ACQWS Paper No. 4
Publication of Water Quality Data

Preamble

Members considered Paper No. 2 at the first meeting of this Advisory Committee on 26.4.2000 and agreed to the release of water quality data of both Dongjiang raw water and treated water through the Internet and also a hardcopy pamphlet to be sent with water bills to customers.

Data Release on the Internet

2. Appendices I and II contain the proposed Internet format of the data to be released in which raw Dongjiang water quality as monitored at Muk Wu Pumping Station (App. I) and treated water in Hong Kong (App. II) are tabulated.

Dongjiang Water Quality

3. The water supply agreement between the Guangdong and Hong Kong authorities made in December 1989 states that all water supplied to Hong Kong will not be inferior to Class II water quality standard stipulated in the Environmental Quality Standard for Surface Water GB3838-83 published by the People's Republic of China in 1983.

4. The special loan agreement between the Guangdong and Hong Kong authorities made in July 1998 for construction of the closed aqueduct states that on completion of the closed aqueduct in 2003 the Guangdong authority will strive to elevate the water quality to Type II water quality standard as stipulated in the Environmental Quality Standard for Surface Water GB3838-88 published by the People's Republic of China in 1988.

5. Part (A) of App. I shows a comparison of the quality of Dongjiang water as received at Muk Wu Pumping Station in year 1999/2000 with the

GB3838-83 parameters. Comparison with requirements of GB3838-88 is also shown on the same page to give more information. Broadly speaking, Dongjiang water quality does not fully comply with the GB3838-83 and 88 standards, primarily in two parameters i.e. dissolved oxygen and BOD_5. Raw water not complying with these two standards can be adequately handled by our treatment works.

6. In Parts (B) and (C) of App. I, a comparison of the Dongjiang water quality with WHO's Guidelines for Drinking-water Quality, which strictly speaking should be applied to treated water only, is tabulated for reference. As can be seen, where heavy metals, pesticides and other chemical parameters of health significance are concerned, Dongjiang water as received at Muk Wu is practically up to treated water standards!

7. Though non-compliance of the two parameters, i.e. dissolved oxygen and biochemical oxygen demand (BOD_5), indicates the presence of pollution by wastewater, such non-compliance does not have any health implication in the treated water as raw water is fully oxygenated and BOD_5 is reduced to below detection limit during the water treatment process. Only treated water is supplied to people in Hong Kong.

Treated Water Quality

8. WSD adopts WHO's Guidelines for Drinking-water Quality (1993) as standards for treated water. On the basis of treated water quality monitoring data in 1999/2000, Hong Kong's drinking water complies with the WHO guidelines as indicated in Parts (A) and (B) of App. II.

9. In addition to the bacteriological quality detailed in Part (A), and the health related chemical parameters listed in Part (B), a third table showing quality parameters which give a good indication of the characteristics of the

supply and which are commonly requested by the public will be released as Part (C) of the appendix.

Frequency of Release of Internet Data

10. As the monitoring data of the raw and treated water show that there is only minimal variations in the values of various chemical parameters of health significance and bacteriological quality of the treated water, and that the most important quality parameters are consistently satisfactory throughout the year, it is proposed to publish water quality data on the Internet on an annual basis to save resources in the compilation of statistics, validation, editing and checking.

Pamphlet on Water Quality

11. With a release of detailed numerical water quality monitoring data on the Internet, there is now less need for release of detailed numerical data in the pamphlet for sending annually to customers. An overall compliance indicator of the wellness of the quality of our drinking water will probably suffice. In addition, general information on topics such as sources of water, treatment processes, the water quality monitoring and quality control, WHO guidelines for Drinking Water, etc. will be of interest to customers. The Water Supplies Department is working on the design of such a pamphlet with a view to releasing it by October/November this year.

Water Supplies Department
June 2000

Quality of Dongjiang Water for the Period 04/1999 - 03/2000
as Monitored at Muk Wu Pumping Station

According to the agreement drawn up between the Guangdong Authorities and Hong Kong Government, all water supplied to Hong Kong shall not be inferior to the Class II water quality standard stipulated in the Environmental Quality Standard for Surface Water GB 3838-83 published by the People's Republic of China in 1983. GB3838-83 has been superseded by GB3838-88. WHO Guidelines for Drinking-water Quality1993 is provided for **reference purpose only**. WHO Guidelines are applicable to treated water only. Dongjiang water is untreated raw water.

Part A. Comparison with GB3838-88 Type II and GB3838-83 Class II

No.	Parameters	Unit	GB3838-83 Class II Standard Value	Compliance with GB3838-83 Class II	Monitoring Data			GB3838- 88 Type II Standard Value	Compliance with GB3838-88 Type II
					Average	m	m		
1	pH	pH	6.5 - 8.5	✓	6.9	6.5	7.4	6.5 - 8.5	✓
2	Temperature	°C	increase ≤ 3 °C after heat absorption summer maximum < 35 °C	✓	24	14	31	- summer weekly average increase due to human factors ≤ 1 °C - winter weekly average decrease due to human factors ≤ 2 °C	
	Visible substances		no foam, no oil film,	(Note 2)	5.8 (Note 2)	2.2 (Note 2)	59.0 (Note 2)	Note 8	(Note 2)
3	Colour	Hazen	≤ 15	✓	9	<5	25	Note 8	
4	Odour	TON	1		No objectionable odour			Note 8	✓
5	Dissolved oxygen	mg/L	≥ 6	✗	4.5	0.6	10.7	≥ 6	✗
6	Biochemical oxygen demand	mg/L	≤ 3	✗	6	2	10	≤ 3	✗
7	Permanganate value	mg/L	≤ 4	✓	1.14	0.73	1.58	≤ 4	✓
8	Volatile phenols	mg/L	≤ 0.005	(Note 3)				≤ 0.002 (Note 9)	(Note 3)
9	Total Cyanide	mg/L	≤ 0.05	✓	<0.01	<0.01	<0.01	≤ 0.05 (fishery 0.005)	✓
10	Total Arsenic	mg/L	≤ 0.04	✓	0.0015	0.0011	0.0018	≤ 0.05	✓
11	Total mercury	mg/L	≤ 0.0005	✓	<0.00005	<0.00005	<0.00005	≤ 0.00005 (Note 9)	✓
12	Total Cadmium	mg/L	≤ 0.005	✓	<0.0001	<0.0001	0.00018	≤ 0.005 (Note 10)	✓
13	Chromium (VI)	mg/L	≤ 0.02	(Note 4 & 5)	< 0.04 (Note 4)	< 0.04 (Note 4)	< 0.04 (Note 4)	≤ 0.05	✓
14	Total Lead	mg/L	≤ 0.05	✓	<0.001	<0.001	<0.001	≤ 0.05 (Note 9)	✓
15	Total Copper	mg/L	≤ 0.01	(Note 5)	<0.09	<0.09	0.11	≤ 1.0 (fishery 0.01)(Note	✓
16	Petroleum hydrocarbons	mg/L	≤ 0.3	(Note 6)				≤ 0.05 (Note 9)	(Note 6)
17	Total coliform	no./L	≤ 10000	✓	3700	200	22000		
18	Total phosphorus (as P)	mg/L	(lake 0.1) (Note 1)	(Note 1)	0.183	0.078	0.326	≤ 0.1 (lake 0.025)	✗
19	Total nitrogen	mg/L	(lake 1.0) (Note 1)	(Note 1)	4.41	1.66	8.62		
20	Sulphate (as SO_4^{2-})	mg/L			16	10	24	≤ 250 (Note 11)	✓
21	Chloride (as Cl^-)	mg/L			16	12	20	≤ 250 (Note 11)	✓
22	Soluble iron	mg/L			0.12	0.04	0.29	≤ 0.3 (Note 11)	✓
23	Total manganese	mg/L			0.13	0.03	0.56	≤ 0.1 (Note 11)	✗
24	Total zinc	mg/L			0.035	0.013	0.059	≤ 1.0 (fishery 0.1) (Note	✓
25	Nitrate (as N)	mg/L			3.20	0.91	6.60	≤ 10	✓
26	Nitrite (as N)	mg/L			0.356	0.072	0.757	≤ 0.1	✗

27	Nonionic ammonia	mg/L						≤ 0.02	
28	Kjeldahl nitrogen	mg/L						≤ 0.5	
29	Fluoride (as F^-)	mg/L			0.45	0.30	0.73	≤ 1.0	✓
30	Selenium (IV)	mg/L			<0.001 (Note 7)	<0.001 (Note 7)	<0.001 (Note 7)	≤ 0.01	✓
31	Anionic surfactants	mg/L						≤ 0.2	
32	Benzo[a]pyrene	mg/L			<0.00018	<0.00018	<0.00018	≤ 2.5×10^{-6} (Note 10)	(Note 5)

Note

1. Reference standards specified in GB3838-83 apply to enclosed water bodies e.g. lake, reservoir to prevent eutrophication, and therefore are not applicable to river water quality.

2. WSD monitors turbidity of raw water instead of visible susbtances.

3. WSD routinely monitors individual phenols.

4. Analytical results for total chromium.

5. All values are compiled in accordance with requirements stipulated by the current quality assurance protocol of the Water Science Division of WSD. Such protocol and instrument capabilities of WSD cannot permit reporting values to the level specified in the standard. Therefore comparison is not possible.

6. WSD routinely monitors individual hydrocarbons.

7. Analytical results for total selenium.

causes:

a. no objectionable sediments;

b. no objectionable floating debris, scum, oil;

c. no objectionable colour, odour, taste, turbidity;

d. no substances harmful or poisonous to man, animal or plant;

e. no substance supporting objectionable aquatic growths.

9. Lowest detection limits of specified analytical methods cannot reach levels required by the standards.

10. Tentative.

11. Parameter that may be adjusted according to local background characteristics of the water.

12. ≥ greater than or equal to

13. ≤ smaller than or equal to

14. < smaller than

15. Cells for those parameters which have no standard values/have no units/have not been monitored by WSD are left blank.

16. ✓ - annual averages comply with standards

17. ✗ - annual averages not comply with standards

Quality of Dongjiang Water for the Period 04/1999 - 03/2000
as Monitored at Muk Wu Pumping Station

Part B. Bacteriological quality

Parameter	Unit	Dongjiang RAW Water Monitoring Data			WHO Guideline Value for Drinking Water (FOR REFERENCE
		Average	Minimum	Maximum	
Total coliform	no. per 100 mL	370	20	2200	0
E. coli	no. per 100 mL	165	0	680	0

Note:

GB 3838-83 Class II specifies a total Coliforms standard of 10,000/litre, equivalent to 1,000/10(
GB 3838-88 Type II does not specify a total Coliforms standard.

Quality of Dongjiang Water for the Period 04/1999 - 03/2000
as Monitored at Muk Wu Pumping Station

Part C. Chemicals of health significance described by World Health Organization Guidelines for Drinking-Water Quality 1993

Parameter	Unit	Dongjiang RAW Water Monitoring Data			WHO Guideline Value for DRINKING Water (FOR REFERENCE ONLY)
		Average	Minimum	Maximu	
Antimony	mg/L	<0.001	<0.001	<0.001	0.005 (P)
Arsenic	mg/L	0.0015	0.0011	0.0018	0.01 (P)
Barium	mg/L	0.029	0.018	0.041	0.7
Boron	mg/L	<0.07	<0.07	<0.07	0.3
Cadmium	mg/L	<0.0001	<0.0001	0.00018	0.003
Chromium	mg/L	<0.04	<0.04	<0.04	0.05 (P)
Copper	mg/L	<0.09	<0.09	0.11	2 (P)
Cyanide	mg/L	<0.01	<0.01	<0.01	0.07
Fluoride	mg/L	0.45	0.30	0.73	1.5
Lead	mg/L	<0.001	<0.001	<0.001	0.01
Manganese	mg/L	0.13	0.03	0.56	0.5 (P)
Mercury (total)	mg/L	<0.00005	<0.00005	<0.00005	0.001
Molybdenum	mg/L	<0.02	<0.02	<0.02	0.07
Nickel	mg/L	0.020	<0.01	0.029	0.02
Nitrate (as NO_3^-)	mg/L	14.15	4.03	29.23	50
Nitrite (as NO_2^-)	mg/L	1.169	0.237	2.487	3 (P)
Selenium	mg/L	<0.001	<0.001	<0.001	0.01
Carbon tetrachloride	µg/L	<0.50	<0.50	<0.50	2
Dichloromethane	µg/L	<5.0	<5.0	<5.0	20
1,2-Dichloroethane	µg/L	<7.5	<7.5	<7.5	30
1,1,1-Trichloroethane	µg/L	<500	<500	<500	2000 (P)
Vinyl chloride	µg/L	<1.2	<1.2	<1.2	5
1,1-Dichloroethene	µg/L	<7.5	<7.5	<7.5	30
1,2-Dichloroethene	µg/L	<12	<12	<12	50
Trichloroethene	µg/L	<18	<18	<18	70 (P)
Tetrachloroethene	µg/L	<10	<10	<10	40
Benzene	µg/L	<2.5	<2.5	<2.5	10
Toluene	µg/L	<175	<175	<175	700
Xylenes	µg/L	<125	<125	<125	500
Ethylbenzene	µg/L	<75	<75	<75	300
Styrene	µg/L	<5.0	<5.0	<5.0	20
Benzo(a)pyrene	µg/L	<0.18	<0.18	<0.18	0.7
Monochlorobenzene	µg/L	<75	<75	<75	300
1,2-Dichlorobenzene	µg/L	<250	<250	<250	1000
1,4-Dichlorobenzene	µg/L	<75	<75	<75	300
Trichlorobenzenes (total)	µg/L	<5.0	<5.0	<5.0	20
Di(2-ethylhexyl)adipate	µg/L	<20	<20	<20	80
Di(2-ethylhexyl)phthalate	µg/L	<2	<2	<2	8

Parameter	Unit	Dongjiang RAW Water Monitoring Data			WHO Guideline Value for DRINKING Water (FOR REFERENCE ONLY)
		Average	Minimum	Maximu	
Acrylamide	µg/L	<0.4	<0.4	<0.4	0.5
Epichlorohydrin	µg/L	<0.4	<0.4	<0.4	0.4 (P)
Hexachlorobutadiene	µg/L	<0.15	<0.15	<0.15	0.6
Edetic acid (EDTA)	µg/L	<50	<50	<50	200 (P)
Nitrilotriacetic acid	µg/L	<50	<50	<50	200
Tributyltin oxide	µg/L	<0.5	<0.5	<0.5	2
Alachlor	µg/L	<5.0	<5.0	<5.0	20
Aldicarb	µg/L	<2.5	<2.5	<2.5	10
Aldrin/Dieldrin	µg/L	<0.008	<0.008	<0.008	0.03
Atrazine	µg/L	<0.50	<0.50	<0.50	2
Bentazon	µg/L	<7.5	<7.5	<7.5	30
Carbofuran	µg/L	<1.2	<1.2	<1.2	5
Chlordane	µg/L	<0.050	<0.050	<0.050	0.2
Chlorotoluron	µg/L	<7.5	<7.5	<7.5	30
DDT	µg/L	<0.50	<0.50	<0.50	2
1,2-Dibromo-3-chloropropane	µg/L	<0.25	<0.25	<0.25	1
2,4-D	µg/L	<7.5	<7.5	<7.5	30
1,2-Dichloropropane	µg/L	<5.0	<5.0	<5.0	20 (P)
1,3-Dichloropropene	µg/L	<5.0	<5.0	<5.0	20
Heptachlor/Heptachlor epoxide	µg/L	<0.008	<0.008	<0.008	0.03
Hexachlorobenzene	µg/L	<0.25	<0.25	<0.25	1
Isoproturon	µg/L	<2.2	<2.2	<2.2	9
Lindane	µg/L	<0.50	<0.50	<0.50	2
MCPA	µg/L	<2.0	<2.0	<2.0	2
Methoxychlor	µg/L	<5.0	<5.0	<5.0	20
Metolachlor	µg/L	<2.5	<2.5	<2.5	10
Molinate	µg/L	<1.5	<1.5	<1.5	6
Pendimethalin	µg/L	<5.0	<5.0	<5.0	20
Pentachlorophenol	µg/L	<2.2	<2.2	<2.2	9 (P)
Permethrin	µg/L	<5.0	<5.0	<5.0	20
Propanil	µg/L	<5.0	<5.0	<5.0	20
Pyridate	µg/L	<25	<25	<25	100
Simazine	µg/L	<0.50	<0.50	<0.50	2
Trifluralin	µg/L	<5.0	<5.0	<5.0	20
2,4-DB	µg/L	<22	<22	<22	90
Dichlorprop (or 2,4-DP)	µg/L	<25	<25	<25	100
2Fenoprop (or 2,4,5-TP)	µg/L	<2.2	<2.2	<2.2	9
Mecoprop (or MCPP)	µg/L	<2.5	<2.5	<2.5	10
2,4,5-T	µg/L	<2.2	<2.2	<2.2	9
Bromate	µg/L	<20	<20	<20	25 (P)
Chlorite	µg/L	<100	<100	<100	200 (P)
2,4,6-Trichlorophenol	µg/L	<50	<50	<50	200
Formaldehyde	µg/L	<225	<225	<225	900
Bromoform	µg/L	<25	<25	<25	100

Parameter	Unit	Dongjiang RAW Water Monitoring Data			WHO Guideline Value for DRINKING Water (FOR REFERENCE ONLY)
		Average	Minimum	Maximu	
Dibromochloromethane	µg/L	<25	<25	<25	100
Bromodichloromethane	µg/L	<15	<15	<15	60
Chloroform	µg/L	<50	<50	<50	200
Dichloroacetic acid	µg/L	<12	<12	<12	50 (P)
Trichloroacetic acid	µg/L	<25	<25	<25	100 (P)
Chloral hydrate	µg/L	<2.5	<2.5	<2.5	10 (P)
Dichloroacetonitrile	µg/L	<22	<22	<22	90 (P)
Dibromoacetonitrile	µg/L	<25	<25	<25	100 (P)
Trichloroacetonitrile	µg/L	<0.25	<0.25	<0.25	1 (P)

NB

(1) This is a summary report on Dongjiang water quality as monitored at Muk Wu Pumping Station.

(2) All values are compiled in accordance with requirements stipulated by the current quality assurance protocol of the Water Science Division of Water Supplies Department.

(3) (P) --- Provisional guideline value

(4) < --- smaller than, ≤ --- smaller than or equal to

(5) > --- greater than, ≥ --- greater than or equal to

(6) For more information, please e-mail to wsdinfo@wsd.gcn.gov.hk; or write to Water Supplies Department at 48/F, Immigration Tower, 7 Gloucester Road, Wan Chai, Hong Kong.

Appendix II

Drinking Water Quality for the Period 04/1999 - 03/2000

Compliance is based on the annual average of monitoring data.

Part A. Bacteriological quality

Parameter	Unit	WHO Guideline Value	Compliance	Monitoring Data		
				Average	Minimum	Maximum
Total coliform	no. per 100 mL	0	✓	0	0	0
E. coli	no. per 100 mL	0	✓	0	0	0

Drinking Water Quality for the Period 04/1999 - 03/2000

Part B. Chemicals of health significance as described by World Health Organization Guidelines for Drinking-Water Quality 1993

Parameter	Unit	WHO Guideline Value	Compliance	Monitoring Data		
				Average	Minimum	Maximum
Antimony	mg/L	0.005 (P)	✓	<0.001	<0.001	<0.001
Arsenic	mg/L	0.01 (P)	✓	<0.001	<0.001	0.0014
Barium	mg/L	0.7	✓	0.017	<0.005	0.040
Boron	mg/L	0.3	✓	<0.07	<0.07	<0.07
Cadmium	mg/L	0.003	✓	<0.0001	<0.0001	0.00023
Chromium	mg/L	0.05 (P)	✓	<0.04	<0.04	<0.04
Copper	mg/L	2 (P)	✓	<0.09	<0.09	0.14
Cyanide	mg/L	0.07	✓	<0.01	<0.01	<0.01
Fluoride	mg/L	1.5	✓	0.48	<0.10	1.40
Lead	mg/L	0.01	✓	<0.001	<0.001	0.0048
Manganese	mg/L	0.5 (P)	✓	<0.01	<0.01	0.10
Mercury (total)	mg/L	0.001	✓	<0.00005	<0.00005	<0.00005
Molybdenum	mg/L	0.07	✓	<0.02	<0.02	<0.02
Nickel	mg/L	0.02	✓	<0.01	<0.01	0.030
Nitrate (as NO_3^-)	mg/L	50	✓	7.27	0.13	21.88
Nitrite (as NO_2^-)	mg/L	3 (P)	✓	<0.004	<0.004	0.010
Selenium	mg/L	0.01	✓	<0.001	<0.001	<0.001
Carbon tetrachloride	µg/L	2	✓	<0.50	<0.50	0.67
Dichloromethane	µg/L	20	✓	<5.0	<5.0	5.4
1,2-Dichloroethane	µg/L	30	✓	<7.5	<7.5	<7.5
1,1,1-Trichloroethane	µg/L	2000 (P)	✓	<500	<500	<500
Vinyl chloride	µg/L	5	✓	<1.2	<1.2	<1.2
1,1-Dichloroethene	µg/L	30	✓	<7.5	<7.5	<7.5
1,2-Dichloroethene	µg/L	50	✓	<12	<12	<12
Trichloroethene	µg/L	70 (P)	✓	<18	<18	<18
Tetrachloroethene	µg/L	40	✓	<10	<10	<10
Benzene	µg/L	10	✓	<2.5	<2.5	<2.5
Toluene	µg/L	700	✓	<175	<175	<175
Xylenes	µg/L	500	✓	<125	<125	<125
Ethylbenzene	µg/L	300	✓	<75	<75	<75
Styrene	µg/L	20	✓	<5.0	<5.0	<5.0
Benzo(a)pyrene	µg/L	0.7	✓	<0.18	<0.18	<0.18
Monochlorobenzene	µg/L	300	✓	<75	<75	<75
1,2-Dichlorobenzene	µg/L	1000	✓	<250	<250	<250
1,4-Dichlorobenzene	µg/L	300	✓	<75	<75	<75
Trichlorobenzenes (total)	µg/L	20	✓	<5.0	<5.0	<5.0
Di(2-ethylhexyl)adipate	µg/L	80	✓	<20	<20	<20
Di(2-ethylhexyl)phthalate	µg/L	8	✓	<2	<2	<2
Acrylamide	µg/L	0.5	✓	<0.4	<0.4	<0.4
Epichlorohydrin	µg/L	0.4 (P)	✓	<0.4	<0.4	<0.4

Parameter	Unit	WHO Guideline Value	Compliance	Monitoring Data		
				Average	Minimum	Maximum
Hexachlorobutadiene	µg/L	0.6	✓	<0.15	<0.15	<0.15
Edetic acid (EDTA)	µg/L	200 (P)	✓	<50	<50	<50
Nitrilotriacetic acid	µg/L	200	✓	<50	<50	<50
Tributyltin oxide	µg/L	2	✓	<0.5	<0.5	<0.5
Alachlor	µg/L	20	✓	<5.0	<5.0	<5.0
Aldicarb	µg/L	10	✓	<2.5	<2.5	<2.5
Aldrin/Dieldrin	µg/L	0.03	✓	<0.008	<0.008	<0.008
Atrazine	µg/L	2	✓	<0.50	<0.50	<0.50
Bentazon	µg/L	30	✓	<7.5	<7.5	<7.5
Carbofuran	µg/L	5	✓	<1.2	<1.2	<1.2
Chlordane	µg/L	0.2	✓	<0.050	<0.050	<0.050
Chlorotoluron	µg/L	30	✓	<7.5	<7.5	<7.5
DDT	µg/L	2	✓	<0.50	<0.50	<0.50
1,2-Dibromo-3-chloropropane	µg/L	1	✓	<0.25	<0.25	<0.25
2,4D	µg/L	30	✓	<7.5	<7.5	<7.5
1,2-Dichloropropane	µg/L	20 (P)	✓	<5.0	<5.0	<5.0
1,3-Dichloropropene	µg/L	20	✓	<5.0	<5.0	<5.0
Heptachlor/Heptachlor epoxide	µg/L	0.03	✓	<0.008	<0.008	<0.008
Hexachlorobenzene	µg/L	1	✓	<0.25	<0.25	<0.25
Isoproturon	µg/L	9	✓	<2.2	<2.2	<2.2
Lindane	µg/L	2	✓	<0.50	<0.50	<0.50
MCPA	µg/L	2	✓	<2.0	<2.0	<2.0
Methoxychlor	µg/L	20	✓	<5.0	<5.0	<5.0
Metolachlor	µg/L	10	✓	<2.5	<2.5	<2.5
Molinate	µg/L	6	✓	<1.5	<1.5	<1.5
Pendimethalin	µg/L	20	✓	<5.0	<5.0	<5.0
Pentachlorophenol	µg/L	9 (P)	✓	<2.2	<2.2	<2.2
Permethrin	µg/L	20	✓	<5.0	<5.0	<5.0
Propanil	µg/L	20	✓	<5.0	<5.0	<5.0
Pyridate	µg/L	100	✓	<25	<25	<25
Simazine	µg/L	2	✓	<0.50	<0.50	<0.50
Trifluralin	µg/L	20	✓	<5.0	<5.0	<5.0
2,4-DB	µg/L	90	✓	<22	<22	<22
Dichlorprop (or 2,4-DP)	µg/L	100	✓	<25	<25	<25
Fenoprop (or 2,4,5-TP)	µg/L	9	✓	<2.2	<2.2	<2.2
Mecoprop (or MCPP)	µg/L	10	✓	<2.5	<2.5	<2.5
2,4,5-T	µg/L	9	✓	<2.2	<2.2	<2.2
Monochloramine	mg/L	3	✓	<1.0	<1.0	3.0
Chlorine	mg/L	5	✓	0.7	<0.1	2.5
Bromate	µg/L	25 (P)	✓	<20	<20	<20
Chlorite	µg/L	200 (P)	✓	<100	<100	<100
2,4,6-Trichlorophenol	µg/L	200	✓	<50	<50	<50
Formaldehyde	µg/L	900	✓	<225	<225	<225
Bromoform	µg/L	100	✓	<25	<25	<25

Parameter	Unit	WHO Guideline Value	Compliance	Monitoring Data		
				Average	Minimum	Maximum
Dibromochloromethane	µg/L	100	✓	<25	<25	<25
Bromodichloromethane	µg/L	60	✓	<15	<15	17
Chloroform	µg/L	200	✓	<50	<50	112
Dichloroacetic acid	µg/L	50 (P)	✓	18	<12	71
Trichloroacetic acid	µg/L	100 (P)	✓	<25	<25	74
Chloral hydrate	µg/L	10 (P)	✓	8.7	<2.5	27
Dichloroacetonitrile	µg/L	90 (P)	✓	<22	<22	<22
Dibromoacetonitrile	µg/L	100 (P)	✓	<25	<25	<25
Trichloroacetonitrile	µg/L	1 (P)	✓	<0.25	<0.25	<0.25
Cyanogen chloride (as CN)	mg/L	0.07	✓	<0.02	<0.02	<0.02

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Part C. Parameters commonly requested by public

Parameter	Unit	Monitoring Data		
		Average	Minimum	Maximum
pH	pH	8.1	6.2	9.4
Colour	Hazen	<5	<5	5
Turbidity	NTU	0.4	<0.1	5.0
Conductivity at 25 °C	uS/cm	190	45	423
Temperature	°C	21	13	29
Free residual chlorine	mg/L	0.7	<0.1	2.5
Total alkalinity (as $CaCO_3$)	mg/L	27	7	55
Total hardness (as $CaCO_3$)	mg/L	56	6	137
Calcium	mg/L	17	1.5	38
Magnesium	mg/L	1.8	0.35	3.5
Chlorides	mg/L	19	4	57
Sulphates	mg/L	16	<5	37
Ortho-phosphates (as PO_4)	mg/L	0.01	<0.01	0.17
Fluoride	mg/L	0.48	<0.10	1.40
Iron	mg/L	<0.01	<0.01	0.13
Manganese	mg/L	<0.01	<0.01	0.10
Aluminium	mg/L	0.03	<0.01	0.23
Silica (as SiO_2)	mg/L	8.9	1.5	14.2

NB (1) This is a summary report on drinking water quality.
(2) All values are compiled in accordance with equirements stipulated by the current qu assurance protocol of the Water Science Division of Water Supplies Department.
(3) (P) --- Provisional guideline value
(4) < --- smaller than
(5) For a full interpretation of WHO Guidelines for Drinking-water Quality 1993, please refer to the original publications.
(6) For more information, please e-mail to wsdinfo@wsd.gcn.gov.hk; or write to Water Supplies Department at 48/F, Immigration Tower, 7 Gloucester Road, Wan Chai, Hong Kong.