

**Dongjiang Water Quality for the Period of April 2009 - March 2010  
as received in Hong Kong at Muk Wu Pumping Station**

**Part A. Comparison with GB3838-2002 Type II Standard for Surface Water**

**General Points**

- The Guangdong authorities built a dedicated aqueduct to convey water abstracted from Dongjiang intake to Shenzhen Reservoir. The entire system was put into operation on 28 June 2003 with significant improvement in Dongjiang water quality as received in Hong Kong.
- On signing the agreement on Dongjiang water supply to Hong Kong on 11 December 2008, the Guangdong authorities would strive to maintain the quality of the water delivered to Hong Kong to meet the national standard set out for Type II waters (applicable for the abstraction for human consumption in first class protection area) in the Environmental Quality Standards for Surface Water GB3838-2002.
- Occasional deviations of certain water quality parameters from the standard values of GB3838-2002 Type II do not mean that the untreated Dongjiang water is not suitable for the abstraction for human consumption. All raw water including Dongjiang water has to go through a series of stringent treatment processes at water treatment works, including filtration and disinfection, prior to distribution to consumers. During this period, the bacteriological and chemical quality of treated water fully complied with the World Health Organization's Guidelines for Drinking-water Quality (2006). For details, please refer to the information on drinking water quality data.
- All samples were taken at Muk Wu Pumping Station where Dongjiang water was received. All analyses were conducted at site and in WSD's laboratories by WSD's qualified staff.
- The Dongjiang water quality for this period complied with the standard set out for Type II waters in the Environmental Quality Standards for Surface Water GB3838-2002.
- Compliance is based on the annual average of monitoring data in accordance with international practice.

Parameters	Unit	Monitoring Data (04/2009 - 03/2010)			GB3838-2002 Type II Standard Value	Compliance
		Minimum	Maximum	Average		
pH	pH	7.0	7.9	7.3	6 - 9	✓
Dissolved Oxygen	mg/L	4.6	11	7.5	≥ 6	✓
Permanganate Index	mg/L	2	3	2	≤ 4	✓
Chemical Oxygen Demand (COD)	mg/L	< 5	10	< 5	≤ 15	✓
5-Day Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	< 2.0	< 2.0	< 2.0	≤ 3	✓
Ammoniacal Nitrogen	mg/L	< 0.02	0.18	0.04	≤ 0.5	✓
Total Phosphorus (as P)	mg/L	0.030	0.082	0.050	≤ 0.1	✓
Copper	mg/L	0.003	0.005	0.004	≤ 1.0	✓
Zinc	mg/L	< 0.01	0.02	< 0.01	≤ 1.0	✓
Fluoride (as F <sup>-</sup> )	mg/L	0.17	0.33	0.25	≤ 1.0	✓
Selenium	mg/L	< 0.003	< 0.003	< 0.003	≤ 0.01	✓
Arsenic	mg/L	0.001	0.002	0.002	≤ 0.05	✓
Mercury	mg/L	< 0.00005	< 0.00005	< 0.00005	≤ 0.00005	✓
Cadmium	mg/L	< 0.001	< 0.001	< 0.001	≤ 0.005	✓
Chromium (VI)	mg/L	< 0.002 (Note 1)	0.002 (Note 1)	< 0.002 (Note 1)	≤ 0.05	✓
Lead	mg/L	< 0.003	< 0.003	< 0.003	≤ 0.01	✓
Cyanide	mg/L	< 0.01	< 0.01	< 0.01	≤ 0.05	✓
Volatile Phenols	mg/L	< 0.001	< 0.001	< 0.001	≤ 0.002	✓
Petroleum Hydrocarbons	mg/L	< 0.0125	< 0.0125	< 0.0125	≤ 0.05	✓
Anionic Surfactants	mg/L	< 0.1	< 0.1	< 0.1	≤ 0.2	✓
Sulphides	mg/L	< 0.05	< 0.05	< 0.05	≤ 0.1	✓
Faecal Coliforms	no./L	30 (Note 2)	1500 (Note 2)	280 (Note 2)	≤ 2000	✓

Parameters	Unit	Monitoring Data (4/2009 - 03/2010)			GB3838-2002 Standard Value	Compliance
		Minimum	Maximum	Average		
Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/L	10	16	12	≤ 250	✓
Chloride (as Cl <sup>-</sup> )	mg/L	< 5	13	10	≤ 250	✓
Nitrate (as N)	mg/L	1.6	2.6	1.9	≤ 10	✓
Iron	mg/L	0.05	0.17	0.09	≤ 0.3	✓
Manganese	mg/L	< 0.01	0.24	0.03	≤ 0.1	✓
Benzo[a]pyrene	mg/L	< 2.0 x 10 <sup>-6</sup>	< 2.0 x 10 <sup>-6</sup>	< 2.0 x 10 <sup>-6</sup>	≤ 2.8 x 10 <sup>-6</sup>	✓

**Note:**

(1) Analytical result for chromium(III) and chromium(VI).

(2) Analytical result for E. coli.