



東業德勤測試顧問有限公司  
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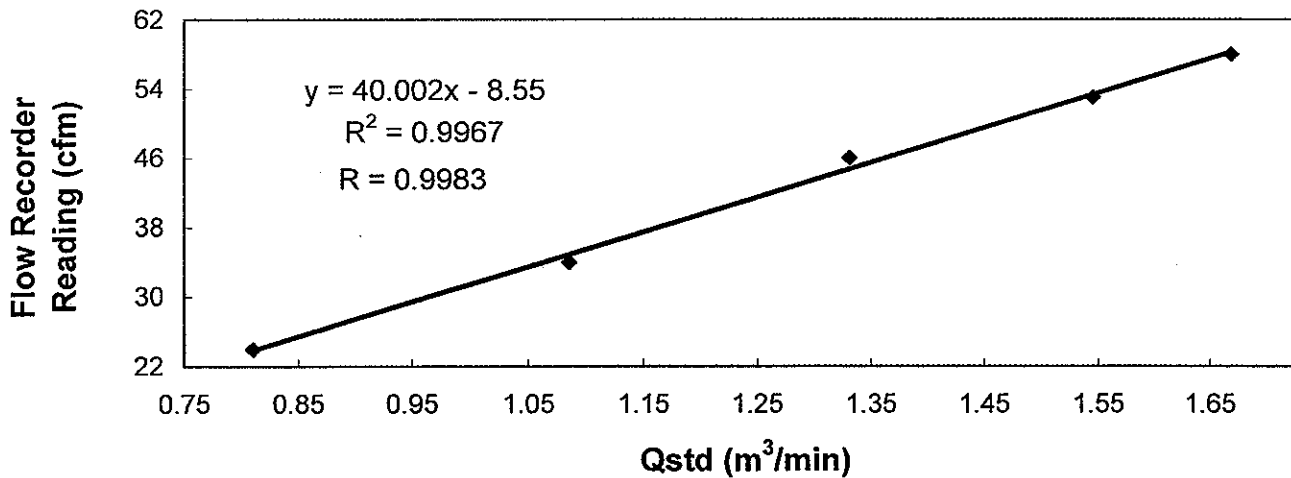
**TEST REPORT**

**Calibration Report  
of  
High Volume Air Sampler**

Manufacturer : Graseby GMW Date of Calibration : 12 August 2008  
Serial No. : 1173 (ET/EA/003/17) Calibration Due Date : 11 October 2008  
Method : Based on Operation Manual to perform 5-point calibration by using calibration kit  
Tisch TE-5025 A

Results	Flow recorder reading (cfm)	58	53	46	34	24
	Qstd (Actual flow rate, m <sup>3</sup> /min)	1.67	1.55	1.33	1.09	0.81
Pressure :		753 mm Hg		Temp. :		298 K

**Sampler 1173 Calibration Curve  
Site: Sok Kwu Wan (AM-1)  
Date of Calibration: 12 August 2008**



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after 5-point calibration

The high volume sampler complies \* / does not comply \* with the specified requirements and is deemed acceptable \* / unacceptable \* for use.

Calibrated by :   
LEUNG, Ka Chun  
(Assistant Environmental Officer)

Approved by :   
LAW, Sau Yee  
(Senior Environmental Officer)



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**TEST REPORT**

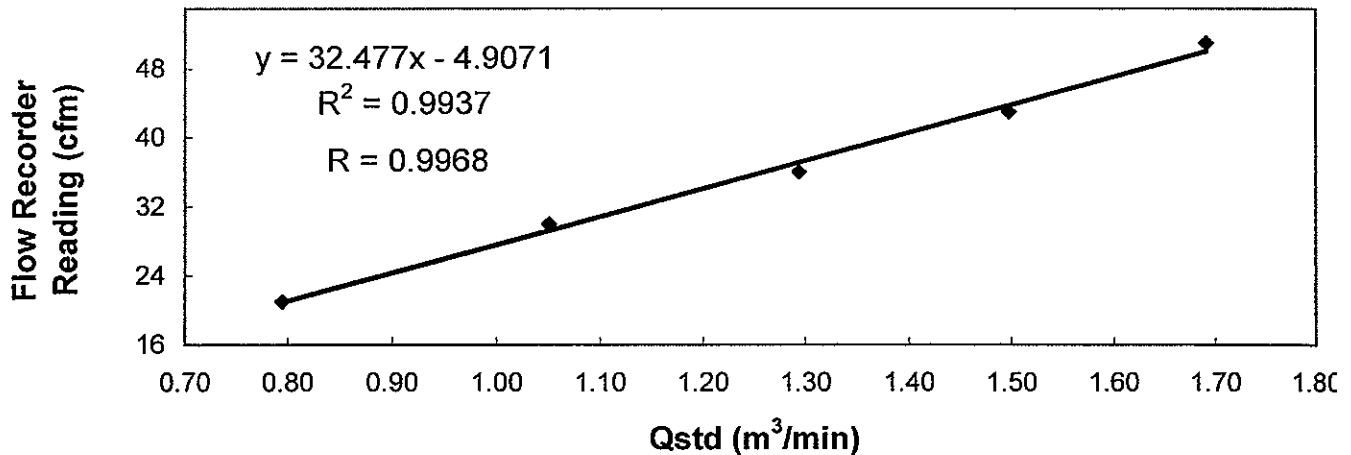
**Calibration Report**  
of  
**High Volume Air Sampler**

**Manufacturer** : Graseby GMW Date of Calibration : 12 August 2008  
**Serial No.** : 9865 (ET / EA / 003 / 14) Calibration Due Date : 11 October 2008  
**Method** : Based on Operations Manual for in series calibration method by TISCH  
ENVIROMENTAL Model Te-5025A calibration kit

**Results** :


Flow recorder reading (cfm)	51	43	36	30	21
Qstd (Actual flow rate, m <sup>3</sup> /min)	1.69	1.50	1.29	1.05	0.79
Pressure :	753 mm Hg		Temp. :	298 K	

**Sampler 9865 Calibration Curve**  
**Site: Sok Kwu Wan (AM-2)**  
**Date of Calibration: 12 August 2008**



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies \* / ~~does not comply~~ \* with the specified requirements and is deemed acceptable \* / unacceptable \* for use.

Calibrated by :   
LEUNG, Ka Chun  
(Assistant Environmental Officer)

Approved by :   
LAW, Sau Yee  
(Senior Environmental Officer)



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**TEST REPORT**

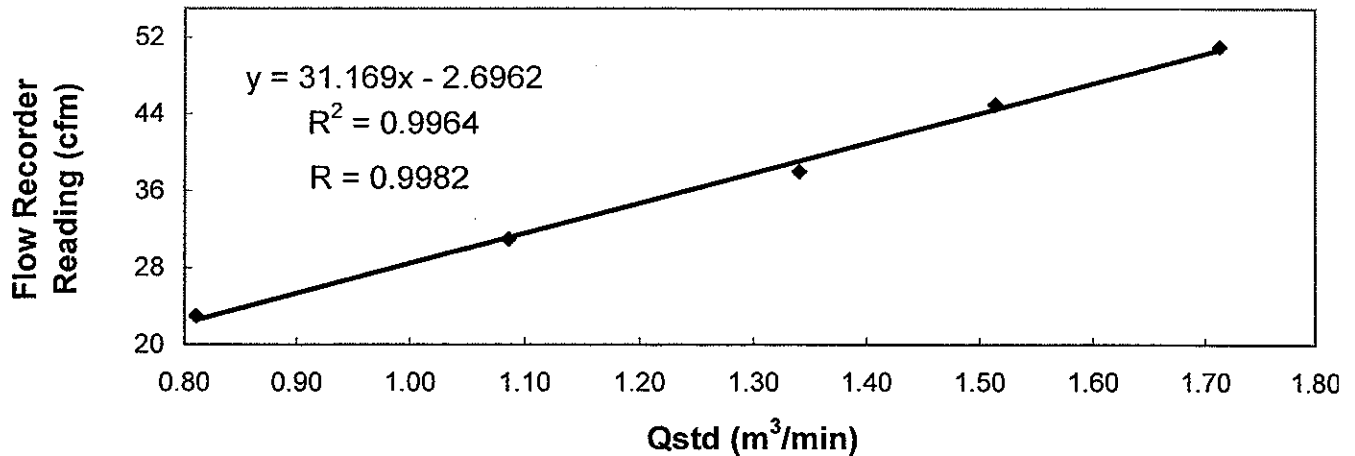
Calibration Report  
of  
High Volume Air Sampler

**Manufacturer** : Graseby GMW Date of Calibration : 12 August 2008  
**Serial No.** : 9912 (ET / EA / 003 / 15) Calibration Due Date : 11 October 2008  
**Method** : Based on Operations Manual for in series calibration method by TISCH  
ENVIROMENTAL Model Te-5025A calibration kit

**Results** :

Flow recorder reading (cfm)	51	45	38	31	23
Qstd (Actual flow rate, m <sup>3</sup> /min)	1.71	1.51	1.34	1.09	0.81
Pressure :	753 mm Hg		Temp. :	298 K	

**Sampler 9912 Calibration Curve**  
**Site: Sok Kwu Wan (AM-3)**  
**Date of Calibration: 12 August 2008**



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies \* / ~~does not comply~~ \* with the specified requirements and is deemed acceptable \* / ~~unacceptable~~ \* for use.

Calibrated by :   
LEUNG, Ka Chun  
(Assistant Environmental Officer)

Approved by :   
LAW, Sau Yee  
(Senior Environmental Officer)



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AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - May 14, 2008 Roots-meter S/N 9833620 Ta (K) - 295  
 Operator Tisch Orifice I.D. - 1172 Pa (mm) - 750.57

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER	ORFICE
					DIFF Hg (mm)	DIFF H2O (in.)
1	NA	NA	1.00	1.3800	3.1	2.00
2	NA	NA	1.00	0.9650	6.3	4.00
3	NA	NA	1.00	0.8630	7.9	5.00
4	NA	NA	1.00	0.8230	8.6	5.50
5	NA	NA	1.00	0.6770	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9935	0.7199	1.4125	0.9958	0.7216	0.8866
0.9893	1.0252	1.9976	0.9916	1.0276	1.2538
0.9870	1.1437	2.2334	0.9894	1.1464	1.4018
0.9862	1.1983	2.3424	0.9885	1.2011	1.4703
0.9807	1.4486	2.8251	0.9830	1.4521	1.7732

Qstd slope (m) = 1.94106  
 intercept (b) = 0.01311  
 coefficient (r) = 0.99996

Qa slope (m) = 1.21546  
 intercept (b) = 0.00823  
 coefficient (r) = 0.99996

y axis =  $\sqrt{H_2O(Pa/760)(298/Ta)}$

y axis =  $\sqrt{H_2O(Ta/Pa)}$

CALCULATIONS

Vstd = Diff. Vol [(Pa-Diff. Hg)/760] (298/Ta)  
 Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]  
 Qa = Va/Time

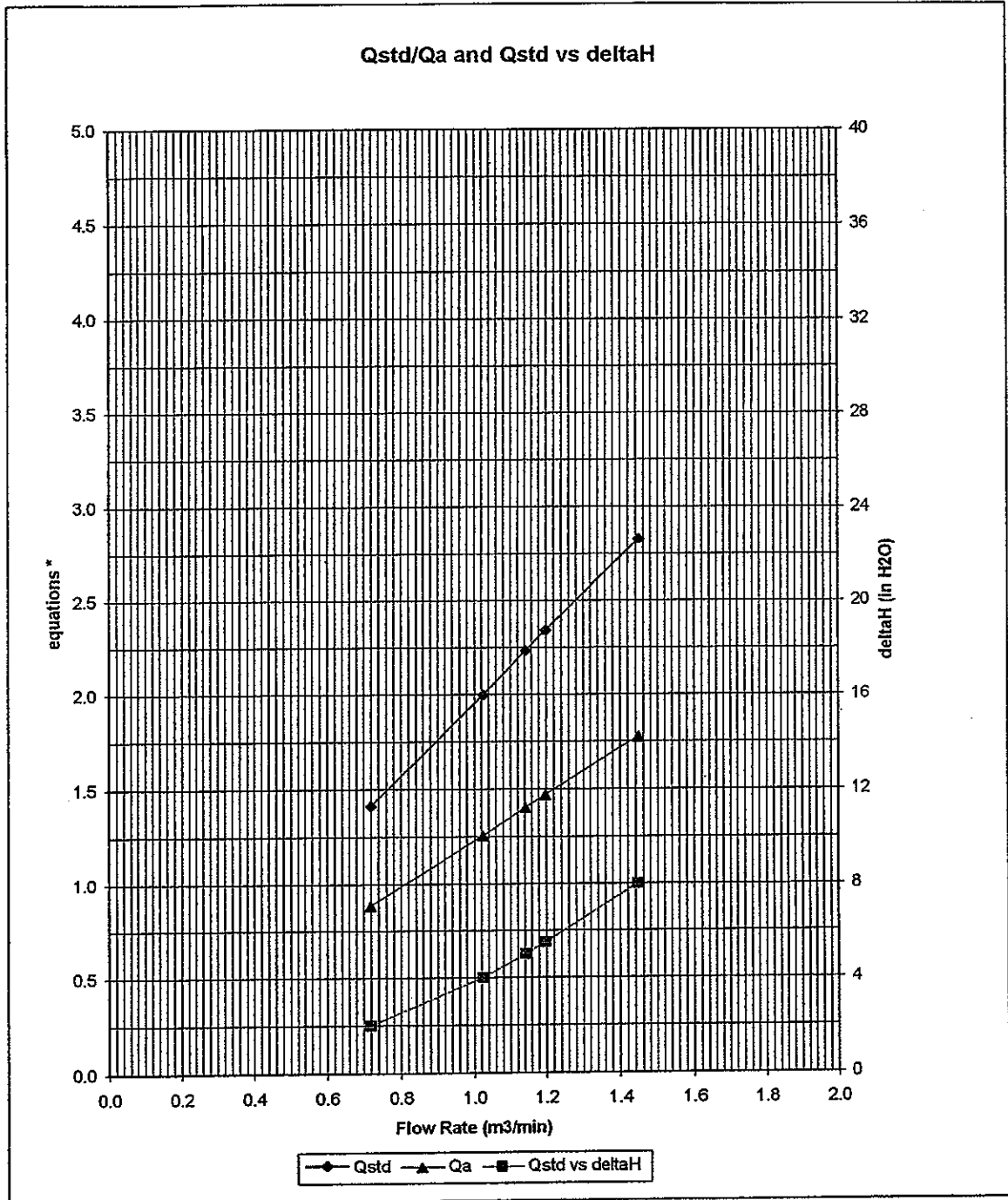
For subsequent flow rate calculations:

Qstd =  $1/m\{[\sqrt{H_2O(Pa/760)(298/Ta)}] - b\}$   
 Qa =  $1/m\{[\sqrt{H_2O(Ta/Pa)}] - b\}$



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AIR POLLUTION MONITORING EQUIPMENT



\* y-axis equations:

Qstd series: 
$$\sqrt{\Delta H \left( \frac{P_a}{P_{std}} \right) \left( \frac{T_{std}}{T_a} \right)}$$

Qa series: 
$$\sqrt{(\Delta H (T_a / P_a))}$$

# 1172



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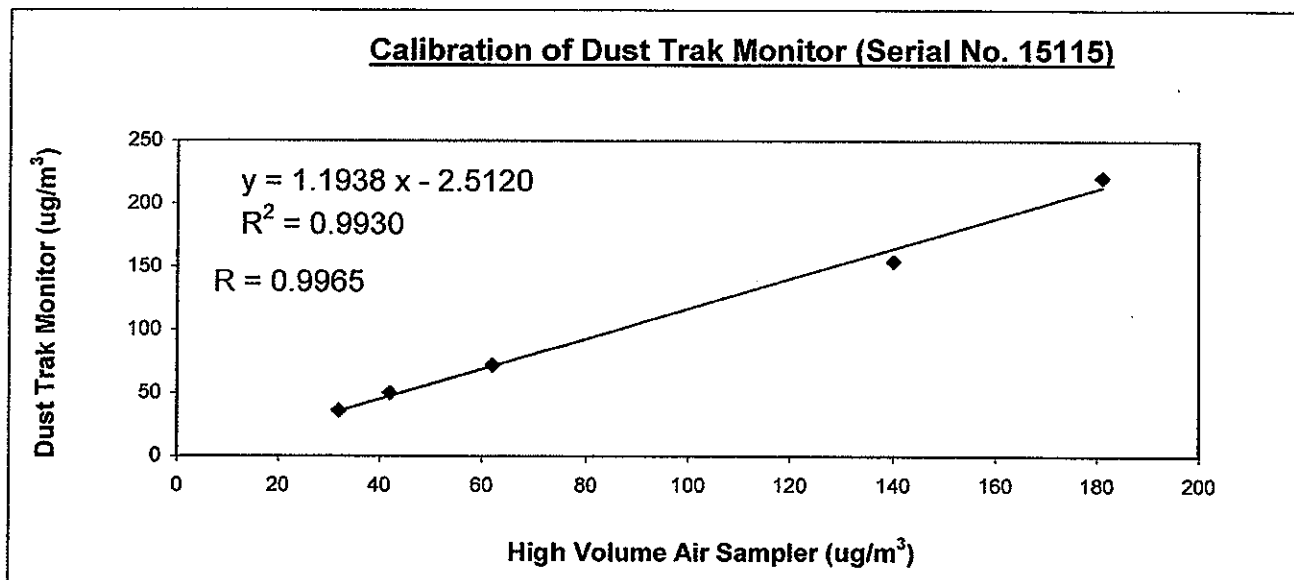
**TEST REPORT**

**Internal Calibration Report**  
of  
**Dust Trak Monitor**

**Manufacturer** : TSI - 8520 Dust Trak      **Date of Calibration** : 14 July 2008  
**Serial No.** : 15115 (ET/EA/001/02)      **Calibration Due Date** : 13 January 2009  
**Method** : Parallel measurement (five-point calibration) by placing the Dust Trak Monitor and High Volume Air Sampler together under the same environmental condition

**Results** :

Dust Trak Monitor ( $\mu\text{g}/\text{m}^3$ )	36	50	72	154	221
High Volume Air Sampler ( $\mu\text{g}/\text{m}^3$ )	32	42	62	140	181
Serial No of High Volume Air Sampler : 1178			Calibration Date: 01 September 2008		

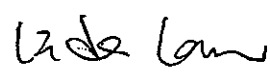


Acceptance Criteria :

Correlation coefficient (r) of the calibration curve greater than 0.990 after a five point calibration

The Dust Trak Monitor complies \* / ~~does not comply~~ \* with the internal calibration procedures and is deemed acceptable \* / ~~unacceptable~~ \* for use.

Calibrated by :   
LEUNG, Ka Ming  
(Assistant Environmental Officer)

Approved by :   
LAW, Sau Yee  
(Senior Environmental Officer)



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**TEST REPORT**

**Internal Calibration Report**

of

**Dust Trak Monitor**

Manufacturer : TSI - 8520 Dust Trak

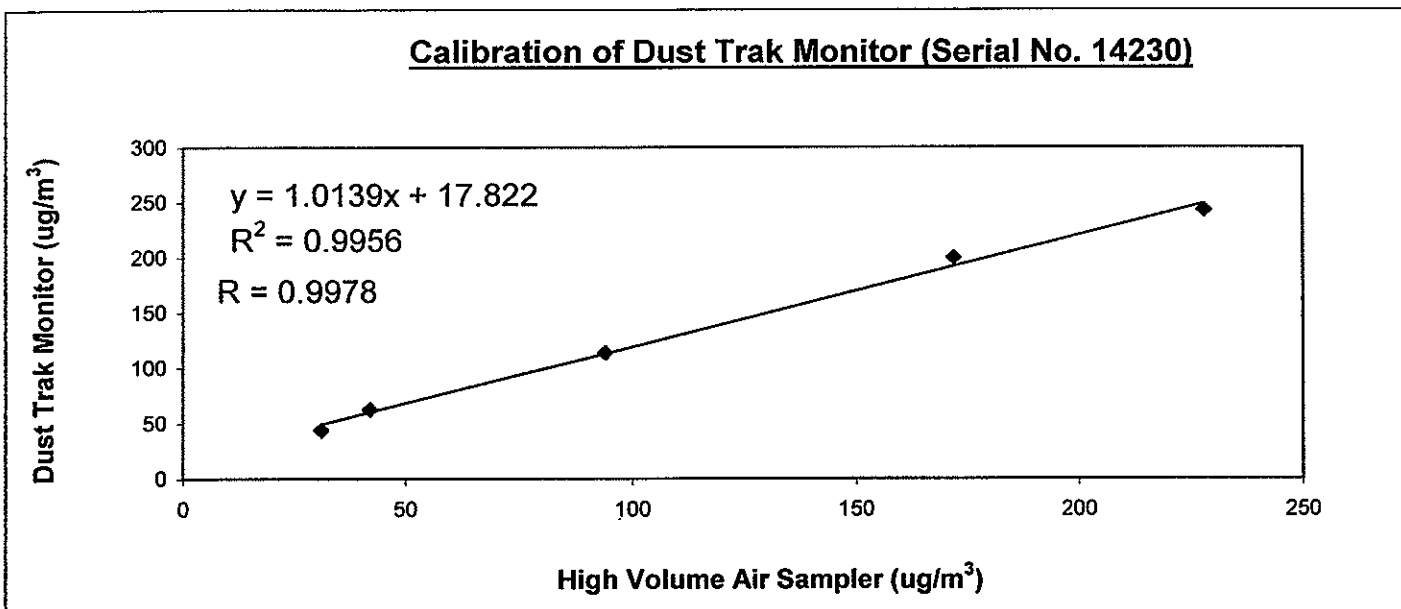
Date of Calibration : 12 July 2008

Serial No. : 14230 ( ET/EA/001/04 )

Due Date : 11 January 2009


Method : Parallel measurement (five-point calibration) by placing the Dust Trak Monitor and High Volume Air Sampler together under the same environmental condition

Results	Dust Trak Monitor (ug/m <sup>3</sup> )	44	63	114	200	243
	High Volume Air Sampler (ug/m <sup>3</sup> )	31	42	94	172	228
	High Volume Air Sampler Serial No.: 1178	Calibration Due Date: 01 September 2008				



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a five point calibration

The Dust Trak Monitor complies \* / does not comply \* with the internal calibration procedures and is deemed acceptable \* / unacceptable \* for use.

Calibrated by :   
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(Assistant Environmental Officer)

Approved by :   
LAW, Sau Yee  
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