# Generalized Gaussian Equation for Elevated Release Off Centerline Value

## Figure 13-1: Key to Stability Classes

Table 13-1 KEY TO STABILITY CATEGORIES

| Surface Wind Speed (at 10 m), m/sec | Day | | | Night | |
|---|---|---|---|---|---|
| | Incoming Solar Radiation | | | Thinly Overcast or ≥4/8 Low Cloud | ≤3/8 Cloud |
| | Strong | Moderate | Slight | | |
| 2 | A | A-B | B | | |
| 2-3 | A-B | B | C | E | F |
| 3-5 | B | B-C | C | D | E |
| 5-6 | C | C-D | D | D | D |
| 6 | C | D | D | D | D |

The neutral class, D, should be assumed for overcast conditions during day or night.

Figure 13-1 is used to estimate stability class, and displays the following information:

| **Surface Wind Conditions at 10 m (m/sec)** | **Daytime Conditions (insolation)** | | | **Night Conditions (cloudiness)** | |
|---|---|---|---|---|---|
| | **Strong** | **Moderate** | **Slight** | **Thin or ≥4/8** | **≤3/8** |
| <2 | A | A-B | B | | |
| 2 to 3 | A-B | B | C | E | F |
| 3 to 5 | B | B-C | C | D | E |
| 5 to 6 | C | C-D | D | D | D |
| >6 | C | D | D | D | D |
| *The neutral class, D, should be assumed for overcast conditions during day or night.* | | | | | |

## Figure 13-2: Horizontal Dispersion Coefficient as a Function of Downwind Distance from the Source

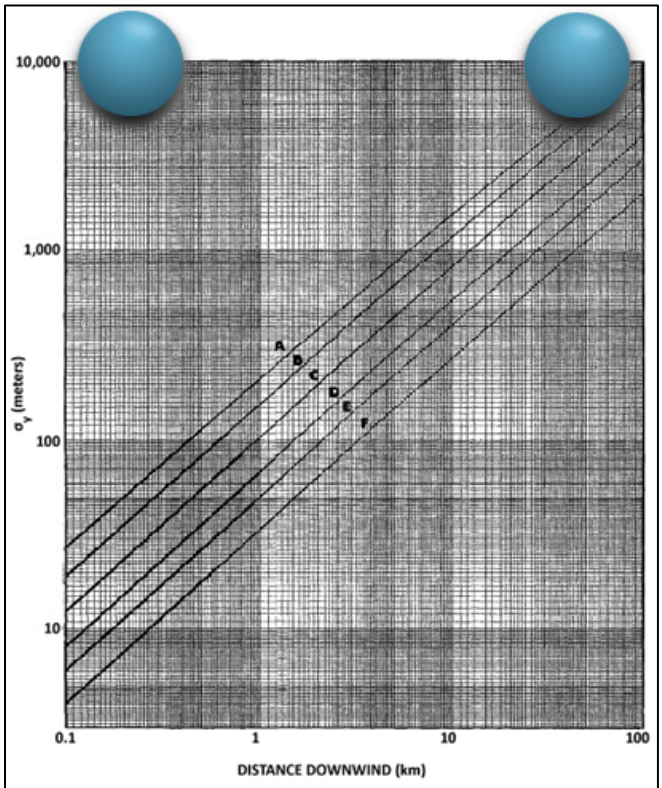


Figure 13-2. Horizontal dispersion coefficient as a function of downwind distance from the source.

This table is used to estimate sigma sub y. The log log graph is read along the bottom out to a desired distance (in km) up to the appropriate stability class line, then left to the sigma sub y value in meters.

## Figure 13-3: Vertical Dispersion Coefficient as a Function of Downwind Distance from the Source

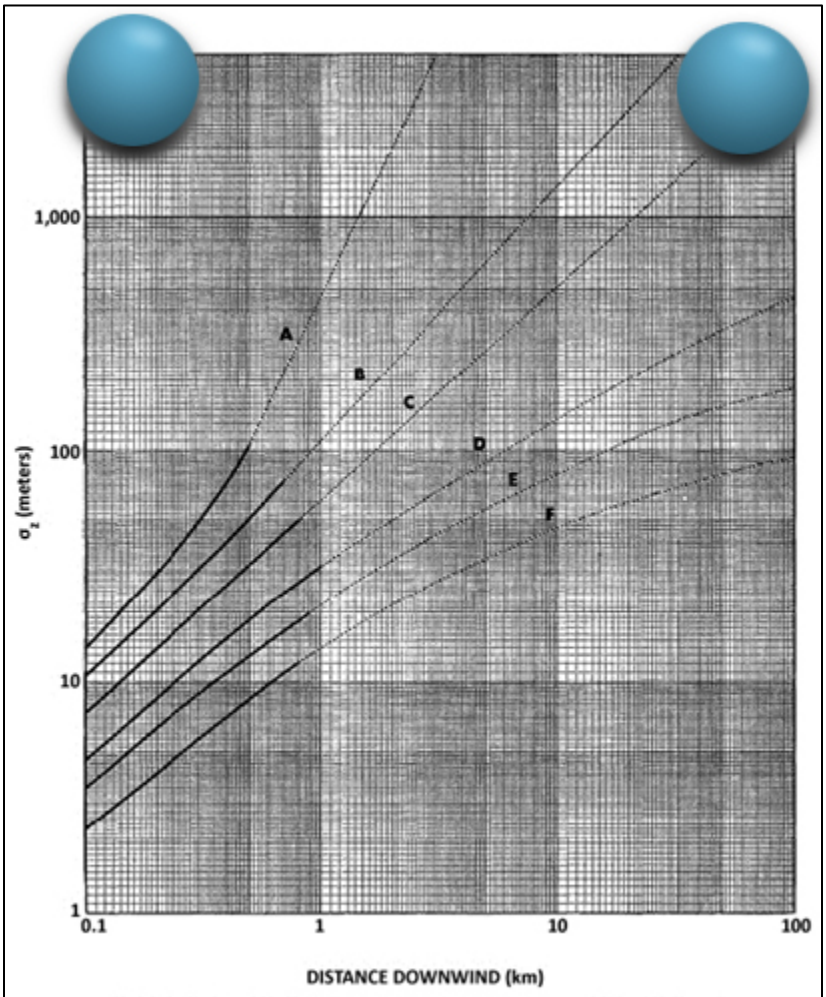


Figure 13-3. Vertical dispersion coefficient as a function of downwind distance from the source.

This table is used to estimate sigma sub z. The log log graph is read along the bottom out to a desired distance (in km) up to the appropriate stability class line, then left to the sigma sub z value in meters.