

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: Shrimp Trap

RQ- 2019-07-08-69

Project: SMP

- 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 6/5/19

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.	Mike Drennan	7/10/19	715	23.7	758.9	8.5	8.45	99.9	—	1.0723	P/F	L/F
ICV				23.8	758.8	8.5	8.45	99.9	—	—	P/F	L/F
CCV			1445	23.8	758.3	8.43	8.70	103.1	—	—	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 hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	Mike Drennan	7/10/19	715	181219A	12/19	1000	1000	P/F	L/F
ICV				190129	2/20	100	102.8	P/F	L/F
CCV			1445	190129	2/20	100	103.0	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.	Mike Drennan	7/10/19	715	180888	3/20	7.00	23.9	7.00	-29.6	P/F	L/F
Calibr.				183218	7/20	4.00	23.6	4.00	145.7	P/F	L/F
Calibr.				186877	10/20	10.01	23.8	10.01	-217.2	P/F	L/F
ICV				186877	10/20	10.01	23.8	10.04	-216.8	P/F	L/F
CCV			1445	183218	7/20	4.00	23.6	4.14	139.1	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 10 187.4, slope from 4 to 7 175.3 (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: 7/5/19

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	Mike Drennan	7/10/19	715	0.272	0.272	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:

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: Besty 167

RQ: 2019-07-08-70

Project: SMP

- 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 6/5/19

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.	Leif Boman	07/10/19	8:15	23.36	/	8.5	8.52	100.0	54.3	1.12314	P/F	D/F
ICV				23.41	/	8.5	8.51	99.9	54.3	/	P/F	D/F
CCV			15:20	24.00	/	8.4	8.48	100.7	54.3	1.12314	P/F	D/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 hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	Leif Boman	07/10/19	8:15	181219A	12/19	1000	1000	P/F	D/F
ICV				196129	02/20	100	104	P/F	D/F
CCV			15:20	190129	02/20	100	105	P/F	D/F
CCV				270606	12/19	50,000	50,921	P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

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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.	Leif Boman	07/10/19	8:15	180888	03/20	7.	23.30	7.00	-46.7	P/F	D/F
Calibr.				183218	07/20	4.	23.10	4.00	125.4	P/F	D/F
Calibr.				186877	10/20	10.	23.29	10.00	-220.0	P/F	D/F
ICV				183218	07/20	4.	23.05	4.00	125.1	P/F	D/F
CCV			15:20	186877	10/20	10.	23.36	10.00	-217.2	P/F	D/F
CCV								9.96	18	P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 $\pm$ 50; mV pH 4 Range +180 $\pm$ 50; mV pH 10 Range -180 $\pm$ 50;

If mV are recorded: slope from 7 to 10 173.3, slope from 4 to 7 172.1 (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: KNOWHEAD; Date of last verification: 3/22/19

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:

10,000 umhos expired so not avail. for bracketing in post-cal