

# Sea-Bird Electronics, Inc.

13431 NE 20th Street, Bellevue, WA 98005-2010 USA

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SENSOR SERIAL NUMBER: 0086  
CALIBRATION DATE: 11-Nov-11

SBE 43F OXYGEN CALIBRATION DATA

**COEFFICIENTS**

Soc = 2.8007e-004 (DI)  
Foffset = -791.46  
Tau20 = 1.28

A = -3.2518e-003  
B = 1.5351e-004  
C = -2.0561e-006  
E nominal = 0.036

**NOMINAL DYNAMIC COEFFICIENTS**

D1 = 1.92634e-4 H1 = -3.30000e-2  
D2 = -4.64803e-2 H2 = 5.00000e+3  
H3 = 1.45000e+3

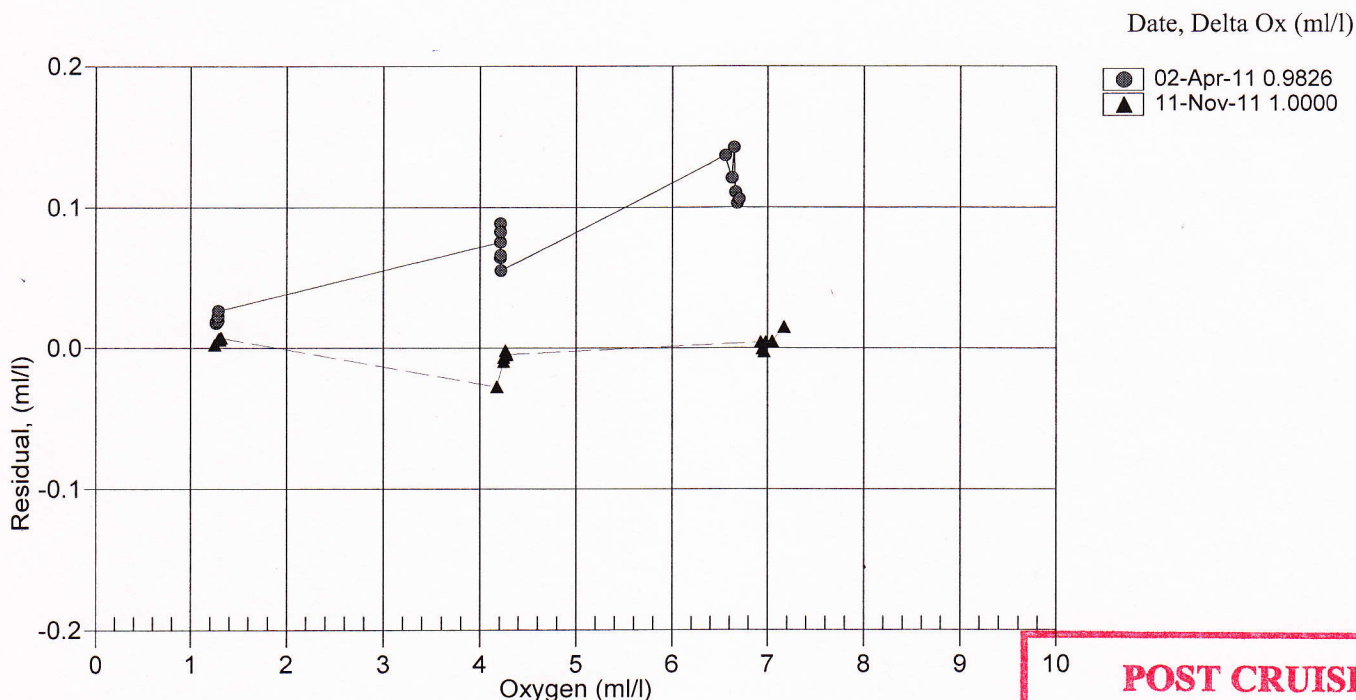
BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(Hz)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.25	2.00	0.10	1254.89	1.25	0.00
1.29	6.00	0.09	1329.22	1.29	0.01
1.29	12.00	0.08	1418.36	1.30	0.01
1.30	20.00	0.08	1539.94	1.31	0.01
1.31	26.00	0.08	1630.70	1.31	0.01
1.31	30.00	0.08	1695.30	1.32	0.01
4.17	2.00	0.10	2328.63	4.14	-0.03
4.24	6.00	0.09	2553.39	4.23	-0.01
4.25	12.00	0.09	2842.18	4.24	-0.01
4.26	20.00	0.08	3230.16	4.26	-0.00
4.26	26.00	0.08	3519.30	4.26	-0.00
4.28	30.00	0.08	3722.48	4.28	-0.00
6.92	26.00	0.08	5225.72	6.93	0.00
6.94	30.00	0.08	5547.69	6.94	-0.00
6.96	20.00	0.08	4775.77	6.95	-0.00
6.97	12.00	0.09	4166.60	6.98	0.00
7.04	6.00	0.09	3723.12	7.04	0.00
7.16	2.00	0.10	3457.52	7.18	0.02

$$\text{Oxygen (ml/l)} = \text{Soc} * (\text{F} + \text{Foffset}) * (1.0 + \text{A} * \text{T} + \text{B} * \text{T}^2 + \text{C} * \text{T}^3) * \text{OxSol}(\text{T},\text{S}) * \exp(\text{E} * \text{P} / \text{K})$$

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



**POST CRUISE  
CALIBRATION**



# SEA-BIRD ELECTRONICS, INC.

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Phone: (425) 643-9866 Fax: (425) 643-9954 www.seabird.com

Service

Report

RMA Number

66754

### Customer Information:

Company U HAWAII/OCEAN Date 12/13/2011

Contact Jennie Mowatt

PO Number Credit Card

Serial Number 43F0086  
Model Number SBE 43F

### Services Requested:

1. Evaluate/Repair Instrumentation.
2. Perform Routine Calibration Service.

### Problems Found:

### Services Performed:

1. Performed initial diagnostic evaluation.
2. Performed "Post Cruise" calibration of the oxygen sensor.
3. Performed full diagnostic evaluation.

### Special Notes: