

In other cases, e.g., use of stack test results, and use of general emissions factors such as from AP-42, the size of the safety factor should be based on the uncertainty associated with the method used to estimate the factor. In general, the more actual emissions data collected under conditions similar to that under which the unit is expected to be operated, the smaller the uncertainty. Thus, both the amount of data, and the representativeness of that data should be given consideration in establishing the size of the safety factor. A statistical approach is provided at the end of this guidance document as an example of one method that could be used to establish the safety factor.

How Do I Determine Maximum Capacity?

In most cases, the maximum capacity of a source is based on its physical and operational design. However, there are sources for which inherent physical limitations for the operation restrict the potential emissions of individual emission units. An inherent limitation is defined as “a limitation on emissions that results from unchanging and unavoidable physical constraints on the operation of a business.” This is commonly called a “bottleneck.” A bottleneck is part of the physical design and physically prohibits increased capacity. For example, a paint spray booth at a small auto body shop uses two spray guns to spray paint. The PTE could be calculated assuming that both guns are operated continuously 8,760 hours per year. However, because there are limitations on the number of cars that can actually be painted per day the PTE calculation should take into consideration this bottleneck and adjust the PTE accordingly. Where such inherent limitations can be documented by a source and confirmed by the DEQ, they can be considered in estimates of a source’s PTE.

The EPA, in issuance of various guidance and regulations, has identified several instances where an inherent limitation on PTE should be recognized. They include:

- In guidance issued in 1995 EPA recognized that a “reasonable and realistic worst-case” estimate of hours of required operation for emergency generators could be used to estimate PTE. The “worst-case” is typically considered to be 500 hours.
- In guidance issued in 1995 EPA recognized that country grain elevators are clearly constrained in their operation, to the extent that they are designed to serve, and as a matter of operation only serve a limited geographical area from which a finite amount of grain can be grown and harvested. Moreover, the principal determinant of which given elevator will be used by a farmer is the proximity of the elevator to the harvest. Consequently a single elevator serves essentially the same geographic area from year to year. The EPA believes that this constraint is “inherent” to the operation of the elevator (i. e., operation of the elevator is directly linked to a specific and definable harvest area). The grain handling and storage facilities at grain elevators are designed to handle very large amounts of grain in a relatively short period of time (i.e., at harvest). Although the physical capability exists to handle large amounts of grain throughout the year, such a year-round operation is clearly unachievable as a practical matter and does not occur in reality. Although the amount of grain harvested during any one year will vary somewhat, the EPA believes that an estimable and reasonable upper bound can be determined which would never be exceeded absent extraordinary circumstances.