- The University of North Carolina (UNC) study using an 11,000 cubic-foot (311 m^3) outdoor Teflon chamber, a simulated urban hydrocarbon mix, and 12-hour irradiations (Jeffries et al., 1975)

- The Bureau of Mines study, using a 100 cubic-foot (2.8 m^3) aluminum-glass chamber, auto-exhaust hydrocarbons, and six-hour irradiations (Dimitriades, 1972, 1977)

- The General Motors study, using a 300 cubic-foot (8.5 m^3) stainless steel-glass chamber, a simulated Los Angeles hydrocarbon mix, and six-hour irradiations (Heuss, 1975)

- The Health, Education and Welfare (HEW) study using a 335 cubic-foot (9.5 m^3) chamber, auto-exhaust hydrocarbons, and up to 10-hour irradiation time (Korth et al., 1964).

- The HEW study using a 335 cubic-foot (9.5 m^3) chamber, toluene and m-xylene, and 6-hour irradiations (Altshuller et al., 1970).

Trijonis (1978a, 1978b) has recently reviewed the results of these studies, as summarized in Table V. As indicated in Table V, the various chamber studies basically agree concerning the dependence of maximum NO_2 and average NO_2 on NO_x input. With other factors held constant, maximum NO_2 and average NO_2 tend to be proportional to initial NO_x. The minor deviations away from proportionality that sometimes occur tend to be in the direction of a slightly less than proportional relationship, i.e., a 50% reduction in NO_x input sometimes produces slightly less than a 50% reduction in NO_2.

There is less agreement among the chamber studies concerning the dependence of NO_2 on initial hydrocarbon concentrations. With respect to maximum NO_2, the Bureau of Mines study indicates essentially no dependence on hydrocarbons. However, two other studies suggest that hydrocarbon reductions decrease maximum NO_2 concentrations. The UNC results indicate that 50% hydrocarbon control tends to decrease maximum NO_2 by about 10 to 20%. The General Motors studies imply that 50% hydrocarbon control reduces maximum NO_2 by about 25%.