

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 X RQ- 2018-07-23-16 Project: L55R SLW

- 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 7/20/18

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 Parnish	7/25/18	729	23.2	8.55	8.55	100	1		P/F	L/F
ICV		7/25/18	730	23.2	8.56	8.55	100			P/F	L/F
CCV	A. Kalmbacher	7-25-18	1330	24.6	8.32	8.36	100.3	—	1.03285	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 Parnish	7/24/18	0740	180711A	7/2019	1,000	1,000	P/F	L/F
ICV		7/24/18	0743	180321A	4/2019	100	104	(P) F	(L) F
CCV	A. Kalmbacher	7-25-18	1335	180711A	7/2019	1,000	871	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.	A. Kalmbacher	7-25-18	0750	2803E45	3/2020	7.0	7.00	20.8	P/F	L/F
Calibr.			0753	2803D38	3/2020	4.0	4.00	150.5	P/F	L/F
Calibr.			0755	2711527	4/2019	10.0	10.00	189.0	P/F	L/F
ICV			0758	2803E45	3/2020	7.0	7.03	21.6	(P) F	(L) F
CCV			1340	2803D38	3/2020	4.0	3.93	153.8	(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 10 168.2, slope from 4 to 7 171.3 (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	A. Kalmbacher	7-25-18	0800	0.001	0.000	(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:

TSV QC/Scanned 7/30/18 JP 7/27/18

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 page.

Meter ID: P-01755

RQ: 2018-07-23-24

Project: UEC

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

07-12-18

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'Connor	07-25-18	0712	23.3	8.53	8.53	100.0	-	-	(P/F)	(L/F)
ICV	✓	✓	0715	23.4	8.51	8.52	100.1	-	-	(P/F)	(L/F)
CCV	JP	7/25/18	1243	24.8	8.29	8.33	100.5	✓	✓	(P/F)	(L/F)
CCV										P/F	L/F

DO Acceptance criteria from Table ± 0.3 mg/L.

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

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

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

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	PO'Connor	07-25-18	0718	180711A	07-2019	1000	1000	(P/F)	(L/F)
ICV	✓	✓	0722	180321A	04-2019	100	1010.9	(P/F)	(L/F)
CCV	JP	7/25/18	1246	180711A	7/19	1000	998	(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.	PO'Connor	07-25-18	0725	2803E45	03-2020	7.0	7.00	-13.9	(P/F)	(L/F)
Calibr.	✓	✓	0728	2803D38	03-2020	4.0	4.00	-	(P/F)	(L/F)
Calibr.	✓	✓	0730	211521	04-2019	10.0	9.92	-180.7	(P/F)	(L/F)
ICV	✓	✓	0733	2803E45	03-2020	7.0	7.04	-11.4	(P/F)	(L/F)
CCV	JP	7/25/18	1250	2803B38	3/20	4.0	3.97	168.1	(P/F)	(L/F)
CCV	PO'Connor	07-25-18	1305	211521	04-2019	10.0	10.02	185.1	(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 07-12-18

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						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:

JP 7/30/18 JP 7/27/18