

1) DD, where: $\theta = 0.5[1 + \exp(-\alpha_1 d)]$

$$\alpha_1 = 0.005, 0.05, 0.1, 1, 2, 10$$

2) PDD, where: $\theta = 0.5[1 + \exp\{(\alpha_2 \log(d)) - (\alpha_1 d)\}]$

$$\alpha_1 = 0.005, 0.05, 0.1, 1, 2, 10$$

$$\alpha_2 = 0.05, 0.1, 0.5, 1$$

3) DIR, where: $\theta = 0.5\left[1 + \exp\left\{(\alpha_3 \cos(\phi - \mu)) + (\alpha_4 \sin(\phi - \mu))\right\}\right]$

where the pollution source is arbitrarily selected to emit a contaminant in the

direction of the mean angle $\mu = \frac{\pi}{4}$ and where ϕ = the angle of the centroid

from the pollution source,

$$\alpha_3 = 0.05, 0.1, 0.2, 0.5, 1, 2$$

$$\alpha_4 = 0.05, 0.1, 0.2, 0.5, 1, 2$$

4) DDIR, where: $\theta = 0.5\left[1 + \exp\left\{(\alpha_3 \cos(\phi - \mu)) + (\alpha_4 \sin(\phi - \mu)) - (\alpha_1 d)\right\}\right]$

$$\alpha_1 = 0.005, 0.05, 0.1, 1, 2, 10$$

$$\alpha_3 = 0.05, 0.1, 0.2, 0.5, 1, 2$$

$$\alpha_4 = 0.05, 0.1, 0.2, 0.5, 1, 2$$

5) PDDIR, where:

$$\theta = 0.5\left[1 + \exp\left\{(\alpha_3 \cos(\phi - \mu)) + (\alpha_4 \sin(\phi - \mu)) + (\alpha_2 \log(d)) - (\alpha_1 d)\right\}\right]$$

$$\alpha_1 = 0.005, 0.05, 0.1, 1, 2, 10$$

$$\alpha_2 = 0.05, 0.1, 0.5, 1$$

$$\alpha_3 = 0.05, 0.1, 0.2, 0.5, 1, 2$$

$$\alpha_4 = 0.05, 0.1, 0.2, 0.5, 1, 2$$