(iv) Calculate CH_4 emissions from the quantity of CH_4 recovered using Equation HH–8 of § 98.343(c)(3)(ii).

§ 98.464 Monitoring and QA/QC requirements.

(a) For calendar year 2011 monitoring, the facility may submit a request to the Administrator to use one or more best available monitoring methods as listed in § 98.3(d)(1)(i) through (iv). The request must be submitted no later than October 12, 2010 and must contain the information in § 98.3(d)(2)(ii). To obtain approval, the request must demonstrate to the Administrator's satisfaction that it is not reasonably feasible to acquire, install, and operate a required piece of monitoring equipment by January 1, 2011. The use of best available monitoring methods will not be approved beyond December 31, 2011.

(b) For each waste stream for which you choose to determine volatile solids concentration for the purposes of paragraph § 98.460(c)(2)(xii) or choose to determine a landfill-specific DOC_x for use in Equation TT–1 of this subpart, you must collect and test a representative sample of that waste stream using the methods specified in paragraphs (b)(1) through (b)(4) of this section.

(1) Develop and follow a sampling plan to collect a representative sample of each waste stream for which testing is elected.

(2) Determine the percent total solids and the percent volatile solids of each sample following Standard Method 2540G ''Total, Fixed, and Volatile Solids in Solid and Semisolid Samples'' (incorporated by reference; *see* § 98.7).

(3) Calculate the volatile solids concentration (weight percent on a dry basis) using Equation TT–7 of this section.

$$C_{VS} = \frac{\%\ \text{Volatile Solids}}{\%\ \text{Total Solids}} \times 100\% \qquad \text{(Eq. TT-7)}$$

Where:

C_{VS} = Volatile solids concentration in the waste stream (weight percent, dry basis).

% Volatile Solids = Percent volatile solids determined using Standard Method 2540G ''Total, Fixed, and Volatile Solids in Solid and Semisolid Samples'' (incorporated by reference; *see* § 98.7).

% Total Solids = Percent total solids determined using Standard Method 2540G ''Total, Fixed, and Volatile Solids in Solid and Semisolid Samples'' (incorporated by reference; *see* § 98.7).

(4) Calculate the waste stream-specific DOC_x value using Equation TT–8 of this section.

$$DOC_x = F_{DOC} \times \%\ \text{Volatile Solids}_x \qquad \text{(Eq. TT-8)}$$

Where:

DOC_x = Degradable organic content of waste stream in Year X (weight fraction, wet basis)

F_{DOC} = Fraction of the volatile residue that is degradable organic carbon (weight fraction). Use a default value of 0.6.

% Volatile $Solids_x$ = Percent volatile solids determined using Standard Method 2540G Total, ''Fixed, and Volatile Solids in Solid and Semisolid Samples'' (incorporated by reference; *see* § 98.7) for Year X.

(c) For landfills with gas collection systems, operate, maintain, and calibrate a gas composition monitor capable of measuring the concentration of CH_4 according to the requirements specified at § 98.344(b).

(d) For landfills with gas collection systems, install, operate, maintain, and calibrate a gas flow meter capable of measuring the volumetric flow rate of the recovered landfill gas according to the requirements specified at § 98.344(c).

(e) For landfills with gas collection systems, all temperature, pressure, and

if applicable, moisture content monitors must be calibrated using the procedures and frequencies specified by the manufacturer.

(f) The facility shall document the procedures used to ensure the accuracy of the estimates of disposal quantities and, if the industrial waste landfill has a gas collection system, gas flow rate, gas composition, temperature, pressure, and moisture content measurements. These procedures include, but are not limited to, calibration of weighing equipment, fuel flow meters, and other measurement devices. The estimated accuracy of measurements made with these devices shall also be recorded, and the technical basis for these estimates shall be provided.

§ 98.465 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 operation or if a required fuel sample is not taken), a substitute data value for the missing parameter shall be used in the calculations, in accordance with paragraph (b) of this section.

(b) For industrial waste landfills with gas collection systems, follow the procedures for estimating missing data specified in § 98.345(a) and (b).

§ 98.466 Data reporting requirements.

In addition to the information required by § 98.3(c), each annual report must contain the following information for each landfill.

(a) Report the following general landfill information:

(1) A classification of the landfill as ''open'' (actively received waste in the reporting year) or ''closed'' (no longer receiving waste).

(2) The year in which the landfill first started accepting waste for disposal.

(3) The last year the landfill accepted waste (for open landfills, enter the estimated year of landfill closure).

(4) The capacity (in metric tons) of the landfill.

(5) An indication of whether leachate recirculation is used during the reporting year and its typical frequency of use over the past 10 years (*e.g.*, used several times a year for the past 10 years, used at least once a year for the past 10 years, used occasionally but not every year over the past 10 years, not used).

(b) Report the following waste characterization information:

(1) The number of waste steams (including ''Other Industrial Solid Waste (not otherwise listed)'') for which Equation TT–1 of this subpart is used to calculate modeled CH_4 generation.

(2) A description of each waste stream (including the types of materials in each waste stream).

(c) For each waste stream identified in paragraph (b) of this section, report the following information:

(1) The decay rate (k) value used in the calculations.

(2) The method(s) for estimating historical waste disposal quantities and the range of years for which each method applies.

(3) If Equation TT–2 of this subpart is used, provide:

(i) The total number of years (N) for which disposal and production data are both available.

(ii) The year, the waste disposal quantity and production quantity for each year Equation TT–2 of this subpart applies.

(iii) The average waste disposal factor (WDF) calculated for the waste stream.

(4) If Equation TT–4 of this subpart is used, provide:

(i) The value of landfill capacity (LFC).

(ii) YrData.

(iii) YrOpen.

(d) For each year of landfilling starting with the ''Start Year'' (S) to the current reporting year, report the following information:

(1) The quantity of waste (W_x) disposed of in the landfill (metric tons, wet weight) for each waste stream identified in paragraph (b) of this section.

(2) The degradable organic carbon (DOC_x) value (mass fraction) and an indication as to whether this was the default value from Table TT–1 of this subpart or a value determined through sampling and calculation for each