| Station | Kwun Tong Go | overnment Sec | ondary School (ID) | lA) | Operator: | Leung Yi | u Ting |
|----------------------|-------------------|------------------|--|-------------------------------------|--------------------|------------------------|---------|
| Date: | 27-Oct-13 | | | | Next Due Date: | 27-Dec | :-13 |
| Pump No.: | 763 | | | V | erified Against: | O.T.S | 0988 |
| Equipment No.: | A-001-64T | | | I | Expiration Date: | 20-May | /-14 |
| | | | | | | | |
| 0 | | | Ambient (| Condition | | | |
| Tempera | ture, Ta | 302 | Kelvin | Pressu | re, Pa | 756.9 | mmHg |
| | | | | | | • | |
| | | Oı | ifice Transfer Sta | ndard Informat | ion | | |
| Equipme | ent No.: | 988 | Slope, mc | 1.94 | 727 | Intercept, bc | 0.02332 |
| Last Calibra | ition Date: | 20-May-13 | | ma v Oatd ha - | - III (D-/7(A) | (200/TE >)1/2 | |
| Next Calibra | ation Date: | 20-May-14 | | mc x Qstd + bc = | = [H X (Pa//00) | X (298/1a)] | |
| | | • | | | | | |
| | | | Calibration of | TSP Sampler | | | |
| Calibration Point | H in. of water | [H x (Pa/70 | 60) x (298/Ta)] ^{1/2} | Qstd (m³/min) X - axis | W in. of oil | [ΔW x (Pa/760) > Y-axi | , - |
| 1 | 9.2 | | 3.01 | 1.53 | 5.8 | 2.39 | |
| 2 | 8.5 | | 2.89 | 1.47 | 5.0 | 2.22 | |
| 3 | 6.2 | | 2.47 | 1.26 | 3.4 | 1.83 | |
| 4 | 4 | 1 | 1.98 | 1.00 | 2.3 | 1.50 | |
| 5 | 2.5 | | 1.57 | 0.79 | 1.4 | 1.17 | |
| By Linear Regr | | X | 110 / | 0.75 | 1.1 | 1.17 | |
| Slope, mw = | | | | Intercept, bw = | | -0.108 | 18 |
| Correlation C | | | 9954 | intercept, bw | | -0.100 | 10 |
| | - | | | | | | |
| | - 122 | | | | | - WW | |
| | | | Set Point C | alculation | | | |
| From the TSP Fig | eld Calibration | Curve, take Qs | $td = 1.21 \text{ m}^3/\text{min}$ (4) | 43 CFM) | | | |
| From the Regress | sion Equation, tl | he "Y" value a | ecording to | | | | |
| | | | • | | | | |
| | | m x | Qstd + b = [W x (I | Pa/760) x (298/T | a)] ^{1/2} | | |
| Therefore S | ot Doint W = (| m v Ootd + h) | x (760 / Pa) x (7 | To / 208) — | 2 | 20 | |
| Therefore, S | et romt w – (1 | iii x Qsiu + u) | x (/00 / Pa) x (1 | (a / 298) = - | 3 | .38 | |
| *If Correlation C | oefficient < 0.99 | 90, check and | ecalibrate again. | | | | |
| | | | Ç | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| - | | | , | | | | |
| - | 1 | | | 1000 | | | |
| QC Reviewer: | T leung | | Signature: | 4 | Date: | 27-10-13 | |

| Station | On Yat House | (ID2) | | Operator: Leung Yiu Ting | | | | |
|-------------------|------------------|----------------|--|--------------------------|------------------|------------------|----------------------------|--|
| Date: | 27-Oct-13 | en •€ | | Next Due Date: 27-Dec-13 | | | | |
| Pump No.: | 1654 | | | V | erified Against: | O.T.S | 0988 | |
| Equipment No.: | A-001-61T | | | 1 | Expiration Date: | 20-May | y-14 | |
| 7710 7001 | | | | | | | | |
| | | | Ambient C | Condition | | 3.000 | | |
| Tempera | ture, Ta | 302 | Kelvin | Pressi | ıre, Pa | 756.9 | mmHg | |
| | | | | | | | | |
| | | O | rifice Transfer Sta | ndard Informa | tion | | | |
| Equipme | ent No.: | 988 | Slope, mc | 1.94 | 727 | Intercept, bc | 0.02332 | |
| Last Calibra | ation Date: | 20-May-13 | | | III (D-/7(0) | (200/75)1/2 | | |
| Next Calibr | ation Date: | 20-May-14 | I | nc x Qstd + bc = | = [H X (Pa//60) | x (298/1a)] | | |
| | | | | | | | | |
| | | | Calibration of | TSP Sampler | | | | |
| Calibration | Н | | 1.0 | Qstd | W | [ΔW x (Pa/760) : | v (208/Ta)] ^{1/2} | |
| Point | in. of water | [H x (Pa/7 | 60) x (298/Ta)] ^{1/2} | (m³/min) | in. of oil | Y-ax | | |
| | | | | X - axis | | 200 2000 | | |
| 1 | 9.0 | | 2.97 | 1.51 | 5.9 | 2.41 | | |
| 2 | 7.0 | | 2.62 | 1.33 | 4.0 | 1.98 | | |
| 3 | 5.2 | | 2.26 | 1.15 | 3.0 | 1.72 | | |
| 4 | 4.1 | - | 2.01 | 1.02 | 2.3 | 1.50 | | |
| 5 | 2.6 | | 1.60 | 0.81 | 1.3 | 1.13 | | |
| By Linear Regr | | X | | | | | | |
| Slope, mw = | | | | Intercept, bw = | | -0.323 | 38 | |
| Correlation C | oefficient* = | 0 | .9966 | | | | | |
| | | | | *** | | | | |
| | | | #19 | | | | | |
| | | | Set Point Ca | | | | | |
| | | | $td = 1.21 \text{ m}^3/\text{min} (4)$ | 3 CFM) | | | | |
| From the Regress | sion Equation, t | he "Y" value a | ccording to | | | | | |
| | | m v | Qstd + b = [W x (P)] | 00/760) w (200/T | 2011/2 | | | |
| | | III X | Qsta + b - [w x (r | a//00) X (298/1 | a)j | | | |
| Therefore, S | Set Point W = (| m x Ostd + b | ² x (760 / Pa) x (T | (a/298) = | 3 | .41 | | |
| , | Ç | , | (| | | | | |
| *If Correlation C | oefficient < 0.9 | 90, check and | recalibrate again. | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Remarks: | | | | | | | | |
| _ | | | | | | | | |
| 15 | | | | | | | | |
| QC Reviewer: | XI Javia | | Signature: | | Date: | F-10-13 | | |

| Station | Sau Nga House | e (ID3) | | Operator: Leung Yiu Ting | | | | |
|-------------------|-------------------|----------------|--|--------------------------|---------------------|------------------|----------------------------|--|
| Date: | 27-Oct-13 | | | Next Due Date: 27-Dec-13 | | | | |
| Pump No.: | 1272 | | | V | erified Against: | O.T.S | 0988 | |
| Equipment No.: | A-001-40T | | | I | Expiration Date: | 20-May | y-14 | |
| | | | | | | | | |
| and the same | | 110 | Ambient (| Condition | | | | |
| Tempera | ture, Ta | 302 | Kelvin | Pressu | ıre, Pa | 756.9 | mmHg | |
| | | 200 | | 10- | | | | |
| | | Oı | ifice Transfer Sta | ndard Informat | tion | | | |
| Equipme | ent No.: | 988 | Slope, mc | 1.94 | 727 | Intercept, bc | 0.02332 | |
| Last Calibra | ition Date: | 20-May-13 | | ma v Oatd ha - | - III (D-/7(0) | (200/TD)1/2 | | |
| Next Calibra | ation Date: | 20-May-14 | | mc x Qstd + bc = | = [H X (Pa//60) | x (298/1a)] | | |
| | | | | | | | | |
| | | | Calibration of | TSP Sampler | | | | |
| Calibration | Н | | 1/2 | Qstd | W | [ΔW x (Pa/760) 2 | × (208/Ta)1 ^{1/2} | |
| Point | in. of water | [H x (Pa/7) | 50) x (298/Ta)] ^{1/2} | (m³/min) | in. of oil | Y-axi | , , | |
| | | | | X - axis | 2 | | | |
| 1 | 9.1 | - | 2.99 | 1.52 | 6.4 | 2.51 | | |
| 2 | 7.0 | - | 2.62 | 1.33 | 4.5 | 2.10 | | |
| 3 | 5.4 | | 2.30 | 1.17 | 3.5 | 1.85 | | |
| 4 | 4 | | 1.98 | 1.00 | 2.3 | 1.50 | | |
| 5 | 3.0 | | 1.72 | 0.87 | 1.5 | 1.21 | | |
| By Linear Regr | | X | | | | | | |
| Slope, $mw = $ | | _ | | Intercept, bw = | | -0.476 | <u>59</u> | |
| Correlation C | oefficient* = | 0 | .9987 | | | | | |
| | | | | | | | | |
| | | 25.101/00/2015 | | | | | | |
| | | | Set Point C | | | 8 13 80050 3534 | | |
| | | | $td = 1.21 \text{ m}^3/\text{min}$ (4) | 43 CFM) | | | | |
| From the Regress | sion Equation, tl | ne "Y" value a | ccording to | | | | | |
| | | m x | Qstd + b = [W x (I | Pa/760) x (298/T | (a)] ^{1/2} | | | |
| Therefore, S | et Point W = (1 | n x Qstd + b) | ²x(760/Pa)x(7 | Γa / 298) = | 3. | .66 | | |
| 41CO 1 O | CC 0.00 | 20 1 1 1 | 14 | | we have | | | |
| *If Correlation C | oemcient < 0.99 | 90, check and | recalibrate again. | | | | | |
| | | | | | | | | |
| D | | | | | | | | |
| Remarks: | | 1000000 | | | | | | |
| - | | (F-1) | | | | | | |
| OCP : | VI 10000 | | | | | 7 | | |
| QC Reviewer: | 11 Hung | | Signature: | | Date: |)7-10-13 | | |

| Station | Sau Ming Prim | iary School (IL | 94) | | Operator | : Leung Yi | u Ting |
|----------------------|--|-------------------------|--|------------------------------|--------------------|--|------------|
| Date: | 20-Oct-13 | | | | Next Due Date | :20-Dec | :-13 |
| Pump No.: | 1275 | | | V | erified Against | O.T.S | 0988 |
| Equipment No.: | A-001-28T | | | I | Expiration Date: | : 20-May | y-14 |
| | | | | | | | To account |
| | | | Ambient (| Condition | | | |
| Tempera | ture, Ta | 302 | Kelvin | Pressu | ire, Pa | 756.9 | mmHg |
| | | | | | | | |
| | | Oı | ifice Transfer Sta | ndard Informat | ion | | |
| Equipme | ent No.: | 988 | Slope, mc | 1.94 | 727 | Intercept, bc | 0.02332 |
| Last Calibra | ation Date: | 20-May-13 | | ma v Ostal I k | III (D /5(A) | (200 /TT >)1/2 | |
| Next Calibra | ation Date: | 20-May-14 | | mc x Qstd + bc = | = [H X (Pa//60) | x (298/1a)] | |
| | 38 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 |) * | | | | | |
| | | *** | Calibration of | TSP Sampler | | *** *** *** *** *** *** *** *** *** ** | |
| Calibration Point | H in. of water | [H x (Pa/7 | 50) x (298/Ta)] ^{1/2} | Qstd (m³/min) X - axis | W in. of oil | [ΔW x (Pa/760) > Y-axi | |
| 1 | 9.5 | | 3.06 | 1.56 | 6.0 | 2.43 | |
| 2 | 7.4 | | 2.70 | 1.37 | 4.5 | 2.10 | |
| 3 | 6.3 | | 2.49 | 1.27 | 3.3 | 1.80 | |
| 4 | 3.8 | | 1.93 | 0.98 | 2.1 | 1.44 | |
| 5 | 2.5 | | 1.57 | 0.79 | 1.4 | 1.17 | |
| By Linear Regr | ession of Y on 2 | X | | | | | |
| Slope, mw = | 1.6195 | _ | | Intercept, bw = | | -0.145 | 56 |
| Correlation C | oefficient* = | 0 | 9917 | | | | |
| | 97. | | | | | | |
| | | | | | | | |
| | HACCOM A PART OF THE PART OF T | | Set Point C | alculation | | | |
| From the TSP Fi | eld Calibration (| Curve, take Qs | $td = 1.21 \text{ m}^3/\text{min}$ (4) | 13 CFM) | | | |
| From the Regress | sion Equation, tl | ne "Y" value a | cording to | | | | |
| | | | | | 4.0 | | |
| | | m x | Qstd + b = [W x (I | Pa/760) x (298/T | a)] ^{1/2} | | |
| Thomasona C | at Daint W - (. | Oadd 1 h) ² | x (760/Pa)x (7 | 7 / 200) | | | |
| Therefore, S | ser rount w – (1 | ii x Qsta + b) | x (/60 / Pa) x (1 | (a / 298) = - | 3 | .35 | |
| *If Correlation C | oefficient < 0.99 | 90. check and i | ecalibrate again | | | | |
| | | o, oncon una | counciate again. | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| | | | | | | | |
| · <u></u> | | | | | | | |
| QC Reviewer: | XI leans | | Signature: | | Date: | 26-10-13 | |

| Station | Sau Mau Filig | Caulone Filma | ry School (1D3) | | Operator: | Leung Y1 | u I ing |
|-------------------|-------------------|-----------------|---|-----------------------|-------------------------|-----------------------------------|------------------|
| Date: | 20-Oct-13 | | | | Next Due Date: | 20-Dec | o-13 |
| Pump No.: | 10088 | | | V | erified Against: | O.T.S | 0988 |
| Equipment No.: | A-001-13T | | | 1 | Expiration Date: | 20-May | y-14 |
| | | | | | | | |
| | | | Ambient (| Condition | | | |
| Tempera | ture, Ta | 302 | Kelvin | Pressu | ıre, Pa | 756.9 | mmHg |
| 2 122 | | | | | | | |
| | | Oı | ifice Transfer Sta | ndard Informat | tion | (1 the second | |
| Equipme | ent No.: | 988 | Slope, mc | 1.94 | 727 | Intercept, bc | 0.02332 |
| Last Calibra | ation Date: | 20-May-13 | | | | | |
| Next Calibr | ation Date: | 20-May-14 | .1 | mc x Qstd + bc = | $= [H \times (Pa/760)]$ | $x (298/Ta)]^{1/2}$ | |
| | | 2.0 | | | | | |
| | | | Calibration of | TSP Sampler | | | |
| Calibration | Н | | | Qstd | 777 | F. W. (D. (E.(0)) | (200 / 27) 71/2 |
| Point | in. of water | [H x (Pa/76 | 60) x (298/Ta)] ^{1/2} | (m ³ /min) | W in. of oil | [ΔW x (Pa/760) x Y-ax i | 20 20 |
| Tomic | 1111 01 111101 | | | X - axis | III. 01 011 | 1-4x | 18 |
| 1 | 9.4 | | 3.04 | 1.55 | 6.2 | 2.47 | į s |
| 2 | 8.0 | | 2.80 | 1.43 | 5.0 | 2.22 | ! |
| 3 | 5.2 | | 2.26 | 1.15 | 3.8 | 1.93 | 1 |
| 4 | 4.1 | | 2.01 | 1.02 | 2.6 | 1.60 | r |
| 5 | 2.5 | | 1.57 | 0.79 | 1.5 | 1.21 | |
| By Linear Regr | ession of Y on 2 | X | | | | | |
| Slope, mw = | 1.6089 | _ | | Intercept, bw = | | -0.025 | 54 |
| Correlation C | oefficient* = | 0. | 9921 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | 4 | Set Point C | alculation | | | |
| From the TSP Fi | eld Calibration (| Curve, take Qs | $td = 1.21 \text{ m}^3/\text{min}$ (4) | 43 CFM) | | | |
| From the Regress | sion Equation, th | ne "Y" value ac | ecording to | | | | |
| | | | _ | | | | |
| | | m x | Qstd + b = [W x (I | Pa/760) x (298/T | $[a]^{1/2}$ | | |
| m1 0 0 | | 0.1.1.2 | | | | | |
| Therefore, S | Set Point W = (1) | n x Qsta + b) | x (760 / Pa)x (7 | (a / 298) = | 3. | .76 | |
| *If Correlation C | cefficient < 0.00 | On check and a | recalibrate again | | | | |
| ii conclution c | ocincient (0.5) | o, check and i | coanorate agam. | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| ixciliai ks. | | | 10 No. | | | | |
| 9- | | | | | | | |
| OC P | W-1- | | G: | /_ | 400 | Sa | |
| QC Reviewer: | 7 / lakg | | Signature: | | Date: | 20-10-B | |

| Date: 24-Dec-13 Pump No.: 763 Tof3 Verified Against: 24-Feb-14 Dec Pate: 24-Feb-14 Verified Against: 20-Msy-14 Equipment No.: A-001-64T Expiration Date: 20-Msy-14 Corfice Transfer Standard Information Equipment No.: 988 Slope, me 1.94727 Intercept, bc 0.02332 Last Calibration Date: 20-Msy-13 Post of TSP Sampler Calibration of Water [H x (Pa/760) x (298/Ta)] ^{1/2} X - axis 1 9.0 3.04 1.55 5.8 2.44 2 8.1 2.88 1.47 5.0 2.27 3 6.4 2.56 1.30 3.5 1.90 4 4.3.3 2.10 1.07 2.2 1.50 Super sme 1.1862 Date: Machine 1.12 | Station | n Kwun Tong Go | overnment Sec | ondary School (ID | 1A) | Operator | : Choi Wi | ng Ho |
|--|--|--------------------|----------------|--|------------------|--------------------|----------------------------|---------|
| Expiration Date: 20-May-14 20-May-14 20-May-14 20-May-14 20-May-13 20-May-14 20-May-13 20-May-14 20-May-14 20-May-14 | Date | : 24-Dec-13 | | | | Next Due Date | :24-Fel | o-14 |
| Calibration H | Pump No. | :763 | e e | | 7 | Verified Against | O.T.S | - 0988 |
| Temperature, Ta 289 Kelvin Pressure, Pa 756.9 mmHg | Equipment No. | :A-001-64T | i i | | | Expiration Date: | 20-Ma | y-14 |
| Temperature, Ta 289 Kelvin Pressure, Pa 756.9 mmHg | | | | | | | | |
| Calibration Date: 20-May-13 | | | | Ambient | Condition | | | |
| Equipment No.: 988 Slope, mc 1.94727 Intercept, bc 0.02332 Last Calibration Date: $20\text{-May-}14$ mc x Qstd + bc = [H x (Pa/760) x (298/Ta)]^{1/2} $(298/Ta)]^{1/2}$ Calibration of TSP Sampler Calibration of TSP Sampler Calibration Point in. of water in. of wa | Tempera | ature, Ta | 289 | Kelvin | Press | ure, Pa | 756.9 | mmHg |
| Equipment No.: 988 Slope, mc 1.94727 Intercept, bc 0.02332 Last Calibration Date: $20\text{-May-}14$ mc x Qstd + bc = [H x (Pa/760) x (298/Ta)]^{1/2} $(298/Ta)]^{1/2}$ Calibration of TSP Sampler Calibration of TSP Sampler Calibration Point in. of water in. of wa | | 20-100 | | | | | | |
| Last Calibration Date: 20-May-13 | | | O | rifice Transfer Sta | andard Informa | tion | | |
| Next Calibration Date: 20-May-14 mc x Qstd + bc = [H x (Pa/760) x (298/Ta)]^{1/2} Calibration of TSP Sampler Calibration H in. of water [H x (Pa/760) x (298/Ta)]^{1/2} Qstd (m³/min) X - axis Min. of oil Y-axis Y-axis 1 9.0 3.04 1.55 5.8 2.44 2 8.1 2.88 1.47 5.0 2.27 3 6.4 2.56 1.30 3.5 1.90 3.04 4.3 2.10 1.07 2.2 1.50 3.5 1.90 3.04 4.3 2.10 1.07 2.2 1.50 3.5 1.16 3.5 3.8 3.16 3.5 | Equipm | ent No.: | 988 | Slope, mc | 1.94 | 1727 | Intercept, bc | 0.02332 |
| Next Calibration Date: 20-May-14 | Last Calibr | ation Date: | 20-May-13 | , | me v Ostd + he | = [H v (Pa/760) | v (208/Ta)1 ^{1/2} | |
| Calibration Point In. of water $[H \times (Pa/760) \times (298/Ta)]^{1/2}$ $\frac{Ostd}{(m^3/min)}$ $\frac{W}{X - axis}$ $\frac{[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}}{Y - axis}$ $\frac{1}{2}$ $\frac{9.0}{2}$ $\frac{3.04}{2}$ $\frac{1.55}{2}$ $\frac{5.8}{2}$ $\frac{2.44}{2}$ $\frac{2.88}{3}$ $\frac{1.47}{2}$ $\frac{5.0}{2}$ $\frac{2.27}{2}$ $\frac{3}{2}$ $\frac{6.4}{2}$ $\frac{2.56}{2}$ $\frac{1.30}{2}$ $\frac{3.5}{2}$ $\frac{1.90}{2}$ $\frac{1.90}{2}$ $\frac{3.5}{2}$ $\frac{1.90}{2}$ $\frac{1.90}{2}$ $\frac{5}{2}$ $\frac{2.8}{2}$ $\frac{1.70}{2}$ $\frac{0.86}{2}$ $\frac{1.3}{2}$ $\frac{1.16}{2}$ $\frac{1.16}{2}$ $\frac{Set\ Point\ Calculation}{2}$ From the TSP Field Calibration Curve, take Qstd = 1.21 m ³ /min (43 CFM) From the Regression Equation, the "Y" value according to $\frac{1.21}{2}$ $\frac{1.22}{2}$ 1.2 | Next Calibr | ration Date: | 20-May-14 | , | ine x Qstu + be | - [11 x (1 a/ /00) | x (290/1a)j | |
| Calibration Point In. of water $[H \times (Pa/760) \times (298/Ta)]^{1/2}$ $\frac{Ostd}{(m^3/min)}$ $\frac{W}{X - axis}$ $\frac{[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}}{Y - axis}$ $\frac{1}{2}$ $\frac{9.0}{2}$ $\frac{3.04}{2}$ $\frac{1.55}{2}$ $\frac{5.8}{2}$ $\frac{2.44}{2}$ $\frac{2.88}{3}$ $\frac{1.47}{2}$ $\frac{5.0}{2}$ $\frac{2.27}{2}$ $\frac{3}{2}$ $\frac{6.4}{2}$ $\frac{2.56}{2}$ $\frac{1.30}{2}$ $\frac{3.5}{2}$ $\frac{1.90}{2}$ $\frac{1.90}{2}$ $\frac{3.5}{2}$ $\frac{1.90}{2}$ $\frac{1.90}{2}$ $\frac{5}{2}$ $\frac{2.8}{2}$ $\frac{1.70}{2}$ $\frac{0.86}{2}$ $\frac{1.3}{2}$ $\frac{1.16}{2}$ $\frac{1.16}{2}$ $\frac{Set\ Point\ Calculation}{2}$ From the TSP Field Calibration Curve, take Qstd = 1.21 m ³ /min (43 CFM) From the Regression Equation, the "Y" value according to $\frac{1.21}{2}$ $\frac{1.22}{2}$ 1.2 | | | | | | | | |
| Calibration Point in. of water [H x (Pa/760) x (298/Ta)] | | | · | Calibration of | | | | |
| 2 8.1 2.88 1.47 5.0 2.27 3 6.4 2.56 1.30 3.5 1.90 4 4.3 2.10 1.07 2.2 1.50 5 2.8 1.70 0.86 1.3 1.16 By Linear Regression of Y on X Slope, mw = 1.8562 Intercept, bw = -0.4662 Correlation Coefficient* = 0.9980 Set Point Calculation From the TSP Field Calibration Curve, take Qstd = 1.21 m³/min (43 CFM) From the Regression Equation, the "Y" value according to m x Qstd + b = [W x (Pa/760) x (298/Ta)]^{1/2} Therefore, Set Point W = (m x Qstd + b)^2 x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. | ESPECIAL CONTROL CONTROL CONTROL CONTROL | 1000000 | [H x (Pa/7 | 60) x (298/Ta)] ^{1/2} | (m³/min) | | [15] NO. | |
| 3 6.4 2.56 1.30 3.5 1.90 4 4.3 2.10 1.07 2.2 1.50 5 2.8 1.70 0.86 1.3 1.16 By Linear Regression of Y on X Slope, mw = 1.8562 Intercept, bw = -0.4662 Correlation Coefficient* = 0.9980 Set Point Calculation From the TSP Field Calibration Curve, take Qstd = 1.21 m³/min (43 CFM) From the Regression Equation, the "Y" value according to m x Qstd + b = [W x (Pa/760) x (298/Ta)] ^{1/2} Therefore, Set Point W = (m x Qstd + b) ² x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. | 1 | 9.0 | | 3.04 | 1.55 | 5.8 | 2.44 | 1 |
| 4 4.3 2.10 1.07 2.2 1.50 5 2.8 1.70 0.86 1.3 1.16 By Linear Regression of Y on X Slope, mw = 1.8562 Intercept, bw = -0.4662 Correlation Coefficient* = 0.9980 Set Point Calculation From the TSP Field Calibration Curve, take Qstd = 1.21 m³/min (43 CFM) From the Regression Equation, the "Y" value according to m x Qstd + b = [W x (Pa/760) x (298/Ta)] 1/2 Therefore, Set Point W = (m x Qstd + b)² x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. | 2 | 8.1 | | 2.88 | 1.47 | 5.0 | 2.27 | 7 |
| | 3 | 6.4 | | 2.56 | 1.30 | 3.5 | 1.90 |) |
| By Linear Regression of Y on X Slope , mw = 1.8562 | 4 | 4.3 | | 2.10 | 1.07 | 2.2 | 1.50 |) |
| Slope , mw = 1.8562 Intercept, bw = -0.4662 Correlation Coefficient* = 0.9980 Set Point Calculation From the TSP Field Calibration Curve, take Qstd = 1.21 m³/min (43 CFM) From the Regression Equation, the "Y" value according to m x Qstd + b = [W x (Pa/760) x (298/Ta)]^{1/2} Therefore, Set Point W = (m x Qstd + b)^2 x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. | 5 | 2.8 | | 1.70 | 0.86 | 1.3 | 1.16 | j |
| Set Point Calculation From the TSP Field Calibration Curve, take Qstd = 1.21 m³/min (43 CFM) From the Regression Equation, the "Y" value according to m x Qstd + b = [W x (Pa/760) x (298/Ta)] ^{1/2} Therefore, Set Point W = (m x Qstd + b)² x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. | By Linear Regr | ession of Y on 2 | X | | | | | |
| Set Point Calculation From the TSP Field Calibration Curve, take Qstd = 1.21 m³/min (43 CFM) From the Regression Equation, the "Y" value according to m x Qstd + b = [W x (Pa/760) x (298/Ta)] ^{1/2} Therefore, Set Point W = (m x Qstd + b) ² x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. | Slope, mw = | 1.8562 | _ | | Intercept, bw = | | -0.460 | 62 |
| From the TSP Field Calibration Curve, take Qstd = 1.21 m³/min (43 CFM) From the Regression Equation, the "Y" value according to m x Qstd + b = [W x (Pa/760) x (298/Ta)] ^{1/2} Therefore, Set Point W = (m x Qstd + b)² x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. | Correlation C | coefficient* = | 0. | .9980 | | | | |
| From the TSP Field Calibration Curve, take Qstd = 1.21 m³/min (43 CFM) From the Regression Equation, the "Y" value according to m x Qstd + b = [W x (Pa/760) x (298/Ta)] ^{1/2} Therefore, Set Point W = (m x Qstd + b)² x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. | | 15.00 | | | | | | |
| From the TSP Field Calibration Curve, take Qstd = 1.21 m³/min (43 CFM) From the Regression Equation, the "Y" value according to m x Qstd + b = [W x (Pa/760) x (298/Ta)] ^{1/2} Therefore, Set Point W = (m x Qstd + b) ² x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. | V | | | | | a. (2 | | |
| From the Regression Equation, the "Y" value according to $\mathbf{m} \times \mathbf{Q} \times \mathbf{M} + \mathbf{b} = [\mathbf{W} \times (\mathbf{Pa}/760) \times (298/\mathbf{Ta})]^{1/2}$ Therefore, Set Point W = (m x Qstd + b) ² x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. | | | | Set Point C | alculation | | 1100 | |
| $m \times Qstd + b = [W \times (Pa/760) \times (298/Ta)]^{1/2}$ Therefore, Set Point W = $(m \times Qstd + b)^2 \times (760/Pa) \times (Ta/298) = 3.08$ *If Correlation Coefficient < 0.990, check and recalibrate again. | From the TSP Fi | eld Calibration (| Curve, take Qs | $td = 1.21 \text{ m}^3/\text{min}$ (4) | 43 CFM) | | | |
| Therefore, Set Point W = (m x Qstd + b) ² x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. Remarks: | From the Regres | sion Equation, th | ne "Y" value a | ccording to | | | | |
| Therefore, Set Point W = (m x Qstd + b) ² x (760 / Pa) x (Ta / 298) = 3.08 *If Correlation Coefficient < 0.990, check and recalibrate again. Remarks: | | | | 0-44 LL DW 0 | - IE (0) (000 IT | 1/2 | | |
| *If Correlation Coefficient < 0.990, check and recalibrate again. Remarks: | | | m x (| QSta + b = [W X (I | ra//60) x (298/1 | a)] | | |
| *If Correlation Coefficient < 0.990, check and recalibrate again. Remarks: | Therefore, S | Set Point W = (n | $(x + b)^2$ | x (760 / Pa) x (7 | (a / 298) = | 3. | .08 | |
| Remarks: | , | | () | (,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | | |
| | *If Correlation C | Coefficient < 0.99 | 00, check and | recalibrate again. | | | | |
| | | | | | | | | |
| | | | | | | | | |
| QC Reviewer: Date: H-11-13 | Remarks: | | | | | | | |
| QC Reviewer: The Date: Figure D | | | | | | | | |
| QC Reviewer: Signature: Date: 4-11-13 | ¥. | | | | | | 27 | |
| | QC Reviewer: | 1 lena | | Signature: | 6 | Date: | SH-12-13 | |
| | | | | - | | • | | |

| Station | On Yat House | (ID2) | | | Operator: | Choi Wii | ng Ho |
|--------------------|-------------------|-----------------|---------------------------------------|--|---|----------------------------|----------------------------|
| Date: | 24-Dec-13 | | | | Next Due Date: | 24-Feb | o-14 |
| Pump No.: | 1654 | | | V | erified Against: | O.T.S | 0988 |
| Equipment No.: | A-001-61T | | | I | Expiration Date: | 20-May | y-14 |
| | | | | | 1900 | | |
| | | | Ambient (| Condition | 20.00 | | 6 20 |
| Tempera | ture, Ta | 289 | Kelvin | Pressu | ıre, Pa | 756.9 | mmHg |
| | | | | | | | |
| | | Or | ifice Transfer Sta | ndard Informat | tion | | |
| Equipme | ent No.: | 988 | Slope, mc | 1.94 | 727 | Intercept, bc | 0.02332 |
| Last Calibra | ation Date: | 20-May-13 | | mc x Qstd + bc = | = [H v (Pa/760) | v (208/Ta)1 ^{1/2} | |
| Next Calibra | ation Date: | 20-May-14 | | ine x Qsta + be - | - [II X (I a//00) | x (298/14)] | |
| | | • | | | | 2 | |
| | | | Calibration of | | | | |
| Calibration | Н | FTY (D /FT | (200 / 77) 71/2 | Qstd | W | [ΔW x (Pa/760) > | x (298/Ta)] ^{1/2} |
| Point | in. of water | [H x (Pa//6 | 50) x (298/Ta)] ^{1/2} | (m ³ /min) X - axis | in. of oil | Y-axi | |
| 1 | 8.9 | | 3.02 | 1.54 | 6.1 | 2.50 | |
| 2 | 6.9 | | 2.66 | 1.35 | 4.1 | 2.05 | |
| 3 | 5.4 | | 2.35 | 1.19 | 3.0 | 1.76 | |
| 4 | 4.1 | † | 2.05 | 1.04 | 2.3 | 1.54 | |
| 5 | 2.7 | † | 1.67 | 0.85 | 1.3 | 1.16 | |
| By Linear Regro | | X | 1.07 | 0.05 | 1.5 | 1.10 | |
| Slope, mw = | 1.8928 | • | | Intercept, bw = | | -0.458 | 80 |
| Correlation Co | | - 0. | 9970 | intercept, 5 " | , | 01100 | |
| | _ | | 5570 | | | | |
| | | | AB (4.4) | W 92 12 | | | |
| | Miles | | Set Point C | alculation | | | |
| From the TSP Fie | eld Calibration (| Curve, take Ost | $d = 1.21 \text{ m}^3/\text{min}$ (4) | | | 10000000 | |
| From the Regress | | 620 | 25 | , | | | |
| C | 1 / | | | | | | |
| | | m x (| Qstd + b = [W x (I | Pa/760) x (298/T | a)] ^{1/2} | | |
| TT1 C C | . D. 1 . W. 7 | 0 1 1 1 2 | (500/5) (5 | . / * * * * * * * * * * * * * * * * * * | - | | |
| Therefore, S | et Point $W = (n$ | n x Qstd + b) | x (760 / Pa) x (7 | (a/298) = | 3. | .27 | |
| *If Correlation Co | oefficient < 0.90 | 00 check and 1 | ecalibrate again | | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | |
| | | o, oncon and i | countries again. | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| _ | | | | | | | |
| - | | | | | | | |
| QC Reviewer: | 41 1000 | | Signature: | | Date: | 27-12-13 | |
| _ | · (Vivia) | | | | | | |

| Station | Sau Nga House | <u>e (</u> ID3) | | | Operator: | Choi Wi | ng Ho |
|----------------------|-------------------|-----------------------------|--------------------------------------|-------------------------------------|--------------------|--|-------------|
| Date: | 24-Dec-13 | | | Next Due Date: 24-Feb-14 | | | |
| Pump No.: | 1272 | a | | V | erified Against: | O.T.S | - 0988 |
| Equipment No.: | A-001-31T | i) | |] | Expiration Date: | 20-Ma | y-14 |
| | | | | | | | |
| | | | Ambient (| Condition | | r | |
| Tempera | ture, Ta | 289 | Kelvin | Pressu | ıre, Pa | 756.9 | mmHg |
| | | Or | rifice Transfer Sta | ındard Informa | tion | | |
| Equipme | ent No.: | 988 | Slope, mc | 1.94 | | Intercept, bc | 0.02332 |
| Last Calibra | ation Date: | 20-May-13 | | 0.11.1 | FIX (D. (E(A)) | (200/77 >1/2 | |
| Next Calibra | ation Date: | 20-May-14 |] | mc x Qstd + bc = | = [H x (Pa//60) | x (298/Ta)] | |
| | | • | | | | | |
| | | | Calibration of | TSP Sampler | | | |
| Calibration Point | H in. of water | [H x (Pa/76 | 60) x (298/Ta)] ^{1/2} | Qstd (m³/min) X - axis | W in. of oil | [ΔW x (Pa/760) : Y-ax | |
| 1 | 8.9 | | 3.02 | 1.54 | 6.4 | 2.56 | 5 |
| 2 | 7.0 | | 2.68 | 1.36 | 4.4 | 2.13 | 3 |
| 3 | 5.6 | | 2.40 | 1.22 | 3.5 | 1.90 |) |
| 4 | 4.3 | | 2.10 | 1.07 | 2.6 | 1.63 | 3 |
| 5 | 3.3 | | 1.84 | 0.93 | 1.6 | 1.28 | 3 |
| By Linear Regr | ession of Y on 2 | X | | | | | |
| Slope, $mw = $ | 2.0291 | _ | | Intercept, bw = | | -0.583 | 37 |
| Correlation C | oefficient* = _ | 0. | 9974 | | | | |
| | | (Maxil | | | | | |
| | | | | | | ************************************** | |
| e d man ri | 110 11 1 | 2 1 0 | Set Point C | | | | |
| | | | $d = 1.21 \text{ m}^3/\text{min}$ (4 | 43 CFM) | | | |
| From the Regress | sion Equation, th | ne "Y" value ad | ccording to | | | | |
| | | m x (| Qstd + b = [W x (I | Pa/760) x (298/T | a)] ^{1/2} | | |
| | | (- | | | | | |
| Therefore, S | et Point W = (r | n x Qstd + b) ² | x (760 / Pa)x(7 | (a/298) = | 3. | .41 | 8 |
| *If Correlation C | oefficient < 0.99 | 90, check and 1 | ecalibrate again. | | | | |
| | | | | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| - | | | | | | | |
| | 1 | | | 1 | | 7 | |
| QC Reviewer: | 71 bling | | Signature: | be | Date: | 94-12-13 | |
| | \vee | | | | | | |

| Station | n Sau Ming Prin | nary School (II | 04) | | Operator | : Shum Kar | n Yuen |
|----------------------|--------------------|-----------------|--|-----------------------------|---------------------|-----------------------------------|--------------|
| Date | : 18-Dec-13 | | | Next Due Date: 18-Feb-14 | | | |
| Pump No. | : 1275 | _ | | 7 | Verified Against | O.T.S | 0988 |
| Equipment No. | : <u>A-001-28T</u> | - | | | Expiration Date: | :20-May | <i>i</i> -14 |
| | | | Ambient (| Condition | | 4-86 | |
| Tempera | ature, Ta | 289 | Kelvin | Press | ure, Pa | 756.9 | mmHg |
| | | 0: | rifice Transfer Sta | ndard Informa | tion | | |
| Equipm | ent No · | 988 | Slope, mc | | 1727 | Intercept, bc | 0.02332 |
| Last Calibr | | 20-May-13 | Slope, me | 1.5 | 721 | intercept, be | 0.02332 |
| Next Calibr | | 20-May-19 | n | nc x Qstd + bc | = [H x (Pa/760) | x (298/Ta)] ^{1/2} | |
| | 3 | | Calibration of | TCD Canadan | | | |
| | Γ | | Calibration of | Qstd | I | I | |
| Calibration Point | H in. of water | [H x (Pa/76 | 60) x (298/Ta)] ^{1/2} | (m³/min) X - axis | W in. of oil | [ΔW x (Pa/760) x Y-ax i | |
| 1 | 9.1 | | 3.06 | 1.56 | 6.1 | 2.50 | |
| 2 | 7.6 | | 2.79 | 1.42 | 4.8 | 2.22 | |
| 3 | 6.0 | | 2.48 | 1.26 | 3.7 | 1.95 | |
| 4 | 4.6 | | 2.17 | 1.10 | 3.0 | 1.76 | |
| 5 | 3.3 | | 1.84 | 0.93 | 2.0 | 1.43 | |
| By Linear Regr | ession of Y on | X | | | | | |
| Slope, mw = | 1.6440 | _ |] | Intercept, bw = | : | -0.089 | 5 |
| Correlation C | oefficient* = | 0. | 9970 | | | | |
| | | | | | | | |
| | | | Set Point Ca | | | | |
| | | 20 5070 | $d = 1.21 \text{ m}^3/\text{min } (4)$ | 3 CFM) | | | |
| From the Regress | sion Equation, the | he "Y" value a | ecording to | | | | |
| | | m x (| Qstd + b = [W x (P | a/760) x (298/T | [a)] ^{1/2} | | |
| Therefore, S | Set Point W = (1 | n x Qstd + b)² | x (760 / Pa) x (T | a / 298) = | 3. | .51 | |
| | | | | | | | |
| If Correlation C | coefficient < 0.9 | 90, check and i | recalibrate again. | | | | |
| | | | | | | | |
| emarks: | | | | | | | |
| - | | | | | | | |
| 3.7 - | 1 - 1 | | | | | , | |
| QC Reviewer: | 1 Lang | | Signature: | ba . | Date: | 27-12-13 | |

| Station | Sau Mau Ping | Catholic Prima | ry School (ID5) | | Operator: | : Shum Kan | n Yuen |
|----------------------|-------------------|-----------------|---------------------------------------|---|--------------------|-----------------------------------|---------|
| Date: | 18-Dec-13 | | | | Next Due Date: | :18-Feb | -14 |
| Pump No.: | 10088 | r | | V | erified Against: | O.T.S | 0988 |
| Equipment No.: | A-001-13T | | | 1 | Expiration Date: | 20-May | y-14 |
| | | | | | 5000 | | |
| | | | Ambient (| Condition | | | |
| Tempera | ture, Ta | 289 | Kelvin | Pressu | ıre, Pa | 756.9 | mmHg |
| | | | W | | | | |
| | | Oı | ifice Transfer Sta | ındard Informa | tion | | |
| Equipme | ent No.: | 988 | Slope, mc | 1.94 | 727 | Intercept, bc | 0.02332 |
| Last Calibra | ation Date: | 20-May-13 | | mc x Qstd + bc = | - (II v (Do/760) | T (209/Ta)1/2 | |
| Next Calibra | ation Date: | 20-May-14 | | ine x Qstu + be - | - [H X (Fa//00) | x (296/1a)j | |
| | | | | | | | |
| | | | Calibration of | TSP Sampler | | | |
| Calibration Point | H in. of water | [H x (Pa/76 | 50) x (298/Ta)] ^{1/2} | Qstd (m³/min) X - axis | W in. of oil | [ΔW x (Pa/760) x Y-ax i | |
| 1 | 8.8 | | 3.01 | 1.53 | 6.2 | 2.52 | |
| 2 | 7.6 | | 2.79 | 1.42 | 5.0 | 2.27 | |
| 3 | 5.3 | | 2.33 | 1.18 | 3.5 | 1.90 | |
| 4 | 4 | | 2.03 | 1.03 | 2.6 | 1.63 | |
| 5 | 2.8 | | 1.70 | 0.86 | 1.6 | 1.28 | |
| By Linear Regre | ession of Y on 2 | X | | | | | |
| Slope, mw = | 1.7950 | _ | | Intercept, bw = | | -0.241 | .2 |
| Correlation Co | oefficient* = | 0. | 9984 | | | | |
| | | | | | | | |
| | | | | 300 | | | 100 E |
| | 50 23.5 | | Set Point Ca | alculation | | | |
| From the TSP Fie | eld Calibration C | Curve, take Qst | $d = 1.21 \text{ m}^3/\text{min}$ (4) | 43 CFM) | | | |
| From the Regress | sion Equation, th | ne "Y" value ac | ecording to | | | | |
| | | | | | | | |
| | | m x (| Qstd + b = [W x (F | Pa/760) x (298/T | a)] ^{1/2} | | |
| TI C C | . D M / | 0 . 1 . 1 . 2 | (5(0)) (5 | . (200) | _ | | 1 |
| Therefore, S | et Point $W = (n$ | n x Qstd + b) | x (760 / Pa)x(T | (a/298) = | 3. | .63 | |
| *If Correlation Co | oefficient < 0.00 | 00 check and | recolibrate again | 10 100000000000000000000000000000000000 | | | |
| ii conciation c | ocificient < 0.99 | o, check and i | ecanorate again. | | | | |
| | | | | | | | |
| Remarks: | | | | | | | |
| Ciliai KS. | | | | | | | |
| - | | | | | | | |
| QC Reviewer: | I lan | | Signature: | L | Date: | 27-12-13 | |



TISCH ENVIROMENTAL, INC.
145 SOUTH MIAMI AVE.
VILLAGE OF CLEVES, OH 45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

| Date - Ma Operator | | Rootsmeter Orifice I. | | 438320 0988 | Ta (K) - Pa (mm) - | 297 - 751.84 |
|--------------------------|---|--|--|---|---|--|
| PLATE OR Run # 1 2 3 4 5 | VOLUME START (m3) NA NA NA NA | VOLUME STOP (m3) NA NA NA NA NA | DIFF VOLUME (m3) 1.00 1.00 1.00 1.00 1.00 | DIFF TIME (min) 1.3900 0.9720 0.8670 0.8270 0.6800 | METER DIFF Hg (mm) 3.2 6.4 7.9 8.7 12.6 | ORFICE DIFF H2O (in.) 2.00 4.00 5.00 5.50 8.00 |

DATA TABULATION

| Vstd (x axis) | (y axis) | | Va | (x axis) Qa | (y axis) |
|--|--|--|--|--|--|
| 0.98840.71100.98421.01250.98211.13270.98111.18630.97591.4352 | 1.4090 1.9926 2.2278 2.3365 2.8179 | | 0.9957 0.9915 0.9894 0.9884 0.9832 | 0.7163 1.0201 1.1412 1.1952 1.4459 | 0.8889 1.2570 1.4054 1.4740 1.7777 |
| Qstd slope (m) = intercept (b) = coefficient (r) = y axis = SQRT[H2O | 1.94727 0.02332 0.99998 | | Qa slope intercept coefficie | = $(b) =$ | 1.21935 0.01471 0.99998 |

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 = $1/m\{[SQRT(H2O(Pa/760)(298/Ta))] - b\}$ Qa = $1/m\{[SQRT H2O(Ta/Pa)] - b\}$

| Venue: Cyberpo. Model No.: Series 1- Serial No: Control: Sensor: | | | pprech berpor ries 14 ntrol: nsor: | nt & Pa t (Pui) 100AB 140 120 | Laser Do SIBATA LD-3 A.005.07 557 CPI Mike She stashnick Ying Seco | TEOM® | М) | 00 | |
|---|--|---------------------------------------|--|--|--|------------|---|-----------------------------|--|
| | alibration Date*: | · · · · · · · · · · · · · · · · · · · | May 2 | | re calibrat | ion is 1 v | voor. | | |
| | tion Result | eu interve | | aruwai | - Calibrai | .101115 1 | yeai | | |
| | ivity Adjustment ivity Adjustment | | - , | | | | | CPM CPM | |
| Hour | Date (dd-mm-yy) | ٦ | Γime | | Amb Cond Temp (°C) | | Concentration ¹ (mg/m ³) Y-axis | Total Count ² | Count/ Minute ³ X-axis |
| 1 | 18-05-13 | 12:30 | - 1 | 13:30 | 28.1 | 78 | 0.04714 | 1887 | 31.45 |
| 2 | 18-05-13 | 13:30 | | 14:30 | 28.1 | 78 | 0.04932 | 1970 | 32.83 |
| 3 | 18-05-13 | 14:30 | | 15:30 | 28.2 | 77 | 0.05156 | 2056 | 34.27 |
| 4 | 18-05-13 | 15:30 | - 1 | 6:30 | 28.1 | 78 | 0.05083 | 2026 | 33.77 |
| Slope (Correla | 2. Total Count 3. Count/minut ar Regression of K-factor): ation coefficient: | was logg e was cal Y or X | ed by l culate 0.00 | _aser [| Oust Moni otal Cour | tor | shnick TEOM [®] | | |
| Remarks | 5: | | | | | | / | | |
| QC Rev | viewer: YW F | ung | | Signati | ure: | 4/ | Dat | e: _20 May | / 2013 |

| Model I Equipm | acturer/Brand: No.: nent No.: vity Adjustment | Scale Settir | ng: | Laser D SIBATA LD-3 A.005.0 702 CP | 8a | nitor | | |
|----------------------|--|---|--------------------------|--|-----------------------------|---|-----------------------------|---|
| Operate | or: | | | Mike Sh | ek (MSh | (M) | | |
| Standar | d Equipment | | | | | | | |
| | No.: | Cyber Series Contro Senso 18 Ma | or: <u>12</u> ny 2013 | Ying Sec 20AB2198 200C1436 | ondary 3 899803 59803 | School) K _o :12 | 500 | |
| | on Result | | or manarro | | | | | - 73 - 73 - 74 - 75 - 75 - 75 - 75 - 75 - 75 - 75 |
| Sensitiv | vity Adjustment vity Adjustment | | | | | 702 702 | CPM CPM | |
| Hour | Date (dd-mm-yy) | Tim | е | Amb Cond Temp (°C) | | Concentration ¹ (mg/m ³) Y-axis | Total Count ² | Count/ Minute ³ X-axis |
| 1 | 18-05-13 | 12:30 - | 13:30 | 28.1 | 78 | 0.04714 | 1764 | 29.40 |
| 2 | 18-05-13 | 13:30 - | 14:30 | 28.1 | 78 | 0.04932 | 1846 | 30.77 |
| 3 | 18-05-13 | 14:30 - | 15:30 | 28.2 | 77 | 0.05156 | 1935 | 32.25 |
| 4 | 18-05-13 | 15:30 - | 16:30 | 28.1 | 78 | 0.05083 | 1899 | 31.65 |
| Slope (ł Correlat | 1. Monitoring of 2. Total Count 3. Count/minut Regression of K-factor): tion coefficient: of Calibration F | was logged e was calcu Y or X - - | by Laser | Dust Mor Total Cou | nitor | tashnick TEOM [®] | | |
| Remarks | | | | | | | | |
| | | | | | | , | | |

| Type: | | | 8_ | | ust Moni | tor | | |
|--|---------------------------------|---------------|--------------|------------------|-------------|--|--|---------------------|
| | facturer/Brand: | | _ | SIBATA | | | | |
| Model No.: | | | | LD-3 A.005.09 | | | | |
| Equipment No.: Sensitivity Adjustment Scale Setting: | | | | 797 CPI | 100,700,00 | | | |
| 061131 | tivity Adjustificht | ocale octili | ··g | 131 011 | 71 | | | |
| Opera | ator: | | _ | Mike She | ek (MSKN | И) | | |
| Standa | rd Equipment | | | | | | | |
| Equip | ment: | Runn | recht & Pa | tashnick | TFOM® | | | |
| Venue | | | rport (Pui ` | | | chool) | | |
| Mode | | | s 1400AB | J | | | | |
| Serial | No: | Contr | ol: 140 | DAB2198 | 99803 | and the second s | | |
| | | Sens | or: 120 | 00C1436 | 59803 | K _o : 12500 |) | |
| Last C | Calibration Date*: | _18 M | ay 2013 | | | | | |
| *Remar | ks: Recommend | ed interval t | for hardwa | re calibra | tion is 1 y | year | | |
| Calibra | tion Result | 100 | | | | | 5000 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 | |
| Sensit | tivity Adjustment | Scale Settir | na (Before | Calibratio | on). | 797 CF | PM | |
| | tivity Adjustment | | | | | 797 CF | | |
| | | | | | 2 | | | 77 |
| Hour | Date | Tin | ne | | pient | Concentration ¹ | Total | Count/ |
| | (dd-mm-yy) | | | | dition | (mg/m ³) | Count ² | Minute ³ |
| | | | | Temp (°C) | R.H. (%) | Y-axis | | X-axis |
| 1 | 18-05-13 | 12:30 - | 13:30 | 28.1 | 78 | 0.04714 | 1885 | 31.42 |
| 2 | 18-05-13 | 13:30 - | 14:30 | 28.1 | 78 | 0.04932 | 1965 | 32.75 |
| 3 | 18-05-13 | 14:30 - | 15:30 | 28.2 | 77 | 0.05156 | 2059 | 34.32 |
| 4 | 18-05-13 | 15:30 - | 16:30 | 28.1 | 78 | 0.05083 | 2024 | 33.73 |
| Note: | 1. Monitoring of | lata was me | easured by | Rupprec | ht & Pata | shnick TEOM® | Marie Colonia | |
| | Total Count | was logged | by Laser I | Dust Mon | itor | | | |
| | Count/minut | e was calcu | ılated by (1 | otal Cou | nt/60) | | | |
| Dy Lino | or Dograssian of | VorV | | | | | | |
| | ar Regression of (K-factor): | 1017 | 0.0015 | | | | | |
| | ation coefficient: | - | 0.9973 | | | | | |
| Conei | ation coemcient. | - | 0.9970 | | | | | |
| Validit | y of Calibration F | Record: | 17 May 2 | 014 | | | | |
| Domorle | | | | | | | | |
| Remark | .5. | | | | | | 1 3 37 - 22- | |
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| | | | | | , / | | | |
| QC Re | eviewer: YW F | una | Signa | ture: | 4/ | Date | e: 20 May | v 2013 |

| Type: | fa atura v/Dravadu | | _ | Laser Do | ıst Moni | itor | | |
|-------------|-------------------------------------|------------|-----------------|---|-----------|----------------------|--------------------|---------------------|
| | facturer/Brand: | | - | SIBATA LD-3 | | | | |
| | Model No.: Equipment No.: | | | A.005.10a | | | | |
| | tivity Adjustment | Scale Set | tina: | 753 CPI | | | | |
| 0011011 | arriy / tajaotimom | | _ | , | | | | |
| Operator: | | | | Mike She | k (MSKI | М) | | |
| Standa | rd Equipment | | 38 | | | | | |
| | | | | | 20 | | | |
| Equip | | | precht & Pa | | | | | |
| Venue | | | erport (Pui | Ying Seco | ndary S | chool) | | <u> </u> |
| Model | | | ies 1400AB | 0400400 | 20000 | | | |
| Serial | No: | | | 0AB2198 | | I/ . 405 | 200 | |
| 1+ 0 | Salibuation Data* | | | 00C1436 | 9803 | K _o : 125 | 00 | |
| Last C | Calibration Date*: | _181 | May 2013 | | | | | |
| *Remar | ks: Recommend | ed interva | l for hardwa | re calibra | tion is 1 | year | | |
| Calibra | tion Result | | 2000 | | | | | |
| Consit | tivity Adjustment | Soolo Sot | tina (Poforo | Calibratic | m). | 753 | СРМ | |
| | tivity Adjustment tivity Adjustment | | | | | | CPM | |
| Serisit | livity Adjustinent | Scale Set | ting (After C | alibration |). | | CFIVI | |
| Hour | Date | Т | ime | Aml | pient | Concentration | 1 Total | Count/ |
| Tioui | (dd-mm-yy) | | iiiic | | dition | (mg/m ³) | Count ² | Minute ³ |
| | (dd iiiii yy) | | | Temp | R.H. | Y-axis | Joann | X-axis |
| | | | | (°C) | (%) | | | 71 63110 |
| 1 | 18-05-13 | 12:30 | - 13:30 | 28.1 | 78 | 0.04714 | 1886 | 31.43 |
| 2 | 18-05-13 | 13:30 | - 14:30 | 28.1 | 78 | 0.04932 | 1968 | 32.80 |
| 3 | 18-05-13 | 14:30 | - 15:30 | 28.2 | 77 | 0.05156 | 2061 | 34.35 |
| 4 | 18-05-13 | 15:30 | - 16:30 | 28.1 | 78 | 0.05083 | 2026 | 33.77 |
| Note: | 1. Monitoring of | lata was n | neasured by | Rupprec | ht & Pata | ashnick TEOM® | 1 | |
| | 2. Total Count | | | | | | | |
| | 3. Count/minut | | | | | | | |
| | | | | | | | | |
| | ar Regression of | Y or X | | | | | | |
| | (K-factor): | | 0.0015 | | | | | |
| Correl | ation coefficient: | | 0.9983 | 1000 | | | | |
| Validit | y of Calibration F | Record: | _17 May 2 | 014 | | | | |
| | | | | | | | | |
| Remark | s: | (4) | | | | | | |
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| | | | | | | | ******* | |
| | | | | | 6 | | | |
| OC Re | eviewer: YW F | - una | Signa | ture: | 1 | / n | ate: 20 Ma | y 2013 |
| ~ · · · · · | | 9 | | | | / | | , |

| Type: Manufacturer/Brand: | | Laser Du SIBATA LD-3 | ıst Moni | tor | | |
|--|-----------------------|--------------------------------|------------|---|--|--|
| Model No.: | | | | | | |
| Equipment No.: Sensitivity Adjustment S | Scale Setting: | A.005.11 799 CPI | | | | |
| | Jodio Colling. | Mike She | | 4) | | |
| Operator: | | IVIIKE SHE | K (WONN | <i>n</i>) | | |
| Standard Equipment | | | | | | |
| Equipment: | | & Patashnick | | | | |
| Venue: | | Pui Ying Seco | ndary So | chool) | | |
| Model No.: | Series 1400 | | 20000 | *** | | |
| Serial No: | Control: | 140AB21989 | | V . 40500 | | |
| Last Calibration Date*: | Sensor: 18 May 201 | 1200C14365 | 9803 | K _o : <u>12500</u> | ** | |
| Last Galibration Date . | 10 May 201 | 0 | | | To the state of th | 300 300 |
| *Remarks: Recommende | ed interval for har | dware calibrat | ion is 1 y | year | | |
| Calibration Result | | | | | Art Services | |
| Sensitivity Adjustment S Sensitivity Adjustment S | | | | 799 CP | | |
| Hour Date (dd-mm-yy) | Time | Amb Cond Temp (°C) | | Concentration ¹ (mg/m ³) Y-axis | Total Count ² | Count/ Minute ³ X-axis |
| 1 18-05-13 | 12:15 - 13. | :15 28.1 | 78 | 0.04685 | 1871 | 31.18 |
| 2 18-05-13 | | :15 28.1 | 78 | 0.04941 | 1979 | 32.98 |
| 3 18-05-13 | | :15 28.2 | 77 | 0.05127 | 2055 | 34.25 |
| 4 18-05-13 | 15:15 - 16. | :15 28.1 | 78 | 0.05060 | 2021 | 33.68 |
| 2. Total Count v 3. Count/minute By Linear Regression of Slope (K-factor): Correlation coefficient: | 0.001 0.997 | ser Dust Mon by (Total Coul | itor | ashnick TEOM [®] | | |
| Validity of Calibration Ro | ecord. 17 ivi | ay 2014 | | | | |
| QC Reviewer: YW Fu | ung S | ignature: | 4/ | Date | e:20 Ma | y 2013 |

| Type: | | | | Laser D | ust Moni | itor | | |
|----------------------------|---|---|--|-----------------|-----------|----------------------------|--------------------|--------------|
| | facturer/Brand: | | | SIBATA | | | | |
| | Model No.: | | | LD-3B | No. | | | |
| | Equipment No.: | | | A.005.13 | | | | |
| Sensi | tivity Adjustment | Scale Set | tting: | 643 CP | VI | | | |
| Opera | ator: | | | Mike She | ek (MSKI | M) | | |
| Standa | rd Equipment | | | | | | | |
| Equip | ment: | Pur | oprecht & Pa | atachnick | TEOM® | | | |
| Venue | | | perport (Pui | | | chool) | | |
| Model | | | ies 1400AB | | maary O | unouij | M2 97 | |
| Serial | | 100000000000000000000000000000000000000 | County Co | OAB2198 | 99803 | | 8.0 | |
| Contai | 110. | | | 200C1436 | | K _o : 12500 |) | |
| Last C | Calibration Date*: | | May 2013 | | | | | |
| *Remar | ks: Recommend | led interva | al for hardwa | are calibra | tion is 1 | year | | |
| Calibra | tion Result | 25m2 | | | | | | man suureesa |
| C' | ii. ii A ali i | CI- C-4 | utin a /D a fa u a | Calibuati | | 640 05 | 21.4 | |
| | tivity Adjustment | | | | | 643 CF | | |
| Serisit | tivity Adjustment | Scale Sel | ung (Anter C | alibi ation |). | CF | IVI | |
| Hour | Date | Т | ime | Aml | pient | Concentration ¹ | Total | Count/ |
| 1.00 | (dd-mm-yy) | | | 200,000,000,000 | dition | (mg/m ³) | Count ² | Minute |
| | (, , , , , , , , , , , , , , , , , , , | | | Temp | R.H. | Y-axis | | X-axis |
| | | e. | | (°C) | (%) | | | |
| 1 | 18-05-13 | 12:15 | - 13:15 | 28.1 | 78 | 0.04685 | 1867 | 31.12 |
| 2 | 18-05-13 | 13:15 | - 14:15 | 28.1 | 78 | 0.04941 | 1975 | 32.92 |
| 3 | 18-05-13 | 14:15 | - 15:15 | 28.2 | 77 | 0.05127 | 2048 | 34.13 |
| 4 | 18-05-13 | 15:15 | - 16:15 | 28.1 | 78 | 0.05060 | 2017 | 33.62 |
| Note: | 1. Monitoring of | data was n | neasured by | / Rupprec | ht & Pata | ashnick TEOM® | | |
| | 2. Total Count | | | | | | | |
| | 3. Count/minut | te was cal | culated by (| Total Cou | nt/60) | | | |
| By Line | or Dograssian of | VorV | | | | | | |
| | ar Regression of (K-factor): | 1 01 7 | 0.0015 | | | | | |
| | ation coefficient: | | 0.9986 | | | | | |
| Corre | ation coemcient. | | 0.9900 | | | | | |
| Validit | y of Calibration F | Record: | 17 May 2 | 2014 | | | | |
| Sand And Barrier State Co. | • | | 1 | | | | | |
| Remark | e. | | | | | | | |
| Kemark | | | | | | | | |
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| OC Ba | eviewer: YW F | Tuna | Signa | aturo: | 4/ | Date | o. 20 Ma | y 2013 |
| QU RE | TVV F | ung | Signa | | V | Date | 5. <u>20 IVIA</u> | y 2013 |

| Type: | | | | - | Laser Du | ıst Moni | tor | | |
|---|--|--------------------------|------------------------|------------|-----------------|-------------|----------------------------|--------------------|---------------------|
| | facturer/Brand: | | | _ | SIBATA LD-3B | | | | |
| | Model No.: Equipment No.: | | | - | A.005.14a | | | | |
| | tivity Adjustment | Scale Sett | ing: | _ | 786 CPI | | | | |
| Opera | ator: | | | | Mike She | k (MSKN | 1) | | |
| Standa | rd Equipment | | | | | | | | |
| | | | | | | | 380 4 5 | | |
| Equip | | | | | ashnick | | -,, | | |
| Venue | | | | | ing Seco | ndary So | chool) | | |
| Model | | | es 1400 | | A DO400 | 20000 | 1.3930 | 1 113 | |
| Serial | No: | Con | | | AB2198 | | V . 4050 | 10 | |
| Loct | Calibration Date*: | Sen | sor: <i>1ay 201</i> | | 0C1436 | 9803 | K _o : _1250 | 10 | |
| Lasic | dibration bate . | | nay 201 | 3 | | | | | |
| *Remar | ks: Recommend | led interval | for har | dwar | e calibra | tion is 1 y | /ear | | |
| Calibra | tion Result | | | | *** | | | | |
| | tivity Adjustment | | | | | | | PM PM | |
| 100000000000000000000000000000000000000 | 300.000 € 0 000 € 000.000000000000000000 | | | | | | | | |
| Hour | Date | Т | ime | | | pient | Concentration ¹ | Total | Count/ |
| | (dd-mm-yy) | | | | Cond | | (mg/m³) | Count ² | Minute ³ |
| | 35. 35. 35. | | | | Temp | R.H. | Y-axis | | X-axis |
| | 10.05.10 | 10.15 | 40 | 4.5 | (°C) | (%) | 0.04005 | 0005 | 00.40 |
| 1 | 18-05-13 | 12:15 | | :15 | 28.1 | 78 | 0.04685 | 2005 | 33.42 |
| 2 | 18-05-13 | 13:15 | | :15 | 28.1 | 78 | 0.04941 | 2121 | 35.35 |
| 3 | 18-05-13 18-05-13 | 14:15 15:15 | | :15 :15 | 28.2 28.1 | 77 78 | 0.05127 0.05060 | 2194 2167 | 36.57 36.12 |
| Note: | | | | | | | shnick TEOM® | 2107 | 30.12 |
| | Total Count Count/minut | was logge te was calc | d by La | ser D | oust Mon | itor | ISTITICK TEOW | | |
| | ar Regression of | Y or X | 0.00 | | | | | | |
| | (K-factor): | | 0.001 | | | | | | |
| Correi | ation coefficient: | | 0.998 | 57 | | | | | |
| Validit | y of Calibration F | Record: | 17 M | ay 20 |)14 | | | | |
| Remark | s: | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | <i>y</i> | | |
| QC Re | eviewer: YW F | ung | _ s | ignati | ure: | 1 | Da | te: _20 Ma | y 2013 |



G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港 黃竹 坑 道 3 7 號 利 達 中 心 地 下 , 9 樓 , 1 2 樓 , 1 3 樓 及 2 0 樓 F-mail: smec@cigismec.com Website: www.cigismec.com



1



CERTIFICATE OF CALIBRATION

Certificate No.:

13CA0325 01-01

Page

of

2

Item tested

Description: Manufacturer: Sound Level Meter (Type 1)

B&K

2238

B&K 4188

Type/Model No.: Serial/Equipment No.: Adaptors used:

2285692

2250420

Microphone

Item submitted by

Customer Name:

AECOM ASIA CO., LTD.

Address of Customer:

Request No .: Date of receipt:

25-Mar-2013

Date of test:

26-Mar-2013

Reference equipment used in the calibration

Description:

Multi function sound calibrator

Signal generator

Signal generator

DS 360 DS 360

Model: Serial No. B&K 4226 2288444

33873

61227

Expiry Date:

22-Jun-2013 29-May-2013

29-May-2013

Traceable to:

CIGISMEC CEPREI CEPREI

Ambient conditions

Temperature:

22 ± 1 °C

Relative humidity: Air pressure:

60 + 10 % 1000 ± 10 hPa

Test specifications

1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.

2. The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of +20%.

The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference 3, between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:

lin/Feng Jun Qi Huang Jia

Date:

26-Mar-2013

Company Chop:

The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

Soils & Materials Engineering Co., Ltd

Form No.CARP152-1/Issue 1/Rev.C/01/02/2007



G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 Website: www.cigismec.com E-mail: smec@cigismec.com

Tel: (852) 2873 6860 Fax: (852) 2555 7533



CERTIFICATE OF CALIBRATION

Certificate No.:

12CA1008 02

Page

Item tested

Description: Manufacturer: Type/Model No.:

Adaptors used:

Sound Level Meter (Type 1)

Rion Co., Ltd.

NL-31

Microphone Rion Co., Ltd. UC-53A

Preamp Rion Co., Ltd.

2

00320528/NOOT. 03A

90565

NH-19 75883

Item submitted by

Serial/Equipment No.:

Customer Name: Address of Customer: AECOM ASIA CO., LTD.

Request No .:

Date of receipt:

08-Oct-2012

Date of test:

08-Oct-2012

Reference equipment used in the calibration

Description: Multi function sound calibrator Signal generator Signal generator

Model: B&K 4226 DS 360 DS 360

Serial No. 2288444 33873 61227

Expiry Date: 22-Jun-2013 29-May-2013 29-May-2013

Traceable to: CIGISMEC CEPREI CEPREI

Ambient conditions

Temperature:

(22 ± 1) °C (60 ± 10) % (1000 ± 5) hPa

Relative humidity: Air pressure:

Test specifications

The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.

The electrical tests were performed using an electrical signal substituted for the microphone which was removed and 2. replaced by an equivalent capacitance within a tolerance of ±20%

The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference 3, between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:

Huang Jian Min/Feng Jun Qi

Date:

08-Oct-2012

Company Chop:

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

© Soils & Materials Engineering Co., Ltd.

Form No.CARP152-1/Issue 1/Rev.C/01/02/2007



G/F, 9/F, 12/F, 13/F. & 20/F, Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港 黄 竹 坑 道 3 7 號 利 達 中 心 地 下 , 9 樓 , 1 2 樓 , 1 3 樓 及 2 0 樓 E-mail: smec@cigismec.com Website: www.cigismec.com

Tel: (852) 2873 6860 Fax: (852) 2555 7533



CERTIFICATE OF CALIBRATION

Certificate No.:

13CA0305 01-01

Page

of

2

Item tested

Description: Manufacturer: Sound Level Meter (Type 1)

B&K

2250-L

B&K 4950

Type/Model No.: Serial/Equipment No.:

2681366 (~.011.01)

2665582

Microphone

Adaptors used:

Item submitted by

Customer Name:

AECOM ASIA CO LIMITED

Address of Customer:

Request No .: Date of receipt:

05-Mar-2013

Date of test:

05-Mar-2013

Reference equipment used in the calibration

Description:

Multi function sound calibrator

Signal generator Signal generator Model:

B&K 4226

DS 360 DS 360

Serial No. 2288444

33873 61227

Expiry Date:

23-May-2013 29-May-2013 29-May-2013 Traceable to:

CIGISMEC CEPREI CEPREI

Ambient conditions

Temperature: Relative humidity: 21 ± 1 °C 60 ± 10 %

Air pressure:

1000 ± 10 hPa

Test specifications

1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.

2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.

The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference 3, between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:

Huang Jian N ng Jun Qi Date:

05-Mar-2013

Company Chop:

The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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Form No.CARP152-1/Issue 1/Rev.C/01/02/2007



G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 E-mail: smec@cigismec.com Website: www.cigismec.com

Tel: (852) 2873 6860 Fax: (852) 2555 7533



CERTIFICATE OF CALIBRATION

Certificate No.:

13CA1107 01-02

Page:

Item tested

Description:

Acoustical Calibrator (Class 1)

Manufacturer:

Rion Co., Ltd.

Type/Model No.:

NC-73

Serial/Equipment No.:

10307223 / N.004.08

Adaptors used:

Item submitted by

Curstomer:

AECOM ASIA CO., LTD.

Address of Customer:

Request No .:

Date of receipt:

07-Nov-2013

Date of test:

08-Nov-2013

Reference equipment used in the calibration

| Description: Lab standard microphone Preamplifier Measuring amplifier Signal generator Digital multi-meter Audio analyzer | Model: B&K 4180 B&K 2673 B&K 2610 DS 360 34401A 8903B | Serial No. 2341427 2239857 2346941 61227 US36087050 GB41300350 | Expiry Date: 17-Apr-2014 16-Apr-2014 24-Apr-2014 15-Apr-2014 10-Dec-2013 15-Apr-2014 | Traceable to: SCL CEPREI CEPREI CEPREI CEPREI CEPREI CEPREI |
|---|---|--|--|---|
| Universal counter | 53132A | MY40003662 | 15-Apr-2014 | CEPREI |

Ambient conditions

Temperature:

22 ± 1 °C

Relative humidity:

60 ± 10 %

Air pressure:

1000 ± 10 hPa

Test specifications

- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- 3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on page 2 of this certificate.

Huang Jian Min/Feng Jun Qi

Approved Signatory:

Date:

11-Nov-2013

Company Chop:

Comments: The results reported in this/certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

Soils & Materials Engineering Co., Ltd.

Form No.CARP156-1/Issue 1/Rev.D/01/03/2007

ENGINA



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Tel: (852) 2873 6860 Fax: (852) 2555 7533



CERTIFICATE OF CALIBRATION

Certificate No.:

13CA0325 01-03

Page:

of

2

Item tested

Description:

Acoustical Calibrator (Class 1)

Manufacturer: Type/Model No.: Rion Co., Ltd. NC-73

Serial/Equipment No.:

10186482 / N.004.09

Adaptors used:

-

Item submitted by

Curstomer:

AECOM ASIA CO., LTD.

Address of Customer:

-

Request No.: Date of receipt:

25-Mar-2013

Date of test:

26-Mar-2013

Reference equipment used in the calibration

| Description: | Model: | Serial No. | Expiry Date: | Traceable to: |
|-------------------------|----------|------------|--------------|---------------|
| Lab standard microphone | B&K 4180 | 2412857 | 29-May-2013 | SCL |
| Preamplifier | B&K 2673 | 2239857 | 17-Dec-2013 | CEPREI |
| Measuring amplifier | B&K 2610 | 2346941 | 17-Dec-2013 | CEPREI |
| Signal generator | DS 360 | 61227 | 29-May-2013 | CEPREI |
| Digital multi-meter | 34401A | US36087050 | 10-Dec-2013 | CEPREI |
| Audio analyzer | 8903B | GB41300350 | 29-May-2013 | CEPREI |
| Universal counter | 53132A | MY40003662 | 29-May-2013 | CEPREI |

Ambient conditions

Temperature:

22 ± 1 °C

Relative humidity:

60 ± 10 %

Air pressure:

1000 ± 10 hPa

Test specifications

- The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B
 and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on page 2 of this certificate.

Huang Jian Min/Feng Jun Qi

Approved Signatory:

Date:

26-Mar-2013

Company Chop:

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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