

## § 98.450

unit inside your facility and a CO<sub>2</sub> stream that was injected into a well on another facility, removed from a discontinued enhanced oil or natural gas or other production well, and transferred to your facility.

*Equipment leak* means those emissions that could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening.

*Expected baseline* is the anticipated value of a monitored parameter that is compared to the measured monitored parameter.

*Maximum monitoring area* means the area that must be monitored under this regulation and is defined as equal to or greater than the area expected to contain the free phase CO<sub>2</sub> plume until the CO<sub>2</sub> plume has stabilized plus an all-around buffer zone of at least one-half mile.

*Research and development project* means a project for the purpose of investigating practices, monitoring techniques, or injection verification, or engaging in other applied research, that will enable safe and effective long-term containment of a CO<sub>2</sub> stream in subsurface geologic formations, including research and short duration CO<sub>2</sub> injection tests conducted as a precursor to long-term storage.

*Separator* means a vessel in which streams of multiple phases are gravity separated into individual streams of single phase.

*Surface leakage* means the movement of the injected CO<sub>2</sub> stream from the injection zone to the surface, and into the atmosphere, indoor air, oceans, or surface water.

*Underground Injection Control permit* means a permit issued under the authority of Part C of the Safe Drinking Water Act at 42 U.S.C. 300h *et seq.*

*Underground Injection Control program* means the program responsible for regulating the construction, operation, permitting, and closure of injection wells that place fluids underground for storage or disposal for purposes of protecting underground sources of drinking water from endangerment pursuant to Part C of the Safe Drinking Water Act at 42 U.S.C. 300h *et seq.*

*Vented emissions* means intentional or designed releases of CH<sub>4</sub> or CO<sub>2</sub> containing natural gas or hydrocarbon gas

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(not including stationary combustion flue gas), including process designed flow to the atmosphere through seals or vent pipes, equipment blowdown for maintenance, and direct venting of gas used to power equipment (such as pneumatic devices).

[75 FR 75078, Dec. 1, 2010, as amended at 76 FR 73907, Nov. 29, 2011]

### Subpart SS—Electrical Equipment Manufacture or Refurbishment

SOURCE: 75 FR 74859, Dec. 1, 2010, unless otherwise noted.

#### § 98.450 Definition of the source category.

The electrical equipment manufacturing or refurbishment category consists of processes that manufacture or refurbish gas-insulated substations, circuit breakers, other switchgear, gas-insulated lines, or power transformers (including gas-containing components of such equipment) containing sulfurhexafluoride (SF<sub>6</sub>) or perfluorocarbons (PFCs). The processes include equipment testing, installation, manufacturing, decommissioning and disposal, refurbishing, and storage in gas cylinders and other containers.

#### § 98.451 Reporting threshold.

You must report GHG emissions under this subpart if your facility contains an electrical equipment manufacturing or refurbishing process and the facility meets the requirements of § 98.2(a)(1). Electrical equipment manufacturing and refurbishing facilities covered by this rule are those that have total annual purchases of SF<sub>6</sub> and PFCs that exceed 23,000 pounds.

#### § 98.452 GHGs to report.

(a) You must report SF<sub>6</sub> and PFC emissions at the facility level. Annual emissions from the facility must include SF<sub>6</sub> and PFC emissions from equipment that is installed at an off-site electric power transmission or distribution location whenever emissions from installation activities (e.g., filling) occur before the title to the equipment is transferred to the electric power transmission or distribution entity.

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(b) You must report CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> emissions from each stationary combustion unit. You must calculate and report these emissions under subpart C of this part (General Stationary Fuel Combustion Sources) by following the requirements of subpart C of this part.

**§ 98.453 Calculating GHG emissions.**

(a) For each electrical equipment manufacturer or refurbisher, estimate the annual SF<sub>6</sub> and PFC emissions using the mass-balance approach in Equation SS-1 of this section:

$$\text{User Emissions} = (\text{Decrease in SF}_6 \text{ Inventory}) + (\text{Acquisitions of SF}_6) - (\text{Disbursements of SF}_6) \quad (\text{Eq. SS-1})$$

where:

Decrease in SF<sub>6</sub> Inventory = (Pounds of SF<sub>6</sub> stored in containers at the beginning of the year) – (Pounds of SF<sub>6</sub> stored in containers at the end of the year).

Acquisitions of SF<sub>6</sub> = (Pounds of SF<sub>6</sub> purchased from chemical producers or suppliers in bulk) + (Pounds of SF<sub>6</sub> returned by equipment users) + (Pounds of SF<sub>6</sub> returned to site after off-site recycling).

Disbursements of SF<sub>6</sub> = (Pounds of SF<sub>6</sub> contained in new equipment delivered to customers) + (Pounds of SF<sub>6</sub> delivered to equipment users in containers) + (Pounds of SF<sub>6</sub> returned to suppliers) + (Pounds of SF<sub>6</sub> sent off site for recycling) + (Pounds of SF<sub>6</sub> sent off-site for destruction).

(b) Use the mass-balance method in paragraph (a) of this section to estimate emissions of PFCs associated with the manufacture or refurbishment of power transformers, substituting the relevant PFC(s) for SF<sub>6</sub> in Equation SS-1 of this section.

(c) Estimate the disbursements of SF<sub>6</sub> or PFCs sent to customers in new equipment or cylinders or sent off-site for other purposes including for recycling, for destruction or to be returned to suppliers using Equation SS-2 of this section:

$$D_{GHG} = \sum_{p=1}^n Q_p \quad (\text{Eq. SS-2})$$

$$Q_p = M_B - M_E - E_L \quad (\text{Eq. SS-3})$$

where:

Q<sub>p</sub> = The mass of SF<sub>6</sub> or the PFC charged into equipment or containers over the period p sent to customers or sent off-site for other purposes including for re-

where:

D<sub>GHG</sub> = The annual disbursement of SF<sub>6</sub> or PFCs sent to customers in new equipment or cylinders or sent off-site for other purposes including for recycling, for destruction or to be returned to suppliers.

Q<sub>p</sub> = The mass of the SF<sub>6</sub> or PFCs charged into equipment or containers over the period p sent to customers or sent off-site for other purposes including for recycling, for destruction or to be returned to suppliers.

n = The number of periods in the year.

(d) Estimate the mass of SF<sub>6</sub> or PFCs disbursed to customers in new equipment or cylinders over the period p by monitoring the mass flow of the SF<sub>6</sub> or PFCs into the new equipment or cylinders using a flowmeter, or by weighing containers before and after gas from containers is used to fill equipment or cylinders, or by using the nameplate capacity of the equipment.

(e) If the mass of SF<sub>6</sub> or the PFC disbursed to customers in new equipment or cylinders over the period p is estimated by weighing containers before and after gas from containers is used to fill equipment or cylinders, estimate this quantity using Equation SS-3 of this section:

cycling, for destruction or to be returned to suppliers.

M<sub>B</sub> = The mass of the contents of the containers used to fill equipment or cylinders at the beginning of period p.