

**Table 3.1g**  
**Summary of Reported Concentrations and Trends of Ozone**

AQMS	Maximum 1-hr Concentration ( $\mu\text{g}\text{m}^{-3}$ )	Number of Exceedances of Maximum 1-hr AQO ( $\mu\text{g}\text{m}^{-3}$ ) <sup>(a)</sup>	Annual Average Concentration ( $\mu\text{g}\text{m}^{-3}$ )	
			1996	1997
Sha Tin <sup>(b)</sup>	270 <sup>(a)</sup>	3	-	22
Kwun Tong <sup>(b)</sup>	128	0	-	17
Yuen Long	231	0	20	24
Central/Western	243 <sup>(a)</sup>	1	29	27
Tai Po <sup>(c)</sup>	116	0	-	28
Tsuen Wan <sup>(c)</sup>	90	0	-	22
Kwai Chung	224	0	34	33

**Notes:**  
 (a) Concentrations in excess of  $240 \mu\text{g}\text{m}^{-3}$   
 (b) Data from June to December 1997  
 (c) Data from November to December 1997

### 3.1.7 Discussion

#### Nitrogen Dioxide

Nitrogen dioxide concentrations are widely acknowledged to be strongly influenced by emissions of oxides of nitrogen ( $\text{NO}_x$ ) from road vehicles and an estimate for Hong Kong indicates that in the order of 25% of all  $\text{NO}_x$  emissions are derived from this source. Oxidation of nitric oxide is the principal mechanism for  $\text{NO}_2$  formation and peaks in  $\text{NO}_2$  are identified during days conducive to photochemical smog formation.

Vehicle emissions have a marked effect on  $\text{NO}_2$  levels in areas directly adjacent to roads and roadside concentrations have been monitored intermittently as part of the Saturation Monitoring Project (SMP) and on a regular basis at the Mong Kok AQMS. Monthly average concentrations observed in the December 1996 monitoring campaign of the SMP, ranged from 60 to  $245 \mu\text{g}\text{m}^{-3}$ . Levels considered to be "High" were reported at several sites in Kowloon, Hong Kong Island and the Northwest New Territories. Data from the Mong Kok AQMS showed this location to be out of compliance with the limits in the *APCO*, with breaches of the hourly, daily and annual average AQOs reported. This is considered indicative of a general deterioration in air quality at this location.

The situation at roadside monitoring stations is contrasted by that reported at the other stations in the EPD monitoring network. All of these stations were deemed compliant with the *APCO*. Although levels reported at these stations will be influenced by vehicle emissions generated both locally and further afield, their position means that they are not subject to the direct effects of local emissions which would undergo significant dispersion before being measured.

Figure 3.1i presents a comparison between concentrations presented in the latest EPD