

Table 5.3e
Annual Average Concentrations of RSP (μgm^{-3})

| AQMS | 1997 | Increment | Total |
|-----------------|------|-----------|-------|
| Central/Western | 51 | 4.1 | 55.1 |
| Mong Kok | 60 | 8.3 | 68.3 |
| Sha Tin | 49 | 7.8 | 56.8 |
| Yuen Long | 58 | 8.5 | 66.5 |
| Tsuen Wan | 54 | 2.3 | 56.3 |
| Kwai Chung | 46 | 4.9 | 51.9 |
| Sham Shui Po | 57 | 5.5 | 62.5 |
| Kwun Tong | 56 | 5.0 | 63.0 |
| Tai Po | 59 | 1.5 | 60.5 |

Under the worst case conditions simulated in this scenario, the total number of AQMS deemed to be out of compliance with the annual average AQO for RSP will increase to eight, from the five stations observed to be out of compliance in 1997. Concentrations are predicted to increase at all of the AQMS. At Yuen Long and Mong Kok, the annual average is anticipated to increase by 15% to approximately 67 and 68 μgm^{-3} (20 and 24% higher than the AQO) respectively.

Figure 5.3b shows the predicted changes in RSP levels on a territory-wide basis. Increases of about 7.5 μgm^{-3} are predicted in the Mong Kok, Tuen Mun and Yuen Long areas. In most of the western part of the SAR, concentrations are predicted to increase by between 2.5 and 7.5 μgm^{-3} . As predicted for nitrogen dioxide, decreases in the predicted concentrations are anticipated in the southern most tip of the Kowloon Peninsula. Concentrations are also predicted to decline in the Wan Chai and Causeway Bay areas on Hong Kong Island. The reduction in the Wan Chai and Causeway Bay areas should be interpreted with caution as the results do not reflect the air quality at street level.

Daily Average Concentrations of Nitrogen Dioxide and RSP

Table 5.3f presents the changes in the daily average concentrations of nitrogen dioxide and RSP predicted to occur under conditions typical of a photochemical smog episode in the SAR. As episodes of photochemical smog are all slightly different from each other and attributable to slightly different factors, the results presented in this analysis should not be taken as being applicable to all episodes. The table also shows the threshold concentration for observations in 1997. The threshold concentration is used to estimate the number of exceedances of the AQO anticipated in 2016. For example, at the Central/Western AQMS, an increase of 18.8 μgm^{-3} is predicted in 2016 for nitrogen dioxide. In order to result in a exceedance of the AQO, the concentration reported in 1997 would therefore have to be greater than 131.2 μgm^{-3} . The database is therefore searched to identify the number of days in 1997 on which the daily average concentration was in excess of 131.2 μgm^{-3} and this statistic is used as the basis for estimating the number of exceedances.