	0	0	0	0	0	0
7	99.2	95.3	99.3	68.5	57.6	84.8	68.6	57.8	84.9	99.2	95.3	99.3	0	0	0	0	0	0
8	99.9	100	100	99.9	100	100	99.9	100	100	99.9	100	100	0	0	0	0	0	0
9	99.4	99.3	99.4	44.6	51.5	68.8	45.4	51.6	53.4	91.1	89.5	90.1	0	0	0	0	0	0
10	100	95.6	100	100	95.6	100	100	95.6	100	100	95.6	100	0	0	0	0	0	0
11	88.5	100	100	88.5	100	100	88.5	100	100	88.5	100	100	0	0	0	0	0	0
12	29.9	100	100	29.9	100	100	29.9	100	100	29.4	99.5	99.5	0	0	0	0	0	0
13	98.9	99.1	99.9	98.9	99.1	99.9	98.9	99.1	99.9	98.9	99.1	99.9	0	0	0	0	0	0
14	100	100	100	68.3	69	69.7	68.4	69.8	69.8	100	100	100	0	0	0	0	0	0
15	100	100	100	100	100	100	100	100	100	99.7	99.7	99.7	0	0	0	0	0	0
16	100	100	100	75.2	100	79.3	76	100	100	51.2	51.5	51.5	0	0	0	28.9	39.4	40.7
17	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	100	100	100
18	100	88.8	100	100	88.8	100	100	88.8	100	0	0	0	0	0	0	99.7	88.5	99.7
19	100	84.9	100	100	84.9	100	100	84.9	100	0	0	0	0	0	0	100	84.9	100
20	99.7	92.3	100	99.7	92.3	100	99.7	92.3	100	0	0	0	0	0	0	99.4	91.9	99.7
21	98	90.1	100	65.8	57.4	71.9	65.9	57.6	71.9	0	0	0	0	0	0	98	90.1	70.4
22	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	100	100	100
23	100	99.9	100	66.2	67.6	100	66.3	67.7	100	47.6	46	46.4	0	0	0	46.1	46.1	46.1
24	77.1	66.3	99.7	77.1	66.3	99.7	77.1	66.3	99.7	77.1	66.3	99.7	0	0	0	0	0	0
25	95.9	55.8	99.5	95.9	55.8	99.5	95.9	55.8	99.5	95.9	55.8	99.5	0	0	0	0	0	0
26	94.4	94.4	99.9	94.4	94.4	99.9	94.4	94.4	99.9	94.4	94.4	99.9	0	0	0	0	0	0
27	57.9	13.6	100	57.9	13.6	100	57.9	13.6	100	57.9	13.6	100	0	0	0	0	0	0
28	94	77.2	95.3	94	56.7	95.3	94	56.7	95.3	94	77.2	95.3	0	0	0	0	0	0
29	100	99.7	99.9	100	99.7	99.9	100	99.7	99.9	100	99.7	99.9	0	0	0	0	0	0
30	91.2	63	100	50.6	35.1	59.3	50.8	35.1	59.4	88.8	60.4	98.1	0	0	0	0	0	0
Avg	92.6	88.6	99.7	83.3	80.1	93.2	83.6	80.2	93.6	68.8	61	75.8	0	0	0	22.4	21.4	21.9
n	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
SD	14.8	18.7	0.9	19.4	22.6	12.4	19.1	22.6	13.1	38.5	39.9	39.9	0	0	0	39.7	37.2	38.4
Min	29.9	13.6	95.3	29.9	13.6	59.3	29.9	13.6	53.4	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	100	100	100

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Table E12. Airflow and emission data completeness (%) at site IA4B for May, 2009.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	31.7	6	100	31.7	6	100	31.7	6	100	31.7	6	100	0	0	0	0	0	0
2	48.3	33.8	100	48.3	33.8	100	48.3	33.8	100	48.3	33.8	100	0	0	0	0	0	0
3	100	99.2	100	100	99.2	100	100	99.2	100	99.7	98.9	99.7	0	0	0	0	0	0
4	92.3	94.8	100	64.4	63.1	67.9	64.6	63.3	68.1	92.3	94.8	100	0	0	0	0	0	0
5	99.7	97.6	100	99.7	97.6	100	99.7	97.6	100	99.3	97.4	99.7	0	0	0	0	0	0
6	93.3	83.3	100	93.3	83.3	100	93.3	83.3	100	93.3	83.3	100	0	0	0	0	0	0
7	97	89.8	100	97	89.8	75.2	97	89.8	75.3	92.7	85.7	96.2	0	0	0	0	0	0
8	73.7	71.1	99.9	73.7	71.1	99.9	73.7	71.1	99.9	73.7	71.1	99.9	0	0	0	0	0	0
9	32.3	22.7	100	32.3	22.7	100	32.3	22.7	100	32.3	22.7	100	0	0	0	0	0	0
10	89.9	46.3	100	89.9	46.3	100	89.9	46.3	100	89.9	46.3	100	0	0	0	0	0	0
11	98.9	99.2	100	98.9	99.2	100	98.9	99.2	100	98.9	99.2	100	0	0	0	0	0	0
12	99.4	91.9	100	99.4	91.9	100	99.4	91.9	100	99	91.6	99.6	0	0	0	0	0	0
13	91.3	93.7	99.2	59.6	58.5	69.1	59.7	58.7	69.2	91.3	93.7	72.6	0	0	0	0	0	0
14	47.6	98.5	100	47.6	98.5	100	47.6	98.5	100	47.6	98.5	99.7	0	0	0	0	0	0
15	88.8	97	97.8	41.5	67.2	52.8	41.7	68	55.3	87.2	95.3	96.4	0	0	0	0	0	0
16	25.2	58.7	100	25.2	58.7	100	25.2	58.7	100	25.2	58.7	100	0	0	0	0	0	0
17	81.7	93.3	100	81.7	93.3	100	81.7	93.3	100	81.7	93.3	100	0	0	0	0	0	0
18	88.2	88.7	88.7	64.8	59.4	88.7	64.9	59.5	88.7	83.8	84.1	84.1	0	0	0	0	0	0
19	99.7	99.7	99.7	58.8	58.8	60.2	59	59	60.3	99.7	99.7	99.7	0	0	0	0	0	0
20	100	68	100	57.8	49	59.2	58	49.1	59.4	96.2	66.3	96.1	0	0	0	0	0	0
21	100	78.7	100	75.2	52.8	100	100	53	100	100	78.7	100	0	0	0	0	0	0
22	100	84.9	91.8	100	84.9	91.8	100	84.9	91.8	100	84.9	91.8	0	0	0	0	0	0
23	100	99.4	99.4	100	99.4	99.4	100	99.4	99.4	100	99.4	99.4	0	0	0	0	0	0
24	100	100	99.2	100	100	99.2	100	100	99.2	100	100	99.2	0	0	0	0	0	0
25	100	78.3	47.4	100	78.3	47.4	100	78.3	47.4	95.1	41.9	42.2	0	0	0	0	0	0
26	100	78.5	87.4	100	78.5	87.4	100	78.5	87.4	99.7	0	87	0	0	0	0	0	0
27	100	29.9	100	100	29.9	100	100	29.9	100	100	0	100	0	0	0	0	0	0
28	99.2	56.6	99.4	73.1	56.6	81.9	73.2	56.6	82.1	98	0	97.6	0	0	0	0	0	0
29	100	96.9	100	100	96.9	100	100	96.9	100	100	0	99.4	0	0	0	0	0	0
30	99.9	92.2	99.9	99.9	92.2	99.9	99.9	92.2	99.9	99.9	0	99.9	0	0	0	0	0	0
31	100	81.7	100	100	81.7	100	100	81.7	100	100	0	89.4	0	0	0	0	0	0
Avg	86.4	77.8	97.1	77.9	70.9	89.7	78.7	71	89.8	85.7	62.1	95.1	0	0	0	0	0	0
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	22.8	25.3	9.6	24.5	25.1	16.3	24.8	25.1	16.1	22.5	38.6	11.4	0	0	0	0	0	0
Min	25.2	6	47.4	25.2	6	47.4	25.2	6	47.4	25.2	0	42.2	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for June, 2009.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	98.9	99.8	100	98.9	99.8	100	98.9	99.8	100	0	94	0	0	0	0	0	0
2	99.9	44.9	72.5	99.9	44.9	72.5	99.9	44.9	72.5	99.9	0	72.5	0	0	0	0	0	0
3	100	57.7	96.3	65.6	29.9	66.8	65.6	29.9	66.8	100	0	96.3	0	0	0	0	0	0
4	99.8	96.5	99.6	32.3	41.8	41.9	32.6	42.1	42.2	97.6	0	97.8	0	0	0	0	0	0
5	99.8	99.9	99.9	98.3	99.9	99.9	98.5	99.9	99.9	99.8	0	99.9	0	0	0	0	0	0
6	100	81	90.6	100	81	90.6	100	81	90.6	100	0	90.6	0	0	0	0	0	0
7	100	99.6	100	99.5	99.6	100	99.5	99.6	100	100	0	100	0	0	0	0	0	0
8	98.9	64.7	100	98.2	64.7	100	98.2	64.7	100	92.7	0	93.8	0	0	0	0	0	0
9	99.7	100	97.7	99.7	100	97.7	99.7	100	97.7	99.7	0	97.7	0	0	0	0	0	0
10	99.7	100	96.5	99.7	100	96.5	99.7	100	96.5	99.7	0	25.6	0	0	0	0	0	0
11	87.1	84.7	88.1	55.6	52.2	55.6	55.6	52.2	55.6	82.6	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	54.2	54.2	54.2	29.1	26.3	32.2	29.2	26.5	32.4	54.2	19.9	54.2	0	0	0	0	0	0
17	78.1	100	100	78.1	100	100	78.1	100	100	78.1	100	100	0	0	0	0	0	0
18	90.7	92.3	92.2	49	41.9	50.1	49.2	42.8	50.3	51.7	50.1	51.1	0	0	0	29	34.3	34
19	100	97.9	100	100	97.9	100	100	97.9	100	0	0	0	0	0	0	100	97.9	100
20	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	100	100	100
21	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	100	100	100
22	100	99.9	100	100	99.9	100	100	99.9	100	0	0	0	0	0	0	100	99.9	100
23	76.3	74.2	100	76.3	74.2	100	76.3	74.2	100	0	0	0	0	0	0	76.3	74.2	100
24	99.8	97.4	99.7	99.8	97.4	99.7	99.8	97.4	99.7	0	0	0	0	0	0	99.8	97.4	99.7
25	100	94.8	100	67.6	69	75.3	67.8	69.1	75.4	31.4	30.6	30.9	0	0	0	63.9	58.7	63.9
26	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
27	100	99.2	100	100	99.2	100	100	99.2	100	100	99.2	100	0	0	0	0	0	0
28	91.9	47.2	100	91.9	47.2	100	91.9	47.2	100	91.9	47.2	100	0	0	0	0	0	0
29	77.6	72.9	100	77.6	72.9	100	77.6	72.9	100	77.6	72.9	100	0	0	0	0	0	0
30	85	52.4	99.9	85	52.4	99.9	85	52.4	99.9	85	52.4	99.9	0	0	0	0	0	0
Avg	81.3	73.7	82.9	73.4	66.4	75.9	73.5	66.4	76	58.1	19.1	53.5	0	0	0	22.3	22.1	23.3
n	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
SD	33.5	33.9	33.9	35.2	35.4	35.4	35.1	35.3	35.4	44	33.2	45	0	0	0	39.1	38.5	40.4
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	100	100	100

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Table E12. Airflow and emission data completeness (%) at site IA4B for July, 2009.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	100	90.8	100	37.8	36.7	37.8	100	90.8	100	100	90.8	100	0	0	0	0	0	0
2	100	99.9	100	0	0	0	100	99.9	100	98.8	98.4	98.7	0	0	0	0	0	0
3	100	97.6	100	0	0	0	100	97.6	100	100	97.6	100	0	0	0	0	0	0
4	100	93.1	95.7	0	0	0	100	93.1	95.7	100	93.1	95.7	0	0	0	0	0	0
5	100	79	100	0	0	0	100	79	100	100	79	100	0	0	0	0	0	0
6	89.4	89.4	89.4	0	0	0	89.4	89.4	89.4	89.4	89.4	89.4	0	0	0	0	0	0
7	99.9	99.7	99.9	0	0	0	99.9	99.7	99.9	99.9	99.7	99.9	0	0	0	0	0	0
8	100	97.8	96.3	0	0	0	100	97.8	96.3	100	97.8	96.3	0	0	0	0	0	0
9	95.3	92.8	94.9	0	0	0	95.3	92.8	94.9	90.6	88	88.4	0	0	0	0	0	0
10	34.4	98.5	98.4	0	0	0	34.4	98.5	98.4	34.4	98.5	98.4	0	0	0	0	0	0
11	0	98.1	100	0	0	0	0	98.1	100	0	98.1	100	0	0	0	0	0	0
12	0	100	100	0	0	0	0	100	100	0	100	100	0	0	0	0	0	0
13	0	99.9	100	0	0	0	0	99.9	100	0	98.3	97.6	0	0	0	0	0	0
14	0	99.9	99.9	0	0	0	0	99.9	99.9	0	99.9	99.9	0	0	0	0	0	0
15	0	29	29	0	0	0	0	22.2	25.6	0	29	29	0	0	0	0	0	0
16	0	36.4	54	0	0	0	0	23.2	46.4	0	5.8	4.4	0	30.4	48.1	0	0	0
17	0	2.4	100	0	0	0	0	2.4	100	0	0	0	0	2.4	99.4	0	0	0
18	0	48.3	100	0	0	0	0	48.3	100	0	0	0	0	48.3	99.7	0	0	0
19	0	70.1	97.8	0	0	0	0	70.1	97.8	0	0	0	0	70.1	97.8	0	0	0
20	0	99.2	96	0	0	0	0	99.2	96	0	0	0	0	99.2	96	0	0	0
21	0	81.6	99.9	0	0	0	0	81.6	99.4	0	0	0	0	80.3	41.1	0	0	0
22	0	76	100	0	0	0	0	76	100	0	0	0	0	76	100	0	0	0
23	0	99.9	99.8	0	0	0	0	99.9	99.8	0	0	0	0	99.5	99.4	0	0	0
24	0	99.4	100	0	0	0	0	99.4	100	0	0	0	0	98.8	99.3	0	0	0
25	0	84.4	100	0	0	0	0	84.4	100	0	0	0	0	84.4	100	0	0	0
26	0	77.9	100	0	0	0	0	77.9	100	0	0	0	0	77.9	100	0	0	0
27	0	99.9	100	0	0	0	0	99.9	100	0	0	0	0	99.9	100	0	0	0
28	0	94.7	100	0	0	0	0	94.7	100	0	0	0	0	89.6	94.9	0	0	0
29	0	78.1	100	0	0	0	0	78.1	100	0	0	0	0	78.1	100	0	0	0
30	0	83.7	100	0	0	0	0	83.7	100	0	26.1	36.6	0	53.2	59.5	0	0	0
31	0	71.7	100	0	0	0	0	71.7	100	0	71.7	100	0	0	0	0	0	0
Avg	29.6	82.9	95.2	1.2	1.2	1.2	29.6	82.2	94.8	29.5	47.1	49.5	0	35.1	43.1	0	0	0
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	44.4	23.5	14.6	6.7	6.5	6.7	44.4	24.9	15.8	44.1	45.6	47.3	0	40.9	46.6	0	0	0
Min	0	2.4	29	0	0	0	0	2.4	25.6	0	0	0	0	0	0	0	0	0
Max	100	100	100	37.8	36.7	37.8	100	100	100	100	100	100	0	99.9	100	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for August, 2009.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	0	78.3	100	0	0	0	0	78.3	100	0	78.3	100	0	0	0	0	0	0
2	0	82.2	100	0	0	0	0	82.2	100	0	82.2	100	0	0	0	0	0	0
3	67.4	91.5	100	0	0	0	67.4	91.5	100	67.4	91.5	100	0	0	0	0	0	0
4	98.1	89.8	98.1	0	0	0	98.1	89.8	98.1	98.1	89.8	98.1	0	0	0	0	0	0
5	100	74.7	100	0	0	0	100	74.7	100	100	74.7	100	0	0	0	0	0	0
6	94	82.8	94	0	0	0	64.2	57.2	70.4	94	82.2	93.7	0	0	0	0	0	0
7	98.5	94.8	98.4	94	68.8	69.3	98.5	73.5	73.9	98.5	94.8	61.7	0	0	0	0	0	0
8	27.6	100	100	27.6	100	100	27.6	100	100	27.6	100	100	0	0	0	0	0	0
9	0	95.8	99.9	0	95.8	99.9	0	95.8	99.9	0	95.8	99.9	0	0	0	0	0	0
10	0	99.9	100	0	99.9	100	0	99.9	100	0	99.9	100	0	0	0	0	0	0
11	0	92.7	100	0	92.7	100	0	92.7	100	0	92.7	100	0	0	0	0	0	0
12	0	100	100	0	100	100	0	100	100	0	100	100	0	0	0	0	0	0
13	27	99.2	99.2	9	54.2	48.1	9.1	54.3	48.2	27	97.2	96.7	0	0	0	0	0	0
14	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	0	0	0	0	0	0
15	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0
16	0	99.7	100	0	99.7	100	0	99.7	100	0	99.7	100	0	0	0	0	0	0
17	68.5	99.9	100	68.5	99.9	100	68.5	99.9	100	68.5	99.9	100	0	0	0	0	0	0
18	99.7	79	100	99.7	79	100	99.7	79	100	99.7	79	100	0	0	0	0	0	0
19	95.6	91.9	100	95.6	91.9	100	95.6	91.9	100	95.6	91.9	100	0	0	0	0	0	0
20	72.2	33.2	99.7	52.4	33.1	78	52.6	33.1	78.1	68.1	29	95.8	0	0	0	0	0	0
21	47.2	15.8	100	47.2	15.8	100	47.2	15.8	100	47.2	15.8	100	0	0	0	0	0	0
22	81.8	44.2	100	81.8	44.2	100	81.8	44.2	100	81.8	44.2	100	0	0	0	0	0	0
23	91.3	66.1	100	91.3	66.1	100	91.3	66.1	100	91.3	66.1	100	0	0	0	0	0	0
24	92.1	88.7	100	92.1	88.7	100	92.1	88.7	100	92.1	88.7	100	0	0	0	0	0	0
25	98.3	89.4	100	98.3	89.4	100	98.3	89.4	100	98.3	89.4	100	0	0	0	0	0	0
26	100	98	100	100	98	100	100	98	100	100	98	100	0	0	0	0	0	0
27	92.6	28.3	99.3	92.6	6.7	99.3	92.6	6.7	99.3	92.6	28.3	99.3	0	0	0	0	0	0
28	99.6	61.3	99.9	29.4	0	29.4	99.6	14.6	99.9	98.1	59.7	67	0	0	0	0	0	0
29	54	11.8	100	0	0	0	54	11.8	100	54	11.8	100	0	0	0	0	0	0
30	24.6	26.3	99.9	0	0	4.7	13.9	6.3	74.2	24.6	26.3	99.9	0	0	0	0	0	0
31	44.7	34.4	95.8	44.7	34.4	95.8	44.7	34.4	95.8	44.7	34.4	95.8	0	0	0	0	0	0
Avg	60.5	75.8	99.5	42.7	53.5	68.5	57.9	70	94.8	60.3	75.5	97	0	0	0	0	0	0
n	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD	39.8	28.1	1.3	42.7	42.4	43.1	40.2	32	12.1	39.7	28.3	8.7	0	0	0	0	0	0
Min	0	11.8	94	0	0	0	0	6.3	48.2	0	11.8	61.7	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0

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Table E12. Airflow and emission data completeness (%) at site IA4B for September, 2009.

Day	Airflow			Ammonia			Hydrogen sulfide			PM_{10}			$PM_{2.5}$			TSP		
	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9	B1	B2	Far9
1	55.6	41.8	92.2	31.3	23.5	66.5	31.5	23.7	66.6	55.1	41.4	91.7	0	0	0	0	0	0
2	65.5	48.8	87	65.5	19.8	87	65.5	19.8	87	65.5	48.8	87	0	0	0	0	0	0
3	70.5	45.8	88.3	70.5	0	88.3	70.5	0	88.3	70.5	45.8	88.1	0	0	0	0	0	0
4	79.8	60.1	95.8	66.7	0	83.5	66.7	0	83.5	79.8	20.9	95.8	0	0	0	0	0	0
5	0.1	0	0.1	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avg	9.1	6.6	12.1	7.8	1.4	10.8	7.8	1.5	10.8	9	5.2	12.1	0	0	0	0	0	0
n	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
SD	23.3	16.9	30.9	20.7	5.4	27.8	20.7	5.5	27.8	23.2	13.9	30.8	0	0	0	0	0	0
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	79.8	60.1	95.8	70.5	23.5	88.3	70.5	23.7	88.3	79.8	48.8	95.8	0	0	0	0	0	0

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