

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

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

Meter ID: YSI 3

RQ: 2019-03-04-13

Project: Alignment Boat / CM

- 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.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification _____

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	B-V	3/7/19	809	20.8	760	8.95	8.95	100	-	-	P/F	L/F
ICV			811	21.1	760	8.89	8.92	100.4	-	-	P/F	L/F
CCV	A Kalmbacher	3-7-19	1615	21.0	760	8.91	9.07	102.3	-	-	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 (Pro D55 0.75 to 1.50); 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 mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	B-V	3/7/19	813			1000	1000	P/F	L/F
ICV			815			50,000	50,367	P/F	L/F
CCV	A Kalmbacher	3-7-19	1620	190125B	2/2020	1,000	1,001	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	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	B-V	3/7/19	823			7.	21.5	7.0	-20.8	P/F	L/F
Calibr.			827			4.	21.8	4.01	154.5	P/F	L/F
Calibr.			830			10.	21.8	9.99	-192.1	P/F	L/F
ICV			835			7.0	21.8	7.02	-20.7	P/F	L/F
CCV	A Kalmbacher	3-7-19	1623	2810F55	4/2020	10.0	22.1	9.99	-192.8	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 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: _____

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last 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						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:

m 3/11/19

BD 3/25/19

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

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

Meter ID: EXO

RQ: 2019-03-04-17

Project: McCullough S&I

- 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.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 02-11-19

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	PO ₂ con	03-07-19	0730	19.4	769.0	9.20	9.33	101.5	—	—	(P/F)	(L/F)
ICV	PO ₂ con	✓	0735	19.7	769.3	9.14	9.25	101.2	—	—	(P/F)	(L/F)
CCV	PO ₂ con	03-07-19	1355	19.0	767.4	9.27	9.37	101.1	—	—	(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 (Pro DSS 0.75 to 1.50); 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 mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	PO ₂ con	03-07-19	0738	190125B	02-2020	1000	1000	(P/F)	(L/F)
ICV	✓	✓	0740	180711B	07-2019	100	100.4	(P/F)	(L/F)
CCV	PO ₂ con	03-07-19	1400	190125B	02-2020	1000	999	(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	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	PO ₂ con	03-07-19	0745	2811E61	11-2020	7.00	21.8	7.00	-20.1	P/F	L/F
Calibr.	✓	✓	0752	2811D47	11-2020	4.00	21.8	4.00	154.8	(P/F)	(L/F)
Calibr.	✓	✓	0758	2810F55	04-2020	10.00	21.7	10.00	193.4	(P/F)	(L/F)
ICV	✓	✓	0800	2811E61	11-2020	7.00	21.5	7.00	-22.8	(P/F)	(L/F)
CCV	PO ₂ con	03-07-19	1405	2811D47	11-2020	4.00	21.87	4.02	153.1	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)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / (NO) / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: _____

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: Dip Net; Date of last verification: 02-11-19

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:

3/11/19 BT 3/14/19