

Table 5.3p
Changes in Daily Average Concentrations (μgm^{-3})
under Typical Photochemical Smog Conditions

AQMS	Nitrogen dioxide	Threshold	RSP	Threshold
Central/Western	12.9	137.1	3.9	176.1
Mong Kok	0.7	149.3	7.1	172.9
Sha Tin	-1.0	151.0	4.9	175.1
Yuen Long	-0.7	150.7	1.0	179.0
Tsuen Wan	-1.5	151.5	1.5	178.5
Kwai Chung	-1.6	151.6	4.2	175.8
Sham Shui Po	0.4	149.6	3.9	176.1
Kwun Tong	1.1	148.9	6.3	173.7
Tai Po	-1.0	151.0	1.5	178.5

As presented in Table 5.3a, in 1997 the AQMS at Kwun Tong, Mong Kok and Sham Shui Po all reported non-compliances for nitrogen dioxide (greater than $150 \mu\text{gm}^{-3}$). The predictions indicate that concentrations at these stations would all be likely to increase under photochemical smog conditions, relative to levels reported in 1997. Analysis of the complete set of AQMS data for 1997 indicates that the number of exceedances reported at Mong Kok is expected to remain at six per annum, an indication that this station will remain out of compliance with the AQO. At the Sham Shui Po AQMS, three exceedances of the AQO are anticipated, the same as reported in 1997. An additional exceedance is predicted at the Kwun Tong AQMS relative to 1997. The largest increases are predicted to arise at the Central/Western AQMS which was in compliance with the standard in 1997. The threshold for Central/Western is in excess of the maximum reported concentration for this AQMS in 1997 and hence it is anticipated that there is a low probability that exceedances would be reported, even though concentrations could increase by approximately 10%.

Figure 5.3o presents the predicted territory-wide changes in nitrogen dioxide concentrations during a photochemical smog event. Increases in the daily average concentration are predicted to arise in the Western Harbour / West Kowloon, North and East Shore of Hong Kong Island and East Lamma Channel. The most significant increase of between 5 and $7.5 \mu\text{gm}^{-3}$ are predicted in these areas. Nitrogen dioxide levels in the majority of the New Territories are predicted to decrease by up to $5 \mu\text{gm}^{-3}$.

Exceedances of the daily average AQO for RSP ($180 \mu\text{gm}^{-3}$) were reported for the Kwun Tong and Sha Tin AQMS in 1997 and under photochemical smog conditions, levels of RSP at these two locations are anticipated to change by 6.3 and $4.9 \mu\text{gm}^{-3}$ respectively. Two exceedances of the AQO are predicted at Mong Kok AQMS which renders this station non-compliant. The most significant increases in concentration are predicted to occur at the Mong Kok and Kwun Tong AQMS.

Figure 5.3p presents the predicted changes in RSP levels across the SAR. RSP concentrations in the Tuen Mun, Tai Po, Sha Tin, Tsuen Wan and most of Kowloon