

Incident Report on Dosing Sodium Hypochlorite above 20 mg/L in SCISTW – Oct 2017

1. Background

In accordance with the WPCO licence, a Method Statement of Disinfection Trials at Stonecutters Island Sewage Treatment Works (SCISTW) in Bathing Season of 2017 (1 March 2017 to 31 October 2017) was prepared for carrying out process optimization trials of the final disinfection facilities.

To facilitate the above trials, dosage of the chlorination system would be adjusted, if required, to above 20 mg/L according to the trend of the *E. coli* levels during the hot weather condition when the chlorine demand is high.

Under Section 3.1.2 of the Method Statement, DSD will closely monitor the TRC level of the effluent for it to be within the discharge limit of 0.2 mg/L at all time after dechlorination to minimize the impact on human health, marine ecology and fisheries due to formation of chlorination by-products.

During the trial periods, the TRC levels after dechlorination at Chamber 15A were monitored continuously.

2. Testing Schedule and Monitoring Result

The schedule of trial tests with dosages of Sodium Hypochlorite higher than 20mg/L and the associated monitoring results are tabulated as follows:

Date	Time	NaOCl dosage rate (mg/L)	Monitored TRC level after dechlorination (mg/L)
6.10.2017	0630 to 1000	24	0.0
7.10.2017	0530 to 1000	24	0.0
8.10.2017	0400 to 1000	24	0.0
9.10.2017	0400 to 1000	24	0.0
10.10.2017	0400 to 0615 0615 to 1000	24 28	0.0
11.10.2017	0400 to 0630 0630 to 1000	24 28	0.0
12.10.2017	0400 to 1000	28	0.0
13.10.2017	0400 to 1000	28	0.0
14.10.2017	0400 to 1000	28	0.0
17.10.2017	0700 to 1000	25	0.0
18.10.2017	0700 to 1000	25	0.0
19.10.2017	0700 to 1000	28	0.0
20.10.2017	0700 to 1000	28	0.0
21.10.2017	0700 to 1000	28	0.0
22.10.2017	0700 to 1000	28	0.0
23.10.2017	0700 to 1000	28	0.0
24.10.2017	0700 to 1000	28	0.0
25.10.2017	0700 to 1000	28	0.0
26.10.2017	0700 to 1000	28	0.0
27.10.2017	0700 to 1000	28	0.0

28.10.2017	0600 to 1000	28	0.0
29.10.2017	0600 to 1000	28	0.0
30.10.2017	0600 to 1030	28	0.0
31.10.2017	0600 to 1000	28	0.0

3. Conclusions

During the above periods, the TRC levels after dechlorination were controlled within the licence requirement (0.2 mg/L). In this connection, the environmental impacts associated with the dosage increase are acceptable and within the envelope of the EIA for the HATS Stage 2A.