(e) Calculate the CO_2 rejection ratio (CO_2RR) from:

$CO_2RR = (ppm\ CO_2)/AR$

§ 86.327–79 Quench checks; NO_X analyzer.

(a) Perform the reaction chamber quench check for each model of high vacuum reaction chamber analyzer prior to initial use.

(b) Perform the reaction chamber quench check for each new analyzer that has an ambient pressure or ''soft vacuum'' reaction chamber prior to initial use. Additionally, perform this check prior to reusing an analyzer of this type any time any repairs could potentially alter any flow rate into the reaction chamber. This includes, but is not limited to, sample capillary, ozone capillary, and if used, dilution capillary.

(c) Quench check as follows:

(1) Calibrate the NO_X analyzer on the lowest range that will be used for testing.

(2) Introduce a mixture of CO_2 calibration gas and NO_X calibration gas to the CL analyzer. Dynamic blending may be used to provide this mixture. Dynamic blending may be accomplished by analyzing the CO_2 in the mixture. The change in the CO_2 value due to blending may then be used to determine the true concentration of the NO_X in the mixture. The CO_2 concentration of the mixture shall be approximately equal to the highest concentration experienced during testing. Record the response.

(3) *Recheck the calibration.* If it has changed more than ±1 percent of full scale, recalibrate and repeat the quench check.

(4) Prior to testing, the difference between the calculated NO_X response and the response of NO_X in the presence of CO_2 (step 2) must not be greater than 3.0 percent of full-scale. The calculated NO_X response is based on the calibration performed in step (1).

(Secs. 206, 301(a), Clean Air Act as amended (42 U.S.C. 7525, 7601(a)))

[42 FR 45154, Sept. 8, 1977, as amended at 44 FR 16917, Mar. 20, 1979]

§ 86.328–79 Leak checks.

(a) *Vacuum side leak check.* (1) Any location within the analysis system where a vacuum leak could affect the test results must be checked.

(2) The maximum allowable leakage rate on the vacuum side is 0.5 percent of the in-use flow rate for the portion of the system being checked. the analyzer flows and bypass flows may be used to estimate the in-use flow rates.

(3) The sample probe and the connection between the sample probe and valve V2 (Figure D79–1) may be excluded from the leak check.

(b) *Pressure side leak check.* (1) The maximum allowable leakage rate on the pressure side in 5 percent of the in-use flow rate.

(2) Option: If the flow rate for each flow meter is equal to or greater than the flow rate recorded in §86.329(b)(1)(ii), then a pressure side leak check is not required.

§ 86.329–79 System response time; check procedure.

(a) Check the system response time by the following procedure:

(1) Stabilize the operating temperature of the sample line, sample pump, and heated filters.

(2) Introduce an HC span gas into the sampling system at the sample probe or valve V2 at atmospheric pressure. Simultaneously, start the time measurement.

(3) When the HC instrument response is 95 percent of the span gas concentration used, stop the time measurement.

(4) If the elapsed time is more than 20.0 seconds, make necessary adjustments.

(5) Repeat with the CO, CO_2, and NO_X instruments and span gases.

(b) *Option.* If the following parameters are determined, the initial system response time may be generally applied to future checks.

(1) *Analyzer and bypass flow rates.* (i) Determine by experimentation the minimum analyzer and bypass flow rates individually and in combination that will produce a response time as close as possible to 20.0 seconds per paragraph (a) of this section.

(ii) Record the highest minimum flow rate for each flow meter as determined in step (i).