deficiencies in the system. For the purpose of this paragraph, at least the following problems shall constitute serious deficiencies in acid plants:

(i) Heat exchangers and associated equipment inadequate to sustain efficient, autothermal operation at the average gas strengths and volumes received by the acid plant during routine process equipment operation;

(ii) Failure to completely fill all available catalyst bed stages with sufficient catalyst;

(iii) Inability of the gas pre-treatment system to prevent unduly frequent plugging or fouling (deterioration) of catalyst or other components of the acid plant; or

(iv) Blower capacity inadequate to permit the treatment of the full volume of gas which the plant could otherwise accommodate, or in-leakage of air into the flues leading to the plant, to the extent that this inadequacy results in bypassing of gas around the plant.

(2) Notwithstanding any contrary provisions of §57.304(c) (malfunction demonstration), no excess emissions (as defined in §57.304(a)) shall be considered to have resulted from a malfunction in the constant control system if the smelter owner has not upgraded serious deficiencies in the constant control system in compliance with the requirements of §57.302(d)(1), unless the smelter owner demonstrates under §57.304(c) that compliance with those requirements would not have affected the magnitude of the emission.

(e) *Multiple control devices.* (1) At any smelter where off-gas streams are treated by various existing control systems (e.g., multiple acid plants or a DMA scrubber and an acid plant), the NSO shall require the use of those systems in the combination that will result in the maximum feasible net SO_2 removal.

(2) To the extent that compliance with this requirement is demonstrated by the smelter operator to result in excess emissions during unavoidable start up and shut down of the control systems, those excess emissions shall not constitute violations of the NSO.

§ 57.303 Total plantwide emission limitation.

(a) *Calculation of the emission limitation.* Each NSO shall contain a requirement limiting the total allowable emissions from the smelter to the level which would have been associated with production at the smelter's maximum production capacity (as defined in §57.103(r)) as of August 7, 1977. This limitation shall be expressed in units of mass per time and shall be calculated as the sum of uncontrolled process and fugitive emissions, and emissions from any control systems (operating at the efficiency prescribed under §57.302). These emission rates may be derived from either direct measurements or appropriately documented mass balance calculations.

(b) *Compliance with the emission limitation.* Each NSO shall require the use of specific, enforceable testing methods and measurement periods for determining compliance with the limitation established under paragraph (a) of this section.

§ 57.304 Bypass, excess emissions and malfunctions.

(a) *Definition of excess emissions.* For the purposes of this subpart, any emissions greater than those permitted by the NSO provisions established under §57.302 (performance level of interim constant controls) or §57.303 (plantwide emission limitation) of this subpart shall constitute excess emissions. Emission of any gas stream identified under §57.301 (a), (b), (c), (d) or (e) of this subpart that is not treated by a sulfur dioxide constant control system shall also constitute an excess emission under this subpart.

(b) *The excess emission report.* Each NSO shall require the smelter to report all excess emissions to the issuing agency, as provided in §57.305(b). The report shall include the following:

(1) Identity of the stack or other emission points where the excess emissions occurred;

(2) Magnitude of the excess emissions expressed in the units of each applicable emission limitation, as well as the operating data, documents, and calculations used in determining the magnitude of the excess emissions;