§ 98.364 Monitoring and QA/QC requirements.

(a) Perform an annual animal inventory or review of facility records (for static populations) or population calculation (for growing populations) to determine the average annual animal population for each animal type (see description in § 98.363(a)(1) and (2)).

(b) Perform an analysis on your operation to determine the fraction of total manure by weight for each animal type that is managed in each on-site manure management system component. If your system changes from previous reporting periods, you must reevaluate the fraction of total manure managed in each system component.

(c) The CH₄ concentration of gas from digesters must be determined using ASTM D1946–90 (Reapproved 2006) Standard Practice for Analysis of Reformed Gas by Gas Chromatography (incorporated by reference see § 98.7). All gas composition monitors shall be calibrated prior to the first reporting year for biogas methane and carbon dioxide content using ASTM D1946–90 (Reapproved 2006) Standard Practice for Analysis of Reformed Gas by Gas Chromatography (incorporated by reference see § 98.7) and recalibrated either annually or at the minimum frequency specified by the manufacturer, whichever is more frequent, or whenever the error in the midrange calibration check exceeds ±10 percent. All monitors shall be maintained as specified by the manufacturer.

(d) All temperature and pressure monitors must be calibrated using the procedures and frequencies specified by the manufacturer. All equipment (temperature and pressure monitors) shall be maintained as specified by the manufacturer.

(e) For digesters with gas collection systems, install, operate, maintain, and calibrate a gas flow meter capable of measuring the volumetric flow rate to provide data for the GHG emissions.
calculations, using the applicable methods specified in paragraphs (e)(1)
through (e)(6) of this section or as specified by the manufacturer.

(1) ASME MFC–3M–2004 Measurement of Fluid Flow in Pipes Using Orifice,
Nozzle, and Venturi (incorporated by reference, see § 98.7).
(2) ASME MFC–4M–1986 (Reaffirmed 1997) Measurement of Gas Flow by Tur-
bine Meters (incorporated by reference, see § 98.7).
Flowmeters (incorporated by reference, see § 98.7).
Means of Critical Flow Venturi Nozzles (incorporated by reference, see § 98.7).
Precision Orifice Meters (incorporated by reference, see § 98.7).
Area Meters (incorporated by reference, see § 98.7).

(f) If applicable, the owner or operator shall document the procedures
used to ensure the accuracy of gas flow rate, gas composition, temperature,
and pressure measurements. These procedures include, but are not limited to,
calibration of fuel flow meters and other measurement devices. The esti-
mated accuracy of measurements made with these devices shall also be re-
corded, and the technical basis for these estimates shall be provided.

(g) Each gas flow meter shall be cali-
brated prior to the first reporting year and recalibrated either annually or at
the minimum frequency specified by the manufacturer, whichever is more
frequent. Each gas flow meter must have a rated accuracy of ±5 percent or
lower and be capable of correcting for the temperature and pressure and, if
the gas composition monitor determines CH₄ concentration on a dry basis, moisture content.

§ 98.365 Procedures for estimating missing data.

(a) A complete record of all measured parameters used in the GHG emissions
calculations is required. Therefore, whenever a quality-assured value of a
required parameter is unavailable (e.g., if a meter malfunctions during unit op-
eration or if a required fuel sample is not taken), a substitute data value for
the missing parameter shall be used in the calculations, according to the re-
quirements in paragraph (b) of this section.

(b) For missing gas flow rates or CH₄ content data, the substitute data value
shall be the arithmetic average of the quality-assured values of that param-
eter immediately preceding and immediately following the missing data inci-
dent. If, for a particular parameter, no quality-assured data are available
prior to the missing data incident, the substitute data value shall be the first
quality-assured value obtained after the missing data period.

§ 98.366 Data reporting requirements.

(a) In addition to the information required by § 98.3(c), each annual report
must contain the following information:

(1) List of manure management system components at the facility.

(2) Fraction of manure from each animal type that is handled in each ma-
nure management system component.

(3) Average annual animal population (for each animal type) for static popu-
lations or the results of Equation JJ–4 for growing populations.

(4) Average number of days that growing animals are kept at the facil-
ity (for each animal type).

(5) The number of animals produced annually for growing populations (for
each animal type).

(6) Typical animal mass (for each animal type).

(7) Total facility emissions (results of Equation JJ–15).

(8) CH₄ emissions from manure management system components listed in
§ 98.360(b), except digesters (results of Equation JJ–2).

(9) VS value used (for each animal type).

(10) B₀ value used (for each animal type).

(11) Methane conversion factor used for each MMS component.

(12) Average ambient temperature used to select each methane conversion
factor.