

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

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

Meter ID: P20 DSS

RQ- 2018-11-19-08

Project: LSTR Boulton Bay

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 10/18

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.	B = D =	11/20/18	840	22.5	760.2	8.66	8.66	100	✓	✓	(P) F	(L) F
ICV	L		842	22.6	760.3	8.64	8.65	100	✓	✓	(P) F	(L) F
CCV	JR	L	1322	19.4	759.2	9.22	9.21	100	✓	✓	(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.	B = D =	11/20/18	847	181102	11/19	1000	1000	(P) F	(L) F
ICV	L		855	180919	9/19	50000	51,053	(P) F	(L) F
CCV	JR	L	1330	101413	9/19	1413	1418	(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 = D =	11/20/18	901	2803E45	3/20	7.	23.7	7.0	-28.7	(P) F	(L) F
Calibr.			903	2806975	6/20	4.	23.7	4.0	151.4	(P) F	(L) F
Calibr.	L		905	1806F51	12/19	10.	23.5	10.0	-202.4	(P) F	(L) F
ICV	JR		907	2803E45	3/20	7.0	23.6	7.05	-29.4	(P) F	(L) F
CCV	JR		1335	1806F51	12/19	10.0	23.6	10.04	206.4	(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 _____, 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	B = D =	11/20/18	909	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:

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

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Meter ID: YSI#3

RQ- 2018-11-12-20

Project: BMAP#2

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.	PO'Connor	11-20-18	0715	22.4	760	8.67	8.67	100.0	—	1.08712	(P) F	(L) F
ICV	✓	✓	0720	22.5	760	8.66	8.65	99.9	—	1.08712	(P) F	(L) F
CCV		11/20/18	0710	20.6	960	8.98	8.86	98.5	—	1.08712	(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'Connor	11-20-18	0723	181102	11-2019	1000	1000	(P) F	(L) F
ICV	✓	✓	0725	180321A	04-2019	100	102	(P) F	(L) F
CCV	PO'Connor	11-20-18	1712	181102	11-2019	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'Connor	11-20-18	0728	2803E45	03-2020	7.00	23.52	7.00	-21.2	(P) F	(L) F
Calibr.	✓	✓	0730	2806975	06-2020	4.00	23.61	4.00	154.3	(P) F	(L) F
Calibr.	✓	✓	0733	1806F51	12-2019	10.00	23.5	9.98	-190.6	(P) F	(L) F
ICV	✓	✓	0750	2803E45	03-2020	7.00	23.35	7.01	79.7	(P) F	(L) F
CCV	PO'Connor	11-20-18	1715	2806975	06-2020	4.00	23.75	4.02	152.6	(P) F	(L) F
CCV	✓	✓	0718	1806F51	12-2019	10.00	23.57	10.01	-192.1	(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)

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: 10-10-18

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:

QC/Scanned BD 11/27/18 JP 11/26/18