

**Dongjiang Water Quality for the Period of April 2016 - March 2017
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.
- In the agreement on Dongjiang water supply to Hong Kong signed on 28 May 2015, the Guangdong authorities would maintain the quality of the water delivered to Hong Kong to meet the national standard set out for Type II waters (applicable to the abstraction for human consumption in first class protection area) 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. Occasional deviations of certain water quality parameters from the standard values of GB3838-2002 Type II do not mean that the 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 chemical, bacteriological and radiological quality of treated water fully complied with the World Health Organization's Guidelines for Drinking-water Quality (2011). 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.
- 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)".

| Parameters | Unit | Monitoring Data (04/2016 - 03/2017) | | | GB3838-2002 Type II Standard Value | Compliance (Please see general points above) |
|---|-------|--|-------------------|---------------------|--|--|
| | | Minimum | Maximum | Average | | |
| pH | pH | 7.0 | 8.6 | 7.4 | 6 - 9 | ✓ |
| Dissolved Oxygen | mg/L | 6.0 | 10 | 7.8 | ≥ 6 | ✓ |
| Permanganate Index | mg/L | 1 | 2 | 2 | ≤ 4 | ✓ |
| Chemical Oxygen Demand (COD) | mg/L | < 5 | 8 | <5 | ≤ 15 | ✓ |
| 5-Day Biochemical Oxygen Demand (BOD ₅) | mg/L | < 2.0 | 2.8 | < 2.0 | ≤ 3 | ✓ |
| Ammoniacal Nitrogen | mg/L | < 0.02 | 0.10 | 0.03 | ≤ 0.5 | ✓ |
| Total Phosphorus (as P) | mg/L | 0.019 | 0.080 | 0.050 | ≤ 0.1 | ✓ |
| Copper | mg/L | < 0.003 | 0.005 | < 0.003 | ≤ 1.0 | ✓ |
| Zinc | mg/L | < 0.01 | 0.04 | < 0.01 | ≤ 1.0 | ✓ |
| Fluoride (as F ⁻) | mg/L | < 0.10 | 0.26 | 0.19 | ≤ 1.0 | ✓ |
| Selenium | mg/L | < 0.003 | < 0.003 | < 0.003 | ≤ 0.01 | ✓ |
| Arsenic | mg/L | <0.001 | 0.002 | 0.001 | ≤ 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 | < 0.001 (Note 1) | 0.002 (Note 1) | < 0.001 (Note 1) | ≤ 0.05 | ✓ |
| Lead | mg/L | < 0.001 | 0.002 | < 0.001 | ≤ 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 | 10 (Note 2) | 8000 (Note 2) | 750 (Note 2) | ≤ 2000 | ✓ |

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|-----------------------------------|------|--|------------------------|------------------------|--|--|
| | | Minimum | Maximum | Average | | |
| Sulphate (as SO_4^{2-}) | mg/L | 7 | 10 | 8 | ≤ 250 | ✓ |
| Chloride (as Cl^-) | mg/L | <5 | 8 | 6 | ≤ 250 | ✓ |
| Nitrate (as N) | mg/L | 1.0 | 1.7 | 1.5 | ≤ 10 | ✓ |
| Iron | mg/L | 0.02 | 0.19 | 0.08 | ≤ 0.3 | ✓ |
| Manganese | mg/L | < 0.01 | 0.18 | 0.03 | ≤ 0.1 | ✓ |
| Benzo[a]pyrene | mg/L | $< 2.0 \times 10^{-6}$ | $< 2.0 \times 10^{-6}$ | $< 2.0 \times 10^{-6}$ | $\leq 2.8 \times 10^{-6}$ | ✓ |

Note:

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

(2) Analytical result for *E. coli*.