

# Appendix F

The QA/QC Procedures and Results

**The Hongkong Electric Co., Ltd.**  
**Lamma Power Station Extension**  
**TEOM Continuous Dust Monitor**  
**Data Quality Assurance Log Sheet**

Month: October Year: 2017

Reservoir (AM1)				
Date	Frequency (Hz) (240 - 275)	Operation Mode (Mode 4)	Main Flow (l/min) (2.70 - 3.30)	Bypass Flow (l/min) (12.30 - 15.04)
01/10/2017	266.764	4	2.97	13.52
07/10/2017	266.425	4	2.96	13.47
13/10/2017	272.347	4	2.95	13.43
19/10/2017	271.954	4	2.99	13.61
25/10/2017	271.180	4	3.03	13.79
31/10/2017	270.195	4	3.03	13.80

East Gate (AM2)				
Date	Frequency (Hz) (240 - 275)	Operation Mode (Mode 4)	Main Flow (l/min) (2.70 - 3.30)	Bypass Flow (l/min) (12.30 - 15.04)
01/10/2017	254.475	4	2.96	13.49
07/10/2017	254.123	4	2.95	13.44
13/10/2017	260.007	4	2.94	13.38
19/10/2017	259.524	4	2.98	13.58
25/10/2017	258.677	4	3.02	13.76
31/10/2017	257.662	4	3.03	13.80

Ash Lagoon (AM3)				
Date	Frequency (Hz) (240 - 275)	Operation Mode (Mode 4)	Main Flow (l/min) (2.70 - 3.30)	Bypass Flow (l/min) (12.30 - 15.04)
01/10/2017	265.132	4	2.94	13.36
07/10/2017	266.003 (09/10)*	4 (09/10)*	2.92 (09/10)*	13.30 (09/10)*
13/10/2017	265.667	4	2.93	13.33
19/10/2017	265.306	4	2.97	13.51
25/10/2017	264.560	4	3.00	13.65
31/10/2017	263.596	4	3.01	13.73

\* - TSP monitoring at AM3 (Ash Lagoon) was suspended on 07/10/2017 due to the breakdown of the TEOM TSP Sampler. Make-up 1-hr TSP sampling at AM3 was conducted on 09/10/2017.

Maintenance Record			
	Reservoir	East Gate	Ash Lagoon
TEOM Filter Exchange	✓	✓	✓
Clean TSP Inlet	✓	✓	✓
Replace flow in-line filter	✓	✓	✓
Pump Repair	x	x	x
Leak Check	x	x	x
Flow audit	x	x	x
Flow Controller Calibration	✓	✓	✓
A/C filter cleaning	✓	✓	✓

Remarks:

N/A

Prepared by: HY Chan

Checked by: KF Chan

**The Hongkong Electric Co., Ltd.**  
**High Volume Air Sampler Site Visit Log Sheet**

Attendance Log

Site Name: Reservoir (AM1)

Date/Time	Staff Name
17/10/2017 / 10:30	WM Tam / WH Man

Equipment / Item

Equipment / Item	Serial No. / No.
HVAS	0131
Used filter paper no.	MI65
New filter paper no.	MI67

Type of filter: Glass-fibre

I. Ambient Conditions

Temperature, Ta: 301.3 K Pressure, Pa: 1006.6 mb

II. Correction of manometer reading

Calibration orifice No.	Manometer reading at site conditions Corresponds to $Q_{STD} = 40$ cubic ft/min. (inch H <sub>2</sub> O)
1534(10/2016)	$H_a = 18.32(T_a/P_a) = \underline{5.48}$

Manometer reading before calibration: 5.90

Adjustment of flow controller (Y/N): Yes

Manometer reading after calibration: 5.50

Note: Tolerance Limit of HVAS flow:  $\pm 1.0$  cubic ft/min. Corresponding limits for manometer :  $\pm 0.2$  inch H<sub>2</sub>O

III. General Conditions of HVAS

Good.

IV. Remarks

N/A.

Conducted by: WM Tam / WH Man

Checked by: SM Hon

**The Hongkong Electric Co., Ltd.**  
**High Volume Air Sampler Site Visit Log Sheet**

Attendance Log

Site Name: East Gate (AM2)

Date/Time	Staff Name
17/10/2017 / 11:15	WM Tam / WH Man

Equipment / Item

Equipment / Item	Serial No. / No.
HVAS	0132
Used filter paper no.	MI66
New filter paper no.	MI68

Type of filter: Glass-fibre

I. Ambient Conditions

Temperature, Ta: 302.9 K Pressure, Pa: 1010.6 mb

II. Correction of manometer reading

Calibration orifice No.	Manometer reading at site conditions Corresponds to $Q_{STD} = 40$ cubic ft/min. (inch H <sub>2</sub> O)
1534(10/2016)	$H_a = 18.32(T_a/P_a) = \underline{5.49}$

Manometer reading before calibration: 5.50

Adjustment of flow controller (Y/N): No

Manometer reading after calibration: N/A

Note: Tolerance Limit of HVAS flow:  $\pm 1.0$  cubic ft/min. Corresponding limits for manometer :  $\pm 0.2$  inch H<sub>2</sub>O

III. General Conditions of HVAS

Good.

IV. Remarks

N/A.

Conducted by: WM Tam / WH Man

Checked by: SM Hon

**The Hongkong Electric Co., Ltd.**  
**Mini Volume Air Sampler Site Visit Log Sheet**

Attendance Log

Site Name: Tai Yuen Village (AM4)

Date/Time	Staff Name
18/10/2017 / 15:30	HT Pang / WH Man

Equipment / Item

Equipment / Item	Serial No. / No.
MINIVOL	5580
Used filter paper no.	MP14
New filter paper no.	MP15

Type of filter: Glass-fibre

- I. Calibration is performed by using Drycal DC-2 Flow Calibrator  
5 std. L/min set point is recommended

Before: 5.30  
After: 5.03

- II. General Services

1. Clean Rotameter: Yes
2. Clean / Replace Pump Valves: No
3. Clean / Replace Pump Diaphragms: No
4. Clean Impaction Inlet: Yes
5. Replace Timer Battery Every 6 months: No
6. Replace Inlet Filter: Yes

Remarks

N/A

Conducted by: HT Pang / WH Man

Checked by: SM Hon

**The Hongkong Electric Co., Ltd.**  
**Lamma Power Station Extension**  
**Noise Monitoring Stations**  
**Daily Calibration Records**

Date	Location: Ash Lagoon		Location: Ching Lam	
	Calibration Results	Deviation from Reference (dB)	Calibration Results	Deviation from Reference (dB)
01/10/2017	Passed	0.10	Passed	0.03
02/10/2017	Passed	0.09	Passed	0.02
03/10/2017	Passed	0.09	Passed	0.02
04/10/2017	Passed	0.12	Passed	0.02
05/10/2017	Passed	0.08	Passed	-0.01
06/10/2017	Passed	0.08	Passed	0.06
07/10/2017	Passed	0.07	---	---
08/10/2017	Passed	0.09	Passed	0.02
09/10/2017	Passed	0.08	---	---
10/10/2017	Passed	0.08	Passed	0.02
11/10/2017	Passed	0.09	Passed	0.04
12/10/2017	Passed	0.11	Passed	0.05
13/10/2017	Passed	0.08	Passed	0.02
14/10/2017	Passed	0.05	Passed	0.03
15/10/2017	Passed	0.07	---	---
16/10/2017	Passed	0.11	Passed	-0.01
17/10/2017	Passed	0.07	Passed	-0.01
18/10/2017	Passed	0.10	Passed	0.00
19/10/2017	Passed	0.06	Passed	0.00
20/10/2017	Passed	0.04	Passed	-0.01
21/10/2017	Passed	0.06	Passed	-0.02
22/10/2017	Passed	0.06	Passed	-0.02
23/10/2017	Passed	0.06	Passed	0.04
24/10/2017	Passed	0.07	Passed	0.02
25/10/2017	Passed	0.05	Passed	0.01
26/10/2017	Passed	0.06	Passed	0.02
27/10/2017	Passed	0.06	Passed	0.00
28/10/2017	Passed	0.07	Passed	0.01
29/10/2017	Passed	0.06	Passed	-0.01
30/10/2017	Passed	0.06	---	---
31/10/2017	Passed	0.06	Passed	-0.01

Remarks:

1. The B&K sound level meter at the noise monitoring station has an advanced feature of internal calibration checking (viz. Charge Injection Calibration (CIC)). CIC is a B&K patented method for in situ verification of the integrity of the entire sound measurement chain (including microphone, preamplifier and cabling).
2. The acceptance criterion of deviation from reference is  $\pm 0.5$  dB.
3. “--“ denote that CIC calibration had not performed.