

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- 2019-09-16-49

Project: HAB

- 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 9/6/19

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.	T. Riordan	10/7/19	0915	22.8	757.7	8.6	8.57	99.7	—	1.0307	P/F	L/F
ICV	1	1	1	22.9	757.7	8.6	8.57	99.7	—	—	P/F	L/F
CCV			1440	22.1	755.4	8.7	8.66	99.2	—	—	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	10/7/19	0915	181219A	12/19	1000	1000	P/F	L/F
ICV	1	1	1	190403	4/20	100	102.9	P/F	L/F
CCV			1440	190403	4/20	100	102.6	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.	T. Riordan	10/7/19	0915	188510	1/21	7.01	23.4	7.01	-12.5	P/F	L/F
Calibr.	1	1	1	187927	11/20	4.00	23.5	4.00	164.1	P/F	L/F
Calibr.	1	1	1	190071	1/21	10.01	23.5	10.01	-184.4	P/F	L/F
ICV	1	1	1	187927	11/20	4.00	23.7	3.99	164.8	P/F	L/F
CCV			1440	190071	1/21	10.02	23.3	10.14	-186.0	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 10 175.9, slope from 4 to 7 176.6 (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: Lead60T; Date of last verification: 5/31/19

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	T. Riordan	10/7/19	0915	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)

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Meter ID: CRANDADDY

RQ: 2019-10-17-164

Project: BMAP

- 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 7/5/19

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.	<u>Lif Boman</u>	<u>10/07/19</u>	<u>8:15</u>	<u>23.2</u> <u>22.6</u>	<u>756.2</u>	<u>8.5</u> <u>8.6</u>	<u>8.50</u>	<u>99.6</u>	<u>/</u>	<u>1.0612</u>	<u>P/F</u>	<u>L/F</u>
ICV	<u> </u>	<u> </u>	<u> </u>	<u>23.3</u>	<u>756.3</u>	<u>8.5</u>	<u>8.50</u>	<u>99.7</u>	<u>/</u>	<u>/</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u> </u>	<u> </u>	<u>14:15</u>	<u>23.6</u>	<u>754.4</u>	<u>8.4</u>	<u>8.56</u>	<u>100.9</u>	<u>/</u>	<u>/</u>	<u>P/F</u>	<u>L/F</u>
CCV											<u>P/F</u>	<u>L/F</u>

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.	<u>Lif Boman</u>	<u>10/07/19</u>	<u>8:15</u>	<u>181219A</u>	<u>12/19</u>	<u>1000</u>	<u>1000</u>	<u>P/F</u>	<u>L/F</u>
ICV	<u> </u>	<u> </u>	<u> </u>	<u>190403</u>	<u>04/20</u>	<u>100</u>	<u>102.7</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u> </u>	<u> </u>	<u>14:15</u>	<u>190403</u>	<u>04/20</u>	<u>100</u>	<u>103.0</u>	<u>P/F</u>	<u>L/F</u>
CCV								<u>P/F</u>	<u>L/F</u>

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.	<u>Lif Boman</u>	<u>10/07/19</u>	<u>8:15</u>	<u>187510</u> <u>188510</u>	<u>01/21</u>	<u>7.00</u>	<u>23.6</u>	<u>7.00</u>	<u>-22.5</u>	<u>P/F</u>	<u>L/F</u>
Calibr.	<u> </u>	<u> </u>	<u> </u>	<u>187827</u>	<u>11/20</u>	<u>4.00</u>	<u>22.9</u>	<u>4.00</u>	<u>155.8</u>	<u>P/F</u>	<u>L/F</u>
Calibr.	<u> </u>	<u> </u>	<u> </u>	<u>190071</u>	<u>01/21</u>	<u>10.00</u>	<u>23.6</u>	<u>10.01</u>	<u>-201.2</u>	<u>P/F</u>	<u>L/F</u>
ICV	<u> </u>	<u> </u>	<u> </u>	<u>187827</u>	<u>11/20</u>	<u>4.00</u>	<u>23.1</u>	<u>4.00</u>	<u>155.5</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u> </u>	<u> </u>	<u>14:15</u>	<u>190071</u>	<u>01/21</u>	<u>10.01</u>	<u>23.6</u>	<u>10.04</u>	<u>-202.9</u>	<u>P/F</u>	<u>L/F</u>
CCV										<u>P/F</u>	<u>L/F</u>

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 10 178.7, slope from 4 to 7 178.3 (both must be between 165 and 180 mV)

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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	<u>Lif Boman</u>	<u>10/07/19</u>	<u>8:15</u>	<u>0.272</u>	<u>0.272</u>	<u>P/F</u>	<u>L/F</u>

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS: