

| | | | | | | File No. | MA20003/18/0010 |
|---|--|-------------------|---------------------------------------|-------------------------|---------------------------------|--------------------|-----------------------------------|
| | CKL 1 - Flat 12 | _ | | | | - | av. |
| Date: | | | Next Due Date: | | | _ | |
| Equipment No.: | A-0 | 1-18 | Model No.: | TE | 5170 | Serial No. | 0723 |
| | | | Ambient (| Condition | | | |
| Temperatu | re, Ta (K) | 302.7 | Pressure, Pa | (mmHg) | | 757.8 | |
| | | Oı | rifice Transfer Sta | andard Inform | ation | | |
| Serial | l No. | 3864 | Slope, mc | 0.05846 | Intercep | t, bc | -0.00313 |
| Last Calibra | ation Date: | 11-Jan-21 | | mc x Qstd + b | $c = [\Delta H \times (Pa/76)]$ | |)] ^{1/2} |
| Next Calibr | ation Date: | 11-Jan-22 | | | x (Pa/760) x (298 | | |
| | | | G 19 44 4 | PERCENCE I | | | |
| | 1 | | Calibration of | TSP Sampler | | TIX (C | |
| Calibration Point | ΔH (orifice), in. of water | | fice 0) x (298/Ta)] ^{1/2} | Qstd (CFM) X - axis | ΔW (HVS), in. of water | HVS [ΔW x (Pa/7 | 60) x (298/Ta)] ^{1/2} Y- |
| 1 | | 1 | 2.54 | | | | axis |
| 2 | 12.8 | | 3.54 3.16 | 60.69 54.18 | 9.8 8.0 | | 3.10 |
| 3 | 8.4 | | 2.87 | 49.17 | 5.9 | | 2.80 |
| 4 | 6.2 | | 2.47 | 42.25 | 4.0 | | 1.98 |
| 5 | 3.4 | | 1.83 | 31.30 | 1.9 | | 1.37 |
| By Linear Regr Slope , mw = Correlation | | _ | 9 981 | Intercept, bw : | -0.541 | 14 | |
| | Coefficient < 0.99 | | | - | | | |
| | | | Set Point C | Calculation | | | |
| | ield Calibration (ssion Equation, th | ne "Y" value acco | _ | x (Pa/760) x (2 | .98/Ta)] ^{1/2} | | |
| Therefore, So | et Point; W = (m | nw x Qstd + bw) | ² x (760 / Pa) x (′ | Γa / 298) = | 4.32 | | |
| Remarks: | | | | | | | |
| Conducted by: | Wong Sh | ing Kwai | Signature: | _ \text{\(\frac{1}{2}\) | <u> </u> | Date: | 6-Sep-21 |
| Checked by: | Henrv | Leung | Signature: | \-Pa | a Xon | Date: | 6-Sep-21 |



File No. MA20003/55/0010

| Project No. | CKL 2 - Flat 103 | 3 Cha Kwo Ling | Village | | | | |
|-------------------|----------------------------|------------------|--|-----------------------------|----------------------------------|-------------------------------|-------------------------------------|
| Date: | 6-Se | p-21 | Next Due Date: 6-Nov | | Nov-21 | Operator: | SK |
| Equipment No.: | A-0 | 1-55 | Model No.: | TE | E 5170 | Serial No. | 1956 |
| | | | Ambient C | andition | | | |
| Temperatur | re Ta (K) | 302.7 | Pressure, Pa | | | 757.8 | |
| Temperatu | ic, ia (K) | 302.7 | Tressure, ra | (mmrig) | | 737.0 | |
| | | Or | ifice Transfer Star | ndard Informa | ation | | |
| Serial | No. | 3864 | Slope, mc | 0.05846 | Intercept | , bc | -0.00313 |
| Last Calibra | ntion Date: | 11-Jan-21 | 1 | mc x Qstd + bo | $c = [\Delta H \times (Pa/760)]$ | $(298/Ta)]^{1/2}$ | |
| Next Calibra | ation Date: | 11-Jan-22 | | $Qstd = \{ [\Delta H \ x] $ | (Pa/760) x (298/7 | Γa)] ^{1/2} -bc} / mc | |
| | | | | | | | |
| | | | Calibration of | TSP Sampler | | | |
| Calibration | | Or | fice | | | HVS | |
| Point | ΔH (orifice), in. of water | [ΔH x (Pa/76 | 50) x (298/Ta)] ^{1/2} | Qstd (CFM) X - axis | ΔW (HVS), in. of water | | 0) x (298/Ta)] ^{1/2} •axis |
| 1 | 12.8 | | 3.54 | 60.69 | 9.8 | 3 | .10 |
| 2 | 10.8 | | 3.26 | 55.75 | 7.6 | 2 | .73 |
| 3 | 8.4 | | 2.87 | 49.17 | 6.0 | 2 | .43 |
| 4 | 5.6 | | 2.34 | 40.16 | 3.6 | 1 | .88 |
| 5 | 3.0 | | 1.72 | 29.41 | 1.9 | 1 | .37 |
| - | ession of Y on X | <u> </u> | | | | | |
| Slope, mw = | | _ | | Intercept, bw | -0.283 | 1 | |
| | coefficient* = | | .9979 | | | | |
| *If Correlation C | Coefficient < 0.99 | 0, check and red | calibrate. | | | | |
| | | | Set Point Ca | alculation | | | |
| From the TSP Fi | eld Calibration C | Curve, take Qstd | = 43 CFM | | | | |
| From the Regres | sion Equation, th | e "Y" value acco | ording to | | | | |
| | | mw x (| $\mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$ | (Pa/760) x (29 | 98/Ta)] ^{1/2} | | |
| Therefore, Se | et Point; W = (m | w x Qstd + bw) | ² x (760 / Pa) x (7 | Γa / 298) = | 4.40 | | |
| | | | | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| | | | | | | | |
| | | | | | 707 | | |
| Conducted by: | Wong Sh | ing Kwai | Signature: | <i>\</i> ? | <u> </u> | Date: | 6-Sep-21 |
| Checked by: | Henry | Leung | Signature: | \-lan | J Chang | Date: | 6-Sep-21 |
| | | | | 1 | .] [| | |



File No. MA20003/41/0008

| Project No. | KTD 2D - Next | to the SOR Offic | ce of Trunk Road T | '2 in Kai Tak A | area | _ | |
|-------------------------|----------------------------|------------------|--|--------------------------|---|-------------|--|
| Date: | 25-Se | p-21 | Next Due Date: | 25-] | 25-Nov-21 | | SK |
| Equipment No.: | A-01 | 1-41 | Model No.: | TE | E 5170 | Serial No. | 5280 |
| | | | • | | | _ | |
| | | | Ambient C | ondition | | | |
| Temperatur | re, Ta (K) | 302.6 | Pressure, Pa | (mmHg) | | 759.5 | |
| | | | | | | | |
| | | | ifice Transfer Star | | | | |
| Serial | | 3864 | Slope, mc | 0.05846 | Intercept | | -0.00313 |
| Last Calibra | | 11-Jan-21 | 1 | | $c = [\Delta H \times (Pa/760)]$ $(Pa/760) \times (298/7)$ | | |
| Next Calibra | ation Date: | 11-Jan-22 | | $Qsta = \{ \Delta H x$ | (Pa//00) X (298/) | [a)] -bc}/[| inc |
| | | • | Calibration of 7 | FSP Sampler | | | |
| e 111 . | | Or | fice | isi samplei | | HVS | |
| Calibration Point | ΔH (orifice), in. of water | | 50) x (298/Ta)] ^{1/2} | Qstd (CFM) X - axis | ΔW (HVS), in. of water | [ΔW x (Pa/ | 760) x (298/Ta)] ^{1/2} Y-axis |
| 1 | 13.4 | | 3.63 | 62.17 | 8.9 | | 2.96 |
| 2 | 11.6 | | 3.38 | 57.85 | 7.1 | 2.64 | |
| 3 | 8.3 | | 2.86 | 48.94 | 5.6 | | 2.35 |
| 4 | 6.0 | | 2.43 | 41.62 | 4.0 | | 1.98 |
| 5 | 3.0 | | 1.72 | 29.45 | 2.4 | | 1.54 |
| Slope, mw = Correlation | coefficient < 0.99 | 0 | .9954 | Intercept, bw = | 0.261 | 7 | |
| | | | Set Point Ca | alculation | | | |
| From the TSP Fi | eld Calibration C | urve, take Qstd | = 43 CFM | | | | |
| From the Regress | sion Equation, the | e "Y" value acco | ording to | | | | |
| | | mw x Q | $\mathbf{pstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$ | (Pa/760) x (29 | $98/Ta) ^{1/2}$ | | |
| Tl | t Deinte W. Com | O-+1 + 1 \ | ² x (760 / Pa) x (] | E- /208) | | | |
| Therefore, Se | et Point; w – (m | w x Qsia + bw) | x (/60 / Pa) x (1 | 1a / 298) – | 4.41 | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| | | | | | | | |
| Conducted by: | Wong Sh | ing Kwai | Signature: | K | <u></u> | Date: | 25-Sep-21 |
| Checked by: | Henry | Leung | Signature: | \-lea | g Xong | Date: | 25-Sep-21 |

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET



File No. MA20003/04/0008

| Project No. | KER 1 - Future | Residential Dev | elopment at Kerry | Godown | | | |
|-------------------|----------------------------|-------------------|--|-----------------------------|----------------------------------|------------------------------|--|
| Date: | 2-O | ct-21 | Next Due Date: | 2-Dec-21 | | Operator: | SK |
| Equipment No.: | A-0 | 1-04 | • | | TE 5170 | | 10595 |
| | | | Ambient C | ondition | | | |
| Temperatu | re, Ta (K) | 303 | Pressure, Pa | | | 758.1 | |
| | · · · | | | | | | |
| | | Ori | fice Transfer Sta | ndard Informa | ation | | |
| Serial | l No. | 3864 | * | | | -0.00313 | |
| Last Calibra | ation Date: | 11-Jan-21 | r | nc x Qstd + bo | $c = [\Delta H \times (Pa/760]]$ |)) x (298/Ta)] ¹ | /2 |
| Next Calibr | ation Date: | 11-Jan-22 | | $Qstd = \{ [\Delta H x] \}$ | (Pa/760) x (298/ | Γa)] ^{1/2} -bc} / n | nc |
| | | | | | | | |
| | ı | | Calibration of | TSP Sampler | | | |
| Calibration | | Or | fice | 1 | | HVS | |
| Point | ΔH (orifice), in. of water | [ΔH x (Pa/76 | (0) x (298/Ta)] ^{1/2} | Qstd (CFM) X - axis | ΔW (HVS), in. of water | | 60) x (298/Ta)] ^{1/2} /-axis |
| 1 | 13.4 | | 3.63 | 62.07 | 9.1 | | 2.99 |
| 2 | 10.6 | | 3.22 | 55.22 | 7.0 | 2.62 | |
| 3 | 8.4 | : | 2.87 | 49.16 | 5.6 | | 2.34 |
| 4 | 5.2 | : | 2.26 | 38.69 | 3.2 | | 1.77 |
| 5 | 3.0 | | 1.72 | 29.40 | 2.1 | | 1.44 |
| _ | coefficient* = | _ | 9978 | Intercept, bw = | -0.028 | 80 | |
| *If Correlation C | Coefficient < 0.9 | 90, check and red | calibrate. | | | | |
| | | | Set Point Ca | alculation | | | |
| From the TSP Fi | ield Calibration (| Curve, take Qstd | | | | | |
| From the Regres | ssion Equation, tl | ne "Y" value acc | ording to | | | | |
| | _ | | - | | 1/2 | | |
| | | mw x Q | $\mathbf{pstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$ | (Pa/760) x (29 | 98/Ta)] ^{1/2} | | |
| Therefore, Se | et Point; W = (m | w x Qstd + bw) | ² x (760 / Pa) x (⁷ | Ta / 298) = | 4.26 | | |
| | | | | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| | | | | | | | |
| | | | | la | ما | | |
| Conducted by: | Wong Sh | ing Kwai | Signature: | | // | Date: | 2-Oct-21 |
| • | | - | | | | _ | |
| Checked by: | Henry | Leung | Signature: | 1-Pa | - Mon | Date: | 2-Oct-21 |

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET



File No. MA20003/44/0009

| Project No. | KTD1 - Centre | of Excellence in | Paediatrics (Childs | ren's Hospital) | | | |
|-----------------------------|--|------------------|--|-------------------------------|----------------------------------|------------------------------|---|
| Date: | 2-0 | ct-21 | Next Due Date: | 2-Dec-21 | | Operator: | SK |
| Equipment No.: | .: <u>A-01-44</u> Model No.: <u>TE-5170</u> | | E-5170 | Serial No. | 1316 | | |
| | | | Ambient C | ondition | | | |
| Temperatu | re, Ta (K) | 303 | Pressure, Pa (mmHg) | | | 758.1 | |
| | | | | | | | |
| | | | ifice Transfer Sta | | | T. | |
| Serial | | 3864 | Slope, mc | 0.05846 | Intercept | | -0.00313 |
| Last Calibra | The state of the s | 11-Jan-21 | 4 | | $c = [\Delta H \times (Pa/760)]$ | | |
| Next Calibr | ration Date: | 11-Jan-22 | | $Qstd = \{ \Delta H x \}$ | (Pa/760) x (298/ | [a)] ^{1/2} -bc} / m | c |
| | | | Calibration of | TSP Samplar | | | |
| 6.17 | | Oı | fice | 191 Sampici | | HVS | |
| Calibration Point | ΔH (orifice), in. of water | | 60) x (298/Ta)] ^{1/2} | Qstd (CFM) X - axis | ΔW (HVS), in. of water | [ΔW x (Pa/76 | (60) x (298/Ta)] ^{1/2} (-axis |
| 1 | 13.6 | | 3.65 | 62.54 | 9.2 | , | 3.00 |
| 2 | 11.2 | | 3.31 | 56.75 | 7.2 | 2 | 2.66 |
| 3 | 8.2 | | 2.84 | 48.57 | 5.6 | 2 | 2.34 |
| 4 | 5.6 | | 2.34 | 40.15 | 3.3 | | 1.80 |
| 5 | 3.2 | | 1.77 | 30.36 | 1.8 | | 1.33 |
| Slope , mw = Correlation | coefficient* = | _ | .9978 | Intercept, bw : | -0.251 | 5 | |
| | | | Set Point Ca | alculation | | | |
| From the TSP Fi | ield Calibration (| Curve, take Qstd | = 43 CFM | | | | |
| From the Regres | ssion Equation, t | he "Y" value acc | ording to | | | | |
| | | mw x C | $\mathbf{0std} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$ | (Pa/760) x (29 | $98/Ta) ^{1/2}$ | | |
| Therefore, Se | et Point; W = (m | nw x Qstd + bw) | ² x (760 / Pa) x (′ | Ta / 298)= | 4.01 | | |
| Remarks: | | | | | | | |
| | | | | la | -1 | | |
| Conducted by: | Wong Sl | ning Kwai | Signature: | | <u></u> | Date: | 2-Oct-21 |
| Checked by: | Henry | Leung | Signature: | \-lem | , don | Date: | 2-Oct-21 |

High-Volume TSP Sampler





| | | | | | | File No. | MA20003/18/0011 |
|-----------------|----------------------------|-------------------------------------|---|---------------------|---|------------------------------------|--|
| Project No. | CKL 1 - Flat 121 | | | | | - | |
| Date: | 6-No | v-21 | Next Due Date: | 6-J | Jan-22 | Operator: | SK |
| Equipment No.: | A-01 | 1-18 | Model No.: | TE | E 5170 | Serial No. | 0723 |
| | | | Ambient | Condition | | | |
| Temperatur | re, Ta (K) | 299.4 | Pressure, Pa | (mmHg) | | 757.5 | |
| | | Or | ifice Transfer Sta | andard Inform | nation | | |
| Serial | No | 3864 | Slope, mc | 0.05846 | Intercep | t be | -0.00313 |
| | | 11-Jan-21 | Stope, file | | $\mathbf{pc} = [\Delta \mathbf{H} \times (\mathbf{Pa}/76)]$ | | |
| | | | | | x (Pa/760) x (298 | | |
| Next Calibra | ation Date: | 11-Jan-22 | | Qstu – {[ΔII] | X (F a/ /00) X (296) | /1a) _[-bc ₃ | / IIIC |
| | | | Calibration of | TSP Sampler | ı | | |
| Calibration | | Or | fice | <u> </u> | | HVS | 1/2 |
| Point | ΔH (orifice), in. of water | [ΔH x (Pa/76 | 0) x (298/Ta)] ^{1/2} | Qstd (CFM) X - axis | ΔW (HVS), in. of water | [ΔW x (Pa/7 | (60) x (298/Ta)] ^{1/2} Y-axis |
| 1 | 12.9 | 3 | 3.58 | 61.25 | 9.8 | 3.12 | |
| 2 | 10.3 | 3 | 3.20 | 54.73 | 8.0 | 2.82 | |
| 3 | 8.5 | 2 | 2.90 | 49.73 | 5.9 | | 2.42 |
| 4 | 6.2 | 2 | 2.48 | 42.48 | 4.0 | | 1.99 |
| 5 | 3.4 | 1 | .84 | 31.47 | 1.9 | | 1.37 |
| Ry Linear Regr | ession of Y on X | 7 | | | | | |
| | 0.0598 | | | Intercept, bw : | -0.524 | 11 | |
| Correlation | | 0. | 9982 | . | | | |
| | Coefficient < 0.99 | - | | - | | | |
| | | , | | | | | |
| | | | Set Point (| Calculation | | | |
| | eld Calibration C | _ | | | | | |
| From the Regres | sion Equation, th | e "Y" value acco | ording to | | | | |
| | | mw x (| $\mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W}]$ | x (Pa/760) x (2 | 298/Ta)] ^{1/2} | | |
| | | | 2.1.2 2.1. [2.1.] | () (- | | | |
| Therefore, Se | et Point; W = (m | $w \times Qstd + bw$) ² | x (760 / Pa) x (| Ta / 298) = | 4.23 | | |
| | | | | | | | |
| D 1 | | | | | | | |
| Remarks: | | | | | | | |
| | | | | W-1 | | | |
| Conducted by: | Wong Sh | ing Kwai | Signature: | X |)\ | Date: | 6-Nov-21 |
| conducted by. | wong sii | ing Kwai | oignature. | | 2 X27 | - Daic. | 0-1101-21 |
| Checked by: | Henry | Leung | Signature: | 1-Pa | 2 Xon | Date: | 6-Nov-21 |



File No. MA20003/55/0011

| Project No. | CKL 2 - Flat 10 | 3 Cha Kwo Ling | Village | | | | | |
|---|--------------------------|-------------------|--|----------------------------|----------------------------------|-------------------------------|-------------------------------|--|
| Date: | 6-N | ov-21 | Next Due Date: | :6-Jan-22 | | Operator: | SK | |
| Equipment No.: | A-0 | 01-55 | | | E 5170 | | 1956 | |
| | | | Ambient C | ondition | | | | |
| Temperatur | re, Ta (K) | 299.4 | Pressure, Pa | | | 757.5 | | |
| • | | | | | • | | | |
| | | Or | ifice Transfer Star | ndard Informa | ation | | | |
| Serial | Serial No. 3864 | | Slope, mc | 0.05846 | Intercept | • | | |
| Last Calibra | ntion Date: | 11-Jan-21 | 1 | | $c = [\Delta H \times (Pa/760)]$ | | | |
| Next Calibra | ation Date: | 11-Jan-22 | (| $Qstd = \{ [\Delta H \ x]$ | (Pa/760) x (298/7 | [a)] ^{1/2} -bc} / mc | | |
| | | | | | | | | |
| | <u> </u> | | Calibration of 7 | FSP Sampler | Ι | THE IC | | |
| Calibration Point | ΔH (orifice), | | fice 50) x (298/Ta)] ^{1/2} | Qstd (CFM) | ΔW (HVS), in. | | 0) x (298/Ta)] ^{1/2} | |
| | in. of water | | | X - axis | of water | | axis | |
| 1 | 12.7 | 1 | 3.55 | 60.77 | 9.8 | | .12 | |
| 2 | 10.7 | 1 | 3.26 | 55.78 | 7.6 | | .75 | |
| 3 | 8.4 | 1 | 2.89 | 49.43 | 6.0 | | .44 | |
| 5 | 5.5 2.9 | | 2.34 1.70 | 40.01 29.07 | 3.6 1.9 | | .37 | |
| By Linear Regr Slope , mw = Correlation | 0.0544 coefficient* = | 0 | .9978 | Intercept, bw | -0.246 | 1 | | |
| *If Correlation C | Coefficient < 0.9 | 90, check and red | calibrate. | | | | | |
| | | | Set Point Ca | alculation | | | | |
| | | Curve, take Qstd | | | | | | |
| From the Regres | sion Equation, tl | ne "Y" value acc | ording to | | | | | |
| | | mw x (| $Qstd + bw = [\Delta W x]$ | (Pa/760) x (29 | 98/Ta)] ^{1/2} | | | |
| Therefore, Se | et Point; W = (m | nw x Qstd + bw) | ² x (760 / Pa) x (7 | Γa / 298) = | 4.42 | | | |
| Remarks: | | | | | | | | |
| Conducted by: | Wong Sl | ning Kwai | Signature: | \(\frac{1}{2}\) | <u></u> | Date: | 6-Nov-21 | |
| Checked by: | Henry | Leung | Signature: | \-la | Jan | Date: | 6-Nov-21 | |



File No. MA20003/41/0009

| Project No. | KTD 2D - Next | to the SOR Offic | ce of Trunk Road T | 2 in Kai Tak A | area | | |
|--|----------------------------|---------------------------------------|---|-------------------------------|------------------------|------------------------------|--|
| Date: | 25-N | Jov-21 | Next Due Date: | 25- | Jan-22 | Operator: | SK |
| Equipment No.: | |)1-41 | | TE | E 5170 | _ | 5280 |
| | | | Ambient C | ondition | | | |
| Temperatu | re Ta(K) | 293.6 | Pressure, Pa | | | 763.5 | |
| Temperatu | 10, 14 (11) | 273.0 | i ressure, ru | (mmig) | | 703.3 | |
| | | Or | ifice Transfer Star | ndard Informa | ation | | |
| Serial | No. | 3864 | Slope, mc | 0.05846 | Intercept | t, bc | -0.00313 |
| Last Calibra | ation Date: | 11-Jan-21 | mc x Qstd + bc = $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | | | | |
| Next Calibra | ation Date: | 11-Jan-22 | | $Qstd = \{ [\Delta H \ x] \}$ | (Pa/760) x (298/7 | Γa)] ^{1/2} -bc} / r | nc |
| | | • | | | | | |
| | | | Calibration of T | ΓSP Sampler | | | |
| Calibration | | Or | fice | | | HVS | |
| Point | ΔH (orifice), in. of water | [ΔH x (Pa/76 | 50) x (298/Ta)] ^{1/2} | Qstd (CFM) X - axis | ΔW (HVS), in. of water | | 760) x (298/Ta)] ^{1/2} Y-axis |
| 1 | 13.2 | | 3.67 | 62.81 | 9.2 | | 3.06 |
| 2 | 11.4 | | 3.41 | 58.37 | 7.4 | | 2.75 |
| 3 | 8.2 | | 2.89 | 49.52 | 5.8 | | 2.43 |
| 4 | 6.0 | | 2.47 | 42.36 | 4.2 | | 2.07 |
| 5 | 3.0 | | 1.75 | 29.97 | 2.3 | | 1.53 |
| By Linear Regr Slope , mw = Correlation *If Correlation C | 0.0454 coefficient* = | _ | .9974 | intercept, bw = | 0.1604 | 4 | |
| | | | Set Point Ca | lculation | | | |
| | | Curve, take Qstd he "Y" value acco | | | | | |
| rom me regres | sion Equation, u | | _ | | | | |
| | | mw x Q | $\mathbf{Qstd} + \mathbf{bw} = [\Delta \mathbf{W} \ \mathbf{x}]$ | (Pa/760) x (29 | 98/Ta)] ^{1/2} | | |
| Therefore, Se | et Point; W = (m | nw x Qstd + bw) | ² x (760 / Pa) x (7 | Γa / 298) = | 4.38 | | |
| Remarks: | | | | | | | |
| Conducted by: | Wong Sl | ning Kwai | Signature: | K | <u></u> | Date: | 25-Nov-21 |
| Checked by: | Henry | Leung | Signature: | Plan | y day | Date: _ | 25-Nov-21 |



RECALIBRATION
DUE DATE:

January 11, 2022

Certificate of Calibration

Calibration Certification Information

Cal. Date: January 11, 2021

Rootsmeter S/N: 438320

°K

Operator: Jim Tisch

Ta: 297
Pa: 750.1

mm Hg

Calibration Model #: TE-5025A

Calibrator S/N: 3864

| Run | Vol. Init (m3) | Vol. Final (m3) | ΔVol. (m3) | ΔTime (min) | ΔP (mm Hg) | ΔH (in H2O) |
|-----|-------------------|--------------------|---------------|----------------|---------------|----------------|
| 1 | 1 | 2 | 1 | 1.4470 | 3.2 | 2.00 |
| 2 | 3 | 4 | 1 | 1.0210 | 6.4 | 4.00 |
| 3 | 5 | 6 | 1 | 0.9140 | 8.0 | 5.00 |
| 4 | , 7 | 8 | 1 | 0.8670 | 8.8 | 5.50 |
| 5 | 9 | 10 | 1 | 0.7140 | 12.9 | 8.00 |

| | Data Tabulation | | | | | | |
|--------|-----------------|---|--------|----------|---------------------------|--|--|
| Vstd | Qstd | $\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}$ | | Qa | $\sqrt{\Delta H (Ta/Pa)}$ | | |
| (m3) | (x-axis) | (y-axis) | Va | (x-axis) | (y-axis) | | |
| 0.9860 | 0.6814 | 1.4073 | 0.9957 | 0.6881 | 0.8899 | | |
| 0.9818 | 0.9616 | 1.9902 | 0.9915 | 0.9711 | 1.2585 | | |
| 0.9797 | 1.0719 | 2.2251 | 0.9893 | 1.0824 | 1.4071 | | |
| 0.9786 | 1.1288 | 2.3337 | 0.9883 | 1.1399 | 1.4757 | | |
| 0.9732 | 1.3630 | 2.8146 | 0.9828 | 1.3765 | 1.7798 | | |
| | m= | 2.06566 | | m= | 1.29348 | | |
| QSTD | b= | 0.00315 | QA | b= | 0.00199 | | |
| | r= | 0.99996 | | r= | 0.99996 | | |

| Calculations | | | | | | | |
|--------------|--|-----|--|--|--|--|--|
| Vstd= | ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta) | Va= | ΔVol((Pa-ΔP)/Pa) | | | | |
| Qstd= | 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: calibrate | ΔH: calibrator manometer reading (in H2O) | | | | | |
| ΔP: rootsme | ter manometer reading (mm Hg) | | | | | |
| Ta: actual ab | osolute 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

FAX: (513)467-9009

www.tisch-env.com



Certificate of Calibration - Wind Monitoring Station

Description: Yau Lai Estate, Bik Lai House

Manufacturer: <u>Davis Instruments</u>

Model No.: <u>Davis7440</u>

Serial No.: MC01010A44

Equipment No.: <u>SA-03-04</u>

Date of Calibration <u>20-Aug-2021</u>

Next Due Date <u>20-Feb-2022</u>

1. Performance check of Wind Speed

| Wind Speed, m/s | | Difference D (m/s) |
|-------------------------|-----------------------|--------------------|
| Wind Speed Reading (V1) | Anemometer Value (V2) | D = V1 - V2 |
| 0.0 | 0.0 | 0.0 |
| 1.5 | 1.5 | 0.0 |
| 2.8 | 2.7 | 0.1 |
| 4.0 | 4.1 | -0.1 |

2. Performance check of Wind Direction

| Wind Direction (°) | | Difference D (°) |
|-----------------------------|---------------------------|------------------|
| Wind Direction Reading (W1) | Marine Compass Value (W2) | D = W1 - W2 |
| 0 | 0 | 0.0 |
| 90 | 90 | 0.0 |
| 180 | 180 | 0.0 |
| 270 | 270 | 0.0 |

Test Specification:

- 1. Performance Wind Speed Test The wind meter was on-site calibrated against the anemometer
- 2. Performance Wind Direction Test The wind meter was on-site calibrated against the marine compass at four direction

Calibrated by: Approved by: Approved by: Henry Leung