

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: DEP#154181 RQ: 2019-04-15-17 Project: LSSR North Boat

- 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'Connor	04-17-19	0645	22.6	760.3	8.6	8.6	99.5	—	1.04708	P/P	L/F
ICV	↓	↓	0650	22.7	760.3	8.6	8.61	99.8			P/F	L/F
CCV	Nicole Reistad	04/17/19	1511	25.5	759.7	8.2	8.24	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 (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.	PO'Connor	04-17-19	0653	190319A	03-2020	1000	1000	P/F	L/F
ICV	↓	↓	0655	190125A	02-2020	100	103.1	P/F	L/F
CCV	Nicole Reistad	04/17/19	1515	0424820	06/20	24820	24344	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'Connor	04-17-19	0657	2807A76	06-2020	7.00	23.9	7.01	-44.5	P/F	L/F
Calibr.	↓	↓	0705	2901A40	01-2021	4.00	24.1	4.00	132.0	P/F	L/F
Calibr.	↓	↓	0707	2809980	03-2020	10.00	23.9	10.01	-220.4	P/F	L/F
ICV	↓	↓	0710	2807A76	06-2020	7.00	23.8	7.05	-46.7	P/F	L/F
CCV	Nicole Reistad	04/17/19	1517	2809980	03/20	10.01	24.0	10.07	-223.6	P/F	L/F
CCV										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 10 175.9, 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: 02-11-19

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						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:

BD 4/22/19

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: YST noe

RQ- 2019-64-15-24

Project: ICW Boat

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.	J Parnish	4/17/19	743	22.7	763.5	8.7	8.7	100.5		1.044	P/F	L/F
ICV	J	J	746	22.7	763.5	8.7	8.69	100.7		1.044	P/F	L/F
CCV	A Kalmbacher	4-17-19	1300	23.6	763.6	8.5	8.61	101.5			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 (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.	J Parnish	4/17/19	747	190319A	3/20	1000	1000	P/F	L/F
ICV	J	J	751	180919	9/19	50,000	49756	P/F	L/F
CCV	A Kalmbacher	4-17-19	1305	190319A	3/2020	1,000	1,008	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.	J Parnish	4/17/19	804	2807A76	6/20	7.	23.9	-30.1	-30.1	P/F	L/F
Calibr.	J	J	805	2901A40	1/21	4.	24.1	144.2	144.2	P/F	L/F
Calibr.	J	J	806	2809980	3/20	10.	24.0	10.02	203.1	P/F	L/F
ICV	J	J	807	2901A40	1/21	4.0	23.8	4.01	144.2	P/F	L/F
CCV	A Kalmbacher	4-17-19	1310	2809980	3/2020	10.0	24.1	10.03	203.5	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 _____, 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	J Pan	4/17/19	807	0.00	0.00	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:

BD 4/22/19