

Scenario II

This scenario denotes the "best case" effect. It incorporates changes attributable to both technological improvements and environmental pressures. It assumes that short-term fluctuations due to recessions, booms, or labor problems will be averaged out on the long-term basis.

Based on expert analysis, several changes are predicted at the various smelters. Generally, the reductions can be attributed directly to conformity with control orders, process improvements, acid plant construction, and industrial hygiene pressures.

This scenario assumes that any production growth at the various smelters already in existence will be negligible or, if any occurs, process improvements would negate the consequences with respect to emissions. The Texas Gulf smelter is the only one for which capacity increases are forecast, and emissions have been duly increased to account for this.

Based on this analysis, five-year averages of emissions would decrease continuously from recent emission levels (1975-1979) of 2.17 million tonnes to 0.87 million tonnes by the end of the century. This represents an optimistic decrease of 60% without sacrificing production output (see Figure E.2.1 and Table E.2.5).

Scenario III

The third scenario does not provide a projection but rather suggests a figure somewhere within the range established by I and II. It is probably the most likely situation since it accounts for the large amount of uncertainty associated with the other projections.

While Scenario I assumes a pessimistic outlook that technological improvements and pollution control will not occur or at least will not be implemented, Scenario II assumes optimistically that improvements will be implemented at all smelters. Neither situation is highly probable. This is evident on examining past performance with respect to events that should have (theoretically at least) the highest degree of probability of occurrence. One would assume that compliance with control orders would have a high degree of certainty. However, economic situations and political pressures dictate not only changes to the magnitude of the figures involved, but also the time frames originally referenced. Since economic conditions are at best difficult to predict and political pressures, being dependent on expediency, are impossible to forecast, the probability of compliance with any specified time frame or specific emission level is low.