## Sea-Bird Electronics, Inc.

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## SENSOR SERIAL NUMBER: 0215 CALIBRATION DATE: 16-Sep-11

## SBE 43F OXYGEN CALIBRATION DATA

| COEFFICIENTS           | A = -3.0025e-003   | NOMINAL DYNAMIC COEFFICIENTS       |  |  |
|------------------------|--------------------|------------------------------------|--|--|
| Soc = 3.0714e-004 (DI) | B = 1.7405e-004    | D1 = 1.92634e-4 $H1 = -3.30000e-2$ |  |  |
| Foffset = $-808.15$    | C = -2.9396e - 006 | D2 = -4.64803e-2 $H2 = 5.00000e+3$ |  |  |
| Tau20 = 1.37           | E  nominal = 0.036 | H3 = 1.45000e+3                    |  |  |

| BATH OX<br>(ml/l) | BATH TEMP<br>ITS-90 | BATH SAL<br>PSU | INSTRUMENT<br>OUTPUT(Hz) | INSTRUMENT OXYGEN(ml/l) | RESIDUAL (ml/l) |
|-------------------|---------------------|-----------------|--------------------------|-------------------------|-----------------|
| 1.25              | 6.00                | 0.00            | 1283.94                  | 1.26                    | 0.00            |
| 1.26              | 12.00               | 0.00            | 1363.02                  | 1.26                    | 0.00            |
| 1.27              | 2.00                | 0.00            | 1238.01                  | 1.27                    | 0.01            |
| 1.27              | 20.00               | 0.00            | 1468.54                  | 1.27                    | 0.00            |
| 1.28              | 26.00               | 0.00            | 1549.30                  | 1.28                    | 0.00            |
| 1.28              | 30.00               | 0.00            | 1607.10                  | 1.28                    | 0.00            |
| 4.17              | 6.00                | 0.00            | 2384.06                  | 4.16                    | -0.01           |
| 4.18              | 12.00               | 0.00            | 2639.30                  | 4.17                    | -0.01           |
| 4.19              | 20.00               | 0.00            | 2980.80                  | 4.19                    | -0.00           |
| 4.20              | 30.00               | 0.00            | 3424.78                  | 4.20                    | -0.00           |
| 4.20              | 26.00               | 0.00            | 3244.21                  | 4.20                    | -0.00           |
| 4.20              | 2.00                | 0.00            | 2224.99                  | 4.19                    | -0.01           |
| 6.85              | 30.00               | 0.00            | 5079.73                  | 6.85                    | 0.00            |
| 6.97              | 20.00               | 0.00            | 4425.49                  | 6.97                    | 0.00            |
| 6.97              | 26.00               | 0.00            | 4857.07                  | 6.97                    | 0.00            |
| 6.98              | 12.00               | 0.00            | 3870.93                  | 6.98                    | 0.00            |
| 7.10              | 6.00                | 0.00            | 3496.71                  | 7.10                    | 0.01            |
| 7.18              | 2.00                | 0.00            | 3238.71                  | 7.19                    | 0.01            |

Oxygen (ml/l) = Soc \* (F + Foffset) \*  $(1.0 + A * T + B * T^2 + C * T^3) * OxSol(T,S) * exp(E * P / K)$ F = frequency output from SBE43F, T = temperature [deg C], S = salinity [PSU] K = temperature [deg K] OxSol(T,S) = oxygen saturation [ml/l], P = pressure [dbar] Residual = instrument oxygen - bath oxygen

Date, Delta Ox (ml/l)

