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for information

AIR QUALITY OF HONG KONG

INTRODUCTION

This paper introduces the report "1995 Air Quality in Hong Kong" and provides a preview of the validated air quality data in 1996.

AIR QUALITY OF HONG KONG IN 1995

2. The air quality information of Hong Kong in 1995 was previously presented to Members in the meeting of June 1996. The printed report "1995 Air Quality in Hong Kong" is attached in Appendix 1 for Members' retention and reference.

3. To recapitulate, the high levels of particulates and nitrogen dioxide were the focus of concern in 1995. Seven out of the eight monitoring stations recorded annual averages of total suspended particulates higher than the air quality objective value of 80 microgrammes per cubic metre ($\mu\text{g}/\text{m}^3$). The level of the respirable fraction, which is of more concern in terms of health effects, was also very high. The air quality objective value of 55 $\mu\text{g}/\text{m}^3$ was violated at six stations. As for nitrogen dioxide, the air quality objectives were infringed at Mong Kok. Like respirable suspended particulates, motor vehicles, especially the diesel vehicles, are the major sources at busy urban areas.

AIR QUALITY OF HONG KONG IN 1996

4. The validation of the air quality monitoring data of 1996 has already been completed. However, it would need a little while before the "1996 Air Quality in Hong Kong" is printed. To facilitate Members a quick reference of the updated air quality data, a summary of the air quality measurement results of 1996 and the preprinted "1996 Air Quality in Hong Kong" are presented in the Appendix 2.

5. Similar to 1995, suspended particulates and nitrogen dioxide remain to be high in 1996. The annual levels of total suspended particulates, respirable suspended particulates and nitrogen dioxide were ranged from 73 $\mu\text{g}/\text{m}^3$ to 135 $\mu\text{g}/\text{m}^3$, 50 $\mu\text{g}/\text{m}^3$ to 75 $\mu\text{g}/\text{m}^3$ and 42 $\mu\text{g}/\text{m}^3$ to 84 $\mu\text{g}/\text{m}^3$, respectively. Six stations recorded at least one violation of the relevant air quality objectives.

6. Accumulation and photochemical oxidation of air pollutants emitted from vehicles led to more breaches of the short-term air quality objectives in 1996. The hourly objective of 240 $\mu\text{g}/\text{m}^3$ for ozone was violated for four and five times at Kwai Chung and Central/Western respectively. For nitrogen dioxide, the 24-hourly objective of 150 $\mu\text{g}/\text{m}^3$ was violated two and three times at Sham Shui Po and Mong Kok respectively.

CD-ROM ON AIR QUALITY OF HONG KONG

7. To further enhance the distribution of information on air pollution and its control, the EPD has prepared a CD-ROM entitled "Air Quality in Hong Kong 1986-1995". This CD-ROM, which has been distributed to Members for information in April 1997, aims to provide a simple and yet comprehensive source of information on Hong Kong's air quality to both the general public and advanced users. An update to provide the 1996 data is now under preparation and should be released by November 1997.

Environmental Protection Department
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APPENDIX 2

A. SUMMARY OF AIR QUALITY OF HONG KONG IN 1996

All concentrations are in microgrammes per cubic metre ($\mu\text{g}/\text{m}^3$)

1. Gaseous Air Pollutants

(a) Sulphur dioxide

<u>Monitoring Station</u>	<u>Maximum 1-h Concentration</u>	<u>Maximum 24-h Concentration</u>	<u>Annual Concentration</u>
Kwun Tong	234	99	19
Sha Tin	332	148	13
Yuen Long	275	95	18
Sham Shui Po	215	97	18
Central/Western	242	74	15
Tsuen Wan	284	95	22
Kwai Chung	218	85	21
Mong Kok	237	122	30

(Note: Air Quality Objectives: 1-h: $800 \mu\text{g}/\text{m}^3$
24-h: $350 \mu\text{g}/\text{m}^3$
1-y $80 \mu\text{g}/\text{m}^3$)

(b) Nitrogen dioxide

<u>Monitoring Station</u>	<u>Maximum 1-h Concentration</u>	<u>Maximum 24-h Concentration</u>	<u>Annual Concentration</u>
Kwun Tong	251	152	65
Sha Tin	222	117	45
Tai Po	187	111	44
Yuen Long	229	153	52
Sham Shui Po	327	168	62
Central/Western	213	127	47
Tsuen Wan	303	139	59
Kwai Chung	333	135	44
Mong Kok	310	172	75

(Note: Air Quality Objectives: 1-h: $300 \mu\text{g}/\text{m}^3$
24-h: $150 \mu\text{g}/\text{m}^3$
1-y $80 \mu\text{g}/\text{m}^3$)

(c) **Ozone**

<u>Monitoring Station</u>	<u>Maximum 1-h Concentration</u>
Yuen Long	268
Central/Western	314
Kwai Chung	299

(Note: Air Quality Objectives: 1-h: 240 $\mu\text{g}/\text{m}^3$)

(c) **Carbon monoxide**

<u>Monitoring Station</u>	<u>Maximum 1-h Concentration</u>	<u>Maximum 8-h Concentration</u>
Kwai Chung	7610	1600
Mong Kok	4240	3240

(Note: Air Quality Objectives: 1-h: 30000 $\mu\text{g}/\text{m}^3$
8-h: 10000 $\mu\text{g}/\text{m}^3$)

2. **Particulate Matters**

(a) **Total suspended particulates**

<u>Monitoring Station</u>	<u>Maximum 24-h Concentration</u>	<u>Annual Concentration</u>
Kwun Tong	202	99
Sha Tin	178	69
Tai Po	178	77
Yuen Long	262	114
Sham Shui Po	224	101
Central/Western	196	87
Tsuen Wan	194	85
Kwai Chung	171	75
Mong Kok	290	142

(Note: Air Quality Objectives: 24-h: 240 $\mu\text{g}/\text{m}^3$
1-y 80 $\mu\text{g}/\text{m}^3$)

(b) Respirable suspended particulates

<u>Monitoring Station</u>	<u>Maximum 24-h Concentration</u>	<u>Annual Concentration</u>
Kwun Tong	108	59
Sha Tin	124	46
Tai Po	124	52
Yuen Long	152	64
Sham Shui Po	125	59
Central/Western	124	52
Tsuen Wan	132	53
Kwai Chung	100	48
Mong Kok	156	77

(Note: Air Quality Objectives: 24-h: $180 \mu\text{g}/\text{m}^3$
1-y $55 \mu\text{g}/\text{m}^3$)

B. PRE-PRINTED REPORT "1996 AIR QUALITY IN HONG KONG"

(Attached)