

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there is qualified data on this page.

Meter ID: YSI 11

RQ: 2018-06-18-13

Project: Sunshine North 2

- Notes:** (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 4-10-2018

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	PO'Comer	06-19-18	0745	23.2	8.54	8.54	100.0	-	1.03141	(P) F	(L) F
ICV	✓	✓	0750	23.5	8.49	8.48	99.9	-	1.03141	(P) F	(L) F
CCV	PO'Comer	06-19-18	1513	25.8	8.14	8.15	100.4	-	1.03141	(P) F	(L) F
CCV										P / F	L / F

DO Acceptance criteria from Table ± 0.3 mg/L.

Optical: DO gain range 0.85 to 1.15; DO charge N/A.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	PO'Comer	06-19-18	0753	180321B	04-2019	1000	1000	(P) F	(L) F
ICV	✓	✓	0802	180321B	04-2019	100	105	(P) F	(L) F
CCV	PO'Comer	06-19-18	1516	180321B	04-2019	1000	974	(P) F	L / F
CCV							974	(P) F	(L) F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	PO'Comer	06-19-18	0805	2711C81	11-2019	7.0	7.00	-14.2	(P) F	(L) F
Calibr.	✓	✓	0808	2711517	10-2019	4.0	4.00	154.4	(P) F	(L) F
Calibr.	✓	✓	0815	2711527	04-2019	10.0	10.00	-184.2	(P) F	(L) F
ICV	✓	✓	0830	2711C81	11-2019	7.0	6.98	-13.9	(P) F	(L) F
CCV	PO'Comer	06-19-18	1524	2711517	10-2019	4.0	4.04	152.0	(P) F	(L) F
CCV									P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 170.0, slope from 4 to 7 166.6 (both must be between 165 and 180 mV)

Is meter equipped with depth sensor? Yes / No If yes, list date of last quarterly depth verification 4-10-2018

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value meters	Pass / Fail	Lab / Field
Pressure mode in air	A Kalmbacher	6-19-2018	0820	0.000	0.001	(P) F	(L) F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

QC/Scanned BT 6/25/18 JP 6/22/18

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there is qualified data on this name.

Meter ID: YSI DSS

RQ- 2018-06-11-18

Project: SUN WITH LVI

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 4/2018

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	J. Parin	6/19/18	714	22.6	8.64	8.65	100	—	—	P/F	L/F
ICV	J	7	715	22.6	8.64	8.65	100.1	—	—	P/F	L/F
CCV	B- J-	6/19/18	1448	24.2	8.38	8.40	100.2	—	—	P/F	L/F
CCV										P/F	L/F

DO Acceptance criteria from Table ± 0.3 mg/L.

Optical: DO gain range 0.85 to 1.15; DO charge N/A.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	J. Parin	6/19/18	717	180321B	4/19	1000	1000	P/F	L/F
ICV	J	7	718	1470318	9/18	147	150	P/F	L/F
CCV	B- J-	6/19/18	1450	180321B	4/19	1000	997	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	J. Parin	6/19/18	719	2711C81	11/19	7.0	7.00		P/F	L/F
Calibr.	J		720	2711S17	10/19	4.0	4.00		P/F	L/F
Calibr.	J		721	2711S27	4/19	10.0	10.00		P/F	L/F
ICV	J		723	2711C81	11/19	7.0	7.01		P/F	L/F
CCV	J	6/19/18	1455	2711S27	4/19	10.0	9.99	-179.6	P/F	L/F
CCV									P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Is meter equipped with depth sensor? Yes / No If yes, list date of last quarterly depth verification

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value meters	Pass / Fail	Lab / Field
Pressure mode in air	J. Parin	6/19/18	730	0.0	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

1/27 QCQA/Scanned 6/25/18 JP 6/22/18