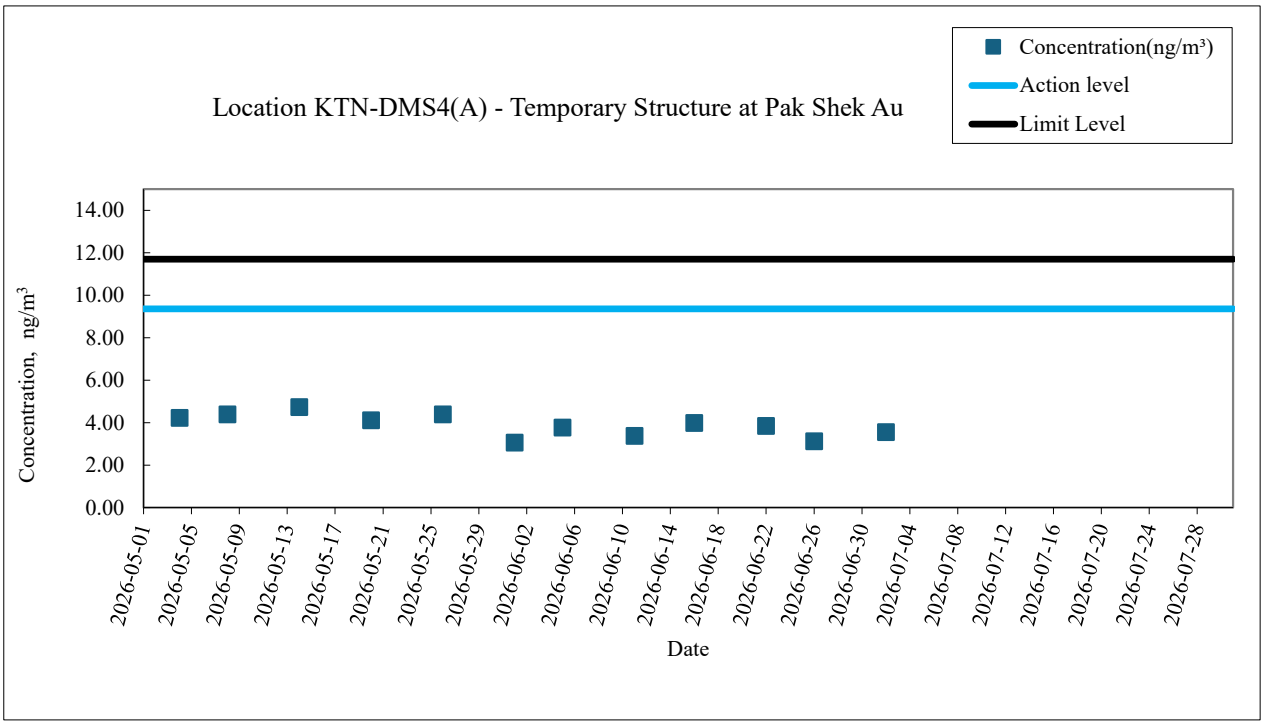
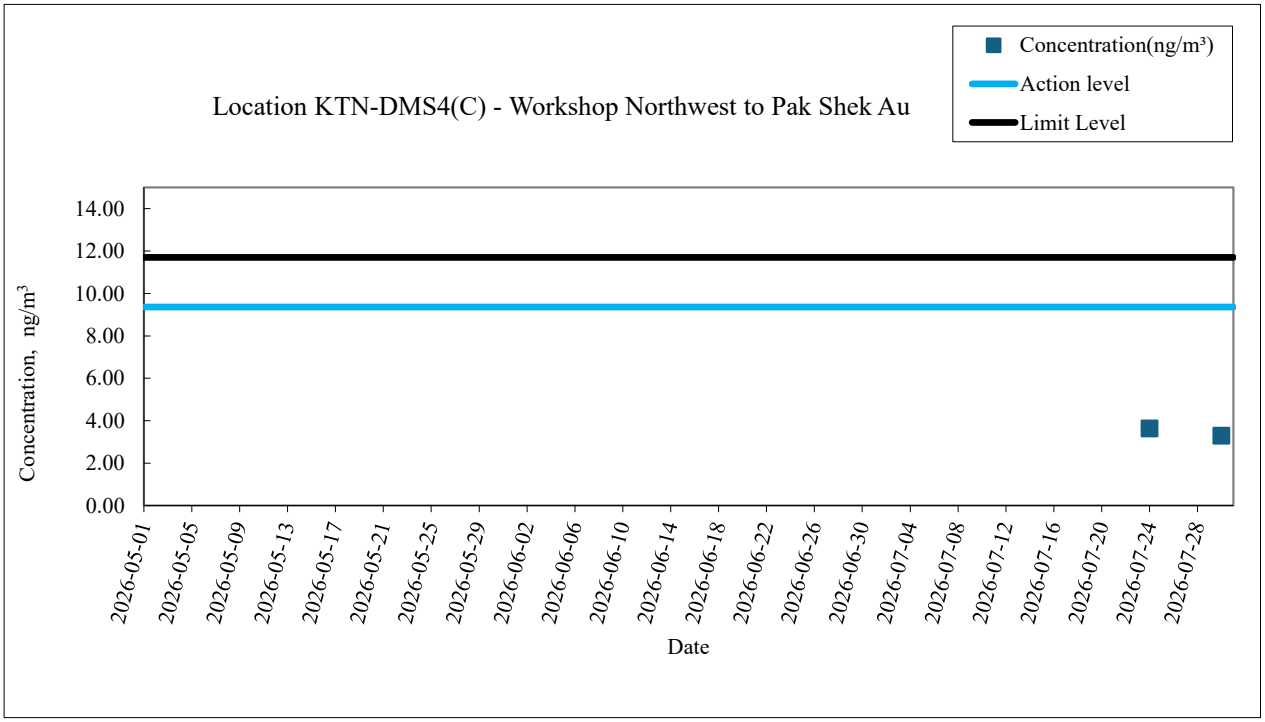
Appendix 8.1 Impact Ambient Arsenic Monitoring Data & Graphical Presentations & Calibration Certificates (sourced from the First Phase ET)

Location KTN-DMS4(A) - Temporary Structure at Pak Shek Au					
Date	Arsenic(μ g)	Standard Volume, Vstd (m^3)	Concentration(ng/m^3)	Action Level	Limit Level
2/7/2026	5.80	1635.7	3.55	9.36	11.70

Location KTN-DMS4(C) - Workshop Northwest to Pak Shek Au					
Date	Arsenic(μ g)	Standard Volume, Vstd (m^3)	Concentration(ng/m^3)	Action Level	Limit Level
24/7/2026	6.00	1650.7	3.63	9.36	11.70
30/7/2026	5.40	1642.9	3.29	9.36	11.70

Remarks: Monitoring at the 1st relocated location of KTN-DMS-4(A) (alternative location for KTN-DMS-4) was suspended since 8 July 2026 due to the loss of power supply. An alternative location (KTN-DMS-4(C)) was proposed by First Phase ET. The first monitoring conducted at KTN-DMS-4(C) was on 24 July 2026


Location KTN-DMS4(A) - Temporary Structure at Pak Shek Au
Concentration(ng/m³)
Action level
Limit Level
Concentration, ng/m³
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
2026-05-01
2026-05-05
2026-05-09
2026-05-13
2026-05-17
2026-05-21
2026-05-25
2026-05-29
2026-06-02
2026-06-06
2026-06-10
2026-06-14
2026-06-18
2026-06-22
2026-06-26
2026-06-30
2026-07-04
2026-07-08
2026-07-12
2026-07-16
2026-07-20
2026-07-24
2026-07-28
Date


Location KTN-DMS4(C) - Workshop Northwest to Pak Shek Au
Concentration(ng/m³)
Action level
Limit Level
Concentration, ng/m³
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
2026-05-01
2026-05-05
2026-05-09
2026-05-13
2026-05-17
2026-05-21
2026-05-25
2026-05-29
2026-06-02
2026-06-06
2026-06-10
2026-06-14
2026-06-18
2026-06-22
2026-06-26
2026-06-30
2026-07-04
2026-07-08
2026-07-12
2026-07-16
2026-07-20
2026-07-24
2026-07-28
Date

Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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Table I - Ambient Arsenic Concentration on 2nd July 2026

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 43822)	Standard Volume, Vstd = $Qstd_{avg}$ x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m^3	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	5.8 µg	1635.7 m^3	3.55 ng/m^3	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

Parameters	Action Level	Limit Level
Ambient Arsenic Concentration	9.36 ng/m^3 80% of 11.7ng/m^3 –the highest ambient concentration predicted during the construction phase with mitigation measures implemented	11.7 ng/m^3 - the highest ambient arsenic concentration predicted during the construction phase with mitigation measures implemented

	Name	Signature	Date
Prepared by:	Meiling Tang	Me.L	12th August 2026
Checked by:	Ivy Tam	Ivy	12th August 2026

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Report No.:	43822
Date of Issue:	2026-07-14
Date Received:	2026-07-03
Date Tested:	2026-07-03
Date Completed:	2026-07-14

ATTN: **Ms Ivy Tam**

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 43822
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

Results:

Sample ID	260401/098
Sample No.	43822-1
Arsenic (µg)	5.8

Remarks: 1) < = less than
2) Results for the test material reported as received

**********END OF REPORT**********

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**

PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
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Report No.:	QC43822
Date of Issue:	2026-07-14
Date Received:	2026-07-03
Date Tested:	2026-07-03
Date Completed:	2026-07-14

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

Parameter	Method Blank	Acceptance
Arsenic (μg)	<0.036	<0.036

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.06	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	99	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	99	90-110

Interference check solution A

Parameter	ICS A	Acceptance
Arsenic (μg)	<0.036	<0.036

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	102	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 43822

****

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TEST REPORT

Report No.:	QC43822
Date of Issue:	2026-07-14
Date Received:	2026-07-03
Date Tested:	2026-07-03
Date Completed:	2026-07-14

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	98	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	5	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	94	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 43822

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Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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Table I - Ambient Arsenic Concentration on 24th July 2026

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 43876)	Standard Volume, Vstd = $Qstd_{avg}$ x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m^3	KTN-DMS4(C) – Workshop northwest to Pak Shek Au	6.0 µg	1650.7 m^3	3.63 ng/m^3	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

Parameters	Action Level	Limit Level
Ambient Arsenic Concentration	9.36 ng/m^3 80% of 11.7ng/m^3 –the highest ambient concentration predicted during the construction phase with mitigation measures implemented	11.7 ng/m^3 - the highest ambient arsenic concentration predicted during the construction phase with mitigation measures implemented

	Name	Signature	Date
Prepared by:	Meiling Tang	Me.L	12th August 2026
Checked by:	Ivy Tam	Ivy	12th August 2026

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Ms Ivy Tam**

Report No.:	43876
Date of Issue:	2026-07-31
Date Received:	2026-07-27
Date Tested:	2026-07-27
Date Completed:	2026-07-31
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 43876
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

Results:

Sample ID	260601/020
Sample No.	43876-1
Arsenic (µg)	6.0

Remarks: 1) < = less than
2) Results for the test material reported as received

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General Manager

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
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ATTN: **Ms Ivy Tam**

Report No.:	QC43876
Date of Issue:	2026-07-31
Date Received:	2026-07-27
Date Tested:	2026-07-27
Date Completed:	2026-07-31
Page:	1 of 2

QC report:

Method Blank

Parameter	Method Blank	Acceptance
Arsenic (μg)	<0.036	<0.036

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.06	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	102	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	98	90-110

Interference check solution A

Parameter	ICS A	Acceptance
Arsenic (μg)	<0.036	<0.036

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	100	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 43876

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General Manager

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TEST REPORT

Report No.:	QC43876
Date of Issue:	2026-07-31
Date Received:	2026-07-27
Date Tested:	2026-07-27
Date Completed:	2026-07-31
Page:	2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	95	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	4	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	90	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 43876

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Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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Table I - Ambient Arsenic Concentration on 30th July 2026

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 43899)	Standard Volume, Vstd = $Qstd_{avg}$ x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m^3	KTN-DMS4(C) – Workshop northwest to Pak Shek Au	5.4 µg	1642.9 m^3	3.29 ng/m^3	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

Parameters	Action Level	Limit Level
Ambient Arsenic Concentration	9.36 ng/m^3 80% of 11.7ng/m^3 –the highest ambient concentration predicted during the construction phase with mitigation measures implemented	11.7 ng/m^3 - the highest ambient arsenic concentration predicted during the construction phase with mitigation measures implemented

	Name	Signature	Date
Prepared by:	Meiling Tang	Mei L	12th August 2026
Checked by:	Ivy Tam	Ivy	12th August 2026

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

ATTN: **Ms Ivy Tam**

Report No.:	43899
Date of Issue:	2026-08-05
Date Received:	2026-07-31
Date Tested:	2026-07-31
Date Completed:	2026-08-05
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 43899
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

Results:

Sample ID	260601/003
Sample No.	43899-1
Arsenic (µg)	5.4

Remarks: 1) < = less than
2) Results for the test material reported as received

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General Manager

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
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Shatin, N.T., Hong Kong

Report No.:	QC43899
Date of Issue:	2026-08-05
Date Received:	2026-07-31
Date Tested:	2026-07-31
Date Completed:	2026-08-05
Page:	1 of 2

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

Parameter	Method Blank	Acceptance
Arsenic (μg)	<0.036	<0.036

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.06	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	100	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	100	90-110

Interference check solution A

Parameter	ICS A	Acceptance
Arsenic (μg)	<0.036	<0.036

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	96	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 43899

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TEST REPORT

Report No.:	QC43899
Date of Issue:	2026-08-05
Date Received:	2026-07-31
Date Tested:	2026-07-31
Date Completed:	2026-08-05

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	91	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	7	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	92	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 43899

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RSP - Respirable Suspended Particulates Sampler (PM 10)
Field Calibration Report

Station	KTN-DMS4A - Temporary Structure at Pak Shek Au	File No.	WMA20002/03/0037
Date:	15-May-26	Next Due Date:	14-Jul-26
Model No.	TE-6070X	Operator:	HL
Equipment No.:	WA-11-03	Serial No.	3225

Ambient Condition			
Temperature, Ta (K)	300.4	Pressure, Pa (mmHg)	758

Orifice Transfer Standard Information					
Serial No.:	2896	Slope, mc	0.0588	Intercept, bc	-0.01498
Last Calibration Date:	7-Jan-26	Next Calibration Date:		7-Jan-27	

Calibration of RSP Sampler

Calibration Point	ORIFICE					HVS	
	ΔH(orifice), in. of water	Del Hc (1)	Qstd (2) (CFM)	Qa (3) (CFM) **X -axis**	Qa (3) (m^3/min) **X -axis**	ΔW (HVS), in. of water	$[\Delta W \times (Ta + 30) / Pa]^{1/2}$ **Y-axis**
1	11.8	11.67	58.38	59.00	1.67	8.6	1.94
2	9.3	9.20	51.85	52.41	1.48	7.0	1.75
3	7.4	7.32	46.28	46.78	1.32	5.2	1.51
4	5.0	4.95	38.09	38.50	1.09	3.7	1.27
5	3.2	3.17	30.52	30.85	0.87	2.4	1.02

By Linear Regression of Y on X

Slope , mw = **0.0327** **Intercept, bw =** **0.0077**

Correlation coefficient* = **0.9984**

(1) DEL Hc = ΔH x (Pa/760*298/Ta)

(2) Qstd = $\{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\}/mc$ (m3/min)

(3) Qa = Qstd x (Ta / Pa) x (760 / 298) (m3/min)

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

Set Point Flow Rate., SFR

SFR = 1.13 x (760/Pa) x (Ta/298) = **40.36**

Sampler Well - Type Manometer Set Point, SSP

SSP = [(mw x SFR + bw)^2 x Pa] / (Ta + 30) = **4.04**

Remarks:

Conducted by: LEE MAN HEI Signature: Date: 15/5/26

Checked by: Ho Ka Chun Signature: Date: 15/5/26

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RSP - Respirable Suspended Particulates Sampler (PM 10)
Field Calibration Report

Station	KTN-DMS4(C) – Workshop northwest to Pak Shek Au	File No.	WMA20002/03/0038
Date:	21-Jul-26	Next Due Date:	20-Sep-26
Model No.	TE-6070X	Operator:	HL
Equipment No.:	WA-11-03	Serial No.	3225

Ambient Condition			
Temperature, Ta (K)	301.7	Pressure, Pa (mmHg)	757.9

Orifice Transfer Standard Information					
Serial No.:	2896	Slope, mc	0.0588	Intercept, bc	-0.01498
Last Calibration Date:	7-Jan-26	Next Calibration Date:		7-Jan-27	

Calibration of RSP Sampler

Calibration Point	ORIFICE					HVS	
	ΔH(orifice), in. of water	Del Hc (1)	Qstd (2) (CFM)	Qa (3) (CFM) **X -axis**	Qa (3) (m^3/min) **X -axis**	ΔW (HVS), in. of water	$[\Delta W \times (Ta + 30) / Pa]^{1/2}$ **Y-axis**
1	11.2	11.03	56.75	57.62	1.63	8.0	1.87
2	9.4	9.26	52.02	52.81	1.49	6.7	1.71
3	7.4	7.29	46.18	46.88	1.33	5.2	1.51
4	4.9	4.83	37.63	38.20	1.08	3.6	1.26
5	3.2	3.15	30.46	30.92	0.87	2.4	1.02

By Linear Regression of Y on X

Slope , mw = **0.0315** **Intercept, bw =** **0.0468**

Correlation coefficient* = **0.9996**

(1) DEL Hc = ΔH x (Pa/760*298/Ta)

(2) Qstd = $\{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\}/mc$ (m3/min)

(3) Qa = Qstd x (Ta / Pa) x (760 / 298) (m3/min)

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

Set Point Flow Rate., SFR

SFR = 1.13 x (760/Pa) x (Ta/298) = **40.54**

Sampler Well - Type Manometer Set Point, SSP

SSP = [(mw x SFR + bw)^2 x Pa] / (Ta + 30) = **4.01**

Remarks:

Conducted by: LEE MAN HEI Signature: Date: 21/7/2026

Checked by: Ho Ka Chun Signature: Date: 21/7/26

TISCH Environmental

RECALIBRATION DUE DATE:
January 7, 2027

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	January 7, 2026	**Rootsmeter S/N:** 438320	**Ta:** 294	°K
Operator:	Jim Tisch		**Pa:** 749.0	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **2896**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4440	3.2	2.00
2	3	4	1	1.0230	6.4	4.00
3	5	6	1	0.9110	7.9	5.00
4	7	8	1	0.8700	8.8	5.50
5	9	10	1	0.7170	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9947	0.6889	1.4135	0.9957	0.6896	0.8860
0.9905	0.9682	1.9990	0.9915	0.9692	1.2530
0.9885	1.0850	2.2349	0.9895	1.0861	1.4009
0.9873	1.1348	2.3440	0.9883	1.1359	1.4693
0.9819	1.3695	2.8270	0.9829	1.3709	1.7720
QSTD	**m=**	**2.07637**	**QA**	**m=**	**1.30019**
	b=	**-0.01498**		**b=**	**-0.00939**
	r=	**0.99998**		**r=**	**0.99998**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

For subsequent flow rate calculations:

Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$

Qa= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

Key
ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

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