Appendix G

The QA/QC Procedures and Results

HIGH VOLUME AIR SAMPLER
SITE VISIT LOG SHEET

Site Name.	RE	Site No.:	AM1
Date of visit:	16-09-2002	Hour of Visit:	10.18
Staff name:	S M HON	HVAS S/N:	AS2
Used filter paper no.:	B26	New filter paper no.:	B28
Type of filter:	Glass-fibre		

I. Ambient Conditions

Temperature, T_a = 28.6°C 301.6 K Pressure, P_a = 1003 mb

II. Correction of manometer reading

Calibration orifice No.	Manometer reading at site conditions corresponds to Q_{STD} = 40 ft^3/min. (inch H_2O)
1534(04/2002)	$\triangle H_a = 18.0(T_a/P_a)$ = 5.41"
1535(04/2002)	$\triangle H_a = 17.9(T_a/P_a)$ =

Manometer reading before calibration: 5.2"
Adjustment of flow controller (Y/N): Y
Manometer reading after calibration: 5.4"

Note: Tolerance Limit of HVAS flow: ± 1.0 ft^3/min. Corresponding limits for manometer : ± 0.2 inch H_2O

III. General Conditions of HVAS

TIDY O.K. THE HVAS HAS BEEN CLEANED WITH TISSUE & TISSUE.

IV. Remarks

HIGH VOLUME AIR SAMPLER
SITE VISIT LOG SHEET

Site Name:	EG	Site No.:	AM2
Date of visit:	16-9-2002	Hour of Visit:	11:00
Staff name:	ALEX, H.K TSANG	HVAS S/N:	2195
Used filter paper no.:	B27	New filter paper no.:	B29
Type of filter:	Glass-fibre		

I. Ambient Conditions

Temperature, T_a = 31.5+273 / 304.5 K Pressure, P_a = 1009 mb

II. Correction of manometer reading

Calibration orifice No.	Manometer reading at site conditions corresponds to Q_{STD} = 40 ft^3/min. (inch H_2O)
1534(04/2002)	$\triangle H_a = 18.0(T_a/P_a)$ = 5.4
1535(04/2002)	$\triangle H_a = 17.9(T_a/P_a)$ =

Manometer reading before calibration: 5.7
Adjustment of flow controller (Y/N): Y
Manometer reading after calibration: 5.4

Note: Tolerance Limit of HVAS flow: ± 1.0 ft^3/min. Corresponding limits for manometer : ± 0.2 inch H_2O

III. General Conditions of HVAS

IV. Remarks

PARTISOL TSP SAMPLER
SITE VISIT LOG SHEET

Site Name ASH GROVE Site Number AM 3

Date of Visit 17-9-2002 Hour of Visit 11 00

Staff Name W.L. MAK / H.K. TSANG Partisol S/N: 2000 B205 5001

Used Filter No.: PP58 New Filter No.: PP89

Ambient temperature: 31.6 Ambient pressure: 1012

I. General Services

1. Replace control unit Large In-line Filter X
2. Clean the sample inlet head ✓
3. Clean sample tube ✓
4. Clean / Replace pump head X
5. Clean / Replace piston X

II. Operational Audits (3 months interval as recommended by manufacturer)

1. Temperature Check (Ambient temperature ± 2°C)

_____ °C Calibration: **Y / N** _____ °C
Before After

2. Pressure Check (Ambient pressure ± 20 mbar)(factor = 0.000987)

_____ mbar Calibration: **Y / N** _____ mbar
Before After

3. Flow Check (16.7± 1.1 litre/min)

_____ cc/min Calibration: **Y / N** _____ cc/min
Before After

III. Remarks

_____

_____

_____

_____

MINI VOLUME AIR SAMPLER

SITE VISIT LOG SHEET

Site Name:	TYV	Site No.:	AM4
Date of visit:	16-09-2002	Hour of Visit:	11:15
Staff name:	S.M. Hon	MINIVOL S/N:	2050
Used filter paper no.:	MF 56	New filter paper no.:	MF 57
Type of filter:	Cellulose / Glass-fibre (Delete as appropriate)		

I. Calibration is performed by using Drycal DC-2 Flow Calibrator

5 Sl/min set point is recommended

5.046 Before 5.010 After

II. General Service of Mini Vol Air Sampler

1. Clean Rotameter: ✓
2. Clean / replace Pump Valves: X
3. Clean / replace Pump Diaphragms: X
4. Clean Impaction Inlet: ✓
5. Replace Timer Battery Every 6 months: X
6. Replace Inlet Filter: ✓

III. Remarks

_____

_____

_____

THE HONGKONG ELECTRIC CO., LTD.
LAMMA POWER STATION EXTENSION
TEOM 1400A CONTINUOUS DUST MONITOR
DATA QUALITY ASSURANCE LOG SHEET

Month : Sept Year : 2002

Reservoir (AM1)					
Date	Frequency (Hz) (260 – 280)	Noise (< 0.1)	Operation Mode (Mode 4)	Main Flow (l/min) (0.94 – 1.06)	Aux. Flow (l/min) (14.67 – 16.67)
2-9-2002	262.89	0.012	4	1.00	15.61
8-9-2002	262.37	0.037	4	1.00	15.61
14-9-2002	262.22	0.052	4	1.00	15.61
20-9-2002	261.88	0.042	4	1.00	15.67
26-9-2002	261.63	0.033	4	1.00	15.67

East Gate (AM2)					
Date	Frequency (Hz) (230 – 250)	Noise (< 0.1)	Operation Mode (Mode 4)	Main Flow (l/min) (0.94 – 1.06)	Aux. Flow (l/min) (14.67 – 16.67)
2-9-2002	247.44	0.060	4	1.00	15.62
8-9-2002	246.94	0.045	4	1.00	15.65
14-9-2002	246.76	0.039	4	0.99	15.64
20-9-2002	246.66	0.037	4	1.00	15.65
26-9-2002	245.45	0.051	4	0.99	15.63

Ash Lagoon (AM3)					
Date	Frequency (Hz) (230 – 250)	Noise (< 0.1)	Operation Mode (Mode 4)	Main Flow (l/min) (0.94 – 1.06)	Aux. Flow (l/min) (14.67 – 16.67)
2-9-2002	246.27	0.028	4	0.99	15.64
8-9-2002	245.84	0.047	4	0.99	15.64
14-9-2002	246.63	0.035	4	1.00	15.64
20-9-2002	246.52	0.031	4	1.00	15.63
26-9-2002	246.30	0.038	4	0.99	15.64

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

Remarks:

Prepared by : Alex.

Checked by : [signature]

THE HONGKONG ELECTRIC CO., LTD.
LAMMA POWER STATION EXTENSION
NOISE MONITORING STATION
SITE VISIT LOG SHEET

Location Ash Lagoon/~~Ching Lam*~~

Date 16-4-2002 Time 15:45

Equipment Rion NA-27 Sound Level Meter

Serial Number ~~00111465~~/00111466/0~~0111467*~~

Staff Attended W.L.MAK, H.K.TSANG

1. Calibration

   Acoustic calibrator used Rion NC-74

   Calibration level before adjustment (dB(A)) 94.0

   Calibration level after adjustment (dB(A)) 94

2. Weather Conditions

   a. ~~Sunny~~/fine/~~cloudy/showery/heavy rain*~~

   b. ~~Strong wind/breeze~~/calm*

3. Remark/Observation

Note: * - Please delete where inappropriate

THE HONGKONG ELECTRIC CO., LTD.
LAMMA POWER STATION EXTENSION
NOISE MONITORING STATION
SITE VISIT LOG SHEET

Location ~~Ash Lagoon~~/Ching Lam*

Date 20-4-2002 Time 14:30

NL-31

Equipment Rion ~~NA-27~~ Sound Level Meter

Serial Number ~~00111465/00111466/00111467*~~ 00520618

Staff Attended W.L.MAK ; H.K.TSANG

1. Calibration

   Acoustic calibrator used Rion NC-74

   Calibration level before adjustment (dB(A)) 94.0

   Calibration level after adjustment (dB(A)) 94

2. Weather Conditions

   a. Sunny/~~fine/cloudy/showery/heavy rain*~~

   b. S~~trong wind~~/breeze/~~calm*~~

3. Remark/Observation

Note: * - Please delete where inappropriate

28/3/2001

Equipment Calibration Record

Equipment No.	YSI -6920-1	Equipment Description	YSI 6920 Monitor
Calibration method reference	YSI Calibration Manual	Calibration equipment used (if any)	—

	pH	DO	Turbidity
Use of reference material (if any)	pH 7.00 & pH 10.00 Buffer Hach Standard	—	0 NTu & 100 NTu Formazin Turbidity Standard.
Permissible tolerance of calibration	± 0.12 pH	± 5 %	± 5 %

Calibration Result

Date	Standard	pH		DO	Turbidity		Calibrated by
		7.00	10.00	100 %	0	100	
2/9/02	Before	7.01	9.99	100	0	99.8	Yan
	After	6.98	10.02	99.7	-0.1	101.2	Yan
4/9/02	Before	6.98	10.00	99.9	-0.2	98.6	Tin
	After	7.00	9.97	102.7	0.1	100.4	Tin
6-9-02	Before	7.01	9.98	98.6	0	101.7	Tin
	After	7.01	9.99	101.8	-0.3	100.1	Tin
9-9-02	Before	7.00	10.01	100.3	-0.5	100.8	Yan
	After	6.96	9.94	99.5	0.2	99.5	Yan
13/9/02	Before	7.00	10.03	100.0	0	99.9	S.Chu
	After	7.02	9.96	99.4	0.3	101.0	S.Chu
16/9/02	Before	7.01	10.02	100.0	-0.1	100.0	Tin
	After	6.99	10.00	100.2	0.2	100.6	Tin
18-9-02	Before	6.98	9.99	100.0	0	100.1	Tin
	After	7.02	9.97	101.9	0.1	99.8	Tin
19/9/02	Before	7.00	10.03	100.5	-0.1	99.5	S.Chu
	After	6.98	10.01	99.7	0.2	100.2	S.Chu
	Before						
	After						
	Before						
	After						
	Before						
	After						
	Before						
	After						
	Before						
	After						
	Before						
	After						

Approved by: _____ Date: 25/9/2002

SUMMARY OF QUALITY CONTROL DATA – QC SAMPLES RESULTS

Parameter	Control Limit	QC ID	Measured Value	QC ID	Measured Value	QC ID	Measured Value	QC ID	Measured Value	QC ID	Measured Value	QC ID	Measured Value	QC ID	Measured Value
Suspended Solids mg/L	8.9 – 10.3	P0209A21	9.4	P0209A43	9.3	P0209A65	9.6	P0209A87	9.7	P0209B21	9.4	P0209B43	9.6	P0209B65	9.5
		P0209B87	9.6	P0209C21	9.4	P0209C43	9.5	P0209C65	9.6	P0209C87	9.5	P0209D21	9.5	P0209D43	9.6
		P0209D65	9.4	P0209D87	9.6	P0209E21	9.5	P0209E43	9.6	P0209E65	9.6	P0209E87	9.7	P0209F21	9.6
		P0209F43	9.5	P0209F65	9.6	P0209F87	9.7	P0209G21	9.3	P0209G43	9.5	P0209G65	9.6	P0209G87	9.5
		P0209H21	9.4	P0209H43	9.6	P0209H65	9.3	P0209H87	9.6						

Total:32

SUMMARY OF QUALITY CONTROL DATA – BLANK RESULTS

Parameter	Control Limit	Blank ID	Measured Value	Blank ID	Measured Value	Blank ID	Measured Value	Blank ID	Measured Value	Blank ID	Measured Value	Blank ID	Measured Value	Blank ID	Measured Value
Suspended Solids mg/L	<1	P0209A22	<1	P0209A44	<1	P0209A66	<1	P0209A88	<1	P0209B22	<1	P0209B44	<1	P0209B66	<1
		P0209B88	<1	P0209C22	<1	P0209C44	<1	P0209C66	<1	P0209C88	<1	P0209D22	<1	P0209D44	<1
		P0209D66	<1	P0209D88	<1	P0209E22	<1	P0209E44	<1	P0209E66	<1	P0209E88	<1	P0209F22	<1
		P0209F44	<1	P0209F66	<1	P0209F88	<1	P0209G22	<1	P0209G44	<1	P0209G66	<1	P0209G88	<1
		P0209H22	<1	P0209H44	<1	P0209H66	<1	P0209H88	<1						

Total:32

SUMMARY OF QUALITY CONTROL DATA – DUPLICATE RESULTS

Parameter	Control Limit	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value
Suspended Solids mg/L	Exceed 20%	P0209A19	8.9	P0209A41	9.3	P0209A63	10.4	P0209A85	8.2	P0209B19	8.8	P0209B41	9.1	P0209B63	8.2
			9.0		9.1		10.1		8.6		8.6		9.3		8.4
		P0209B85	7.9	P0209C19	8.6	P0209C41	7.2	P0209C63	9.3	P0209C85	7.6	P0209D19	7.3	P0209D41	8.9
			8.2		8.9		7.4		9.0		7.2		7.7		9.1
		P0209D63	9.3	P0209D85	7.9	P0209E19	8.7	P0209E41	8.3	P0209E63	9.3	P0209E85	8.2	P0209F19	6.8
			9.7		7.6		8.9		8.5		9.6		8.4		6.6
		P0209F41	7.2	P0209F63	7.9	P0209F85	7.2	P0209G19	8.1	P0209G41	7.2	P0209G63	8.1	P0209G85	8.9
			7.4		8.1		7.3		8.2		7.4		8.4		8.5
		P0209H19	9.4	P0209H41	8.1	P0209H63	8.3	P0209H85	8.4						
			9.6		8.3		8.5		8.7						

SUMMARY OF QUALITY CONTROL DATA – BLIND DUPLICATE RESULTS

Parameter	Control Limit	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value
Suspended Solids mg/L	Exceed 20%	P0209A10	8.3	P0209A20	7.2	P0209A32	7.8	P0209A42	8.2	P0209A54	10.3	P0209A64	9.2	P0209A76	8.9	P0209A86	6.8	P0209B10	9.4	P0209B20	7.9	P0209B32	7.2	P0209B42	8.3		
			8.7		7.6		7.4		8.5		10.5		9.5		8.6		6.4		9.8		8.1		7.5		8.1		
		P0209B54	9.4	P0209B64	7.1	P0209B76	7.6	P0209B86	6.9	P0209C10	8.3	P0209C20	7.2	P0209C32	7.3	P0209C42	6.7	P0209C54	9.3	P0209C64	7.4	P0209C76	7.4	P0209C86	6.5		
			9.1		7.3		8.0		7.1		8.7		7.8		7.5		6.5		9.7		7.6		7.8		6.8		
		P0209D10	7.8	P0209D20	6.4	P0209D32	9.3	P0209D42	8.2	P0209D54	6.4	P0209D64	8.2	P0209D76	7.7	P0209D86	6.3	P0209E10	9.4	P0209E20	7.9	P0209E32	7.6	P0209E42	7.6		
			76.4.4		6.6		9.1		8.5		6.8		8.5		7.9		6.6		9.8		8.1		7.8		7.8		
		P0209E54	6.4	P0209E64	7.5	P0209E76	8.3	P0209E86	6.6	P0209F10	7.4	P0209F20	5.6	P0209F32	8.7	P0209F42	6.4	P0209F54	6.2	P0209F64	7.2	P0209F76	9.1	P0209F86	5.6		
			6.7		7.9		8.5		6.9		7.8		5.9		8.9		6.7		6.4		7.5		9.3		5.4		
		P0209G10	6.9	P0209G20	7.2	P0209G32	9.3	P0209G42	6.3	P0209G54	6.7	P0209G64	7.3	P0209G76	7.2	P0209G86	7.5	P0209H10	6.4	P0209H20	8.1	P0209H32	7.9	P0209H42	6.8		
			7.2		7.5		9.6		6.6		6.9		7.6		7.6		7.7		6.6		8.3		8.1		6.6		
		P0209H54	7.6	P0209H64	6.8	P0209H76	9.2	P0209H86	7.2																		
			7.4		6.5		9.5		7.5																		

Total:104