

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: Bethy 167

RQ: 2018-07-16-41

Project: 5mP

- 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 8/31/18

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.	T. Riordan	9/13/18	720	23.42		8.514	8.51	100.0	53.3	1.02275	P/F	L/F
ICV			1	23.42		8.514	8.52	100.1	52.3		P/F	L/F
CCV			1345	23.30		8.530	8.59	100.7	52.3	1.02275	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.	T. Riordan	9/13/18	720	180312B	3/19	1000	1000	P/F	L/F
ICV			1	180312A	3/19	100	100	P/F	L/F
CCV			1345	180312B	3/19	1000	1001	P/F	L/F
CCV			1	180312A	3/19	100	101	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.	T. Riordan	9/13/18	720	176157	8/19	7.	24.08	7.00	-37.4	P/F	L/F
Calibr.			1	177759	10/19	4.	24.14	4.00	139.1	P/F	L/F
Calibr.			1	176507	9/19	10.	24.07	10.00	-213.1	P/F	L/F
ICV			1	177759	10/19	4.	24.11	4.00	139.0	P/F	L/F
CCV			1345	176507	9/19	10.	23.92	10.05	-215.6	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 10 175.7, slope from 4 to 7 176.5 (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: Knothead; Date of last verification: 3/9/18

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:

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: SCUD

RQ- 2018-09-10-61

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 7/6/18

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 L-40	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Mike Drennan	9/13/18	800	23.9	758.6	8.418	99.9	8.40			(P) F	(L) F
ICV				24.1	758.6	8.418	8.40	99.8			(P) F	(L) F
CCV			1415	24.1	757.8	8.403	8.37	99.7			(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.			860	180312B	3/19	1000	1060	(P) F	(L) F
ICV				180312A	3/19	100	100.5	(P) F	(L) F
CCV			1415	180312A	3/19	100	100.4	(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.			800	176157	8/19	7.0	24.5	7.00	-21.1	(P) F	(L) F
Calibr.				177759	10/19	4.0	24.4	4.00	156.9	(P) F	(L) F
Calibr.				176507	9/19	10.0	24.5	10.00	-200.6	(P) F	(L) F
ICV				176507	9/19	10.0	24.5	10.00	-200.1	(P) F	(L) F
CCV			1415	177759	10/19	4.0	24.3	4.07	153.5	(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 10 179.5, slope from 4 to 7 178.0 (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: Crusty; 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	9/17/18	800	0.000	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: