

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: YSI #3

RQ- 2019-01-14-25

Project: LSR SW 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 10/2018

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.	C. Ruben	1.15.19	0745	20.8	760	8.90	8.90	99.5	-	-	P/F	L/F
ICV	↓	↓	0749	21.0	760	8.91	8.90	100.0	-	-	P/F	L/F
CCV	C. Ruben	1.15.19	1315	16.5	760	9.76	9.90	101	-	-	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.	C. Ruben	1.15.19	0751	181102	11/2019	1000	995	P/F	L/F
ICV	↓	↓	0755	180321A	4/2019	100	100	P/F	L/F
CCV	C. Ruben	1.15.19	1319	181102	11/2019	1000	998	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.	C. Ruben	1.15.19	0800	2809841	8/2020	7.	21.5	-24.3	7.0	P/F	L/F
Calibr.	↓	↓	0804	2810832	9/2020	4.	22.0	3.99	152	P/F	L/F
Calibr.	↓	↓	0810	2712855	6/2019	10.	21.7	9.85	-191	P/F	L/F
ICV	C. Ruben	1.15.19	0812	2809841	8/2020	7.0	21.6	7.05	767.2	P/F	L/F
CCV	C. Ruben	1.15.19	1322	2810832	9/2020	4.0	21.8	4.02	149.1	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: 10/2019

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	C. Ruben	1.15.19	0815	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:

8/11/19 BT Scanned/QC 1/28/19

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: Pro DSS

RQ- 2019-01-14-24

Project: LSJR Southwest

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.	<u>B Davis</u>	<u>1/15/19</u>	<u>746</u>	<u>20.7</u>	<u>762.9</u>	<u>8.96</u>	<u>8.97</u>	<u>100.4</u>	<u>/</u>	<u>/</u>	<u>P/F</u>	<u>L/F</u>
ICV			<u>747</u>	<u>21.0</u>	<u>762.9</u>	<u>8.91</u>	<u>8.95</u>	<u>100.5</u>	<u>/</u>	<u>/</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u>AKelmbacher</u>	<u>1-15-19</u>	<u>1505</u>	<u>19.0</u>	<u>762.4</u>	<u>9.27</u>	<u>9.40</u>	<u>101.5</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>B Davis</u>	<u>1/15/19</u>	<u>749</u>	<u>181109</u>	<u>11/19</u>	<u>1000</u>	<u>998</u>	<u>P/F</u>	<u>L/F</u>
ICV			<u>752</u>	<u>180711B</u>	<u>7/19</u>	<u>100</u>	<u>103</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u>AKelmbacher</u>	<u>1-15-19</u>	<u>1508</u>	<u>181109</u>	<u>11/2019</u>	<u>1000</u>	<u>1000</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>B Davis</u>	<u>1/15/19</u>	<u>803</u>	<u>2809841</u>	<u>8/20</u>	<u>7.</u>	<u>21.9</u>	<u>7.02</u>	<u>-33.9</u>	<u>P/F</u>	<u>L/F</u>
Calibr.			<u>808</u>	<u>2810B32</u>	<u>9/20</u>	<u>4.</u>	<u>22.0</u>	<u>4.0</u>	<u>146.2</u>	<u>P/F</u>	<u>L/F</u>
Calibr.			<u>812</u>	<u>1806F51</u>	<u>12/19</u>	<u>10.</u>	<u>21.9</u>	<u>10.04</u>	<u>-207.9</u>	<u>P/F</u>	<u>L/F</u>
ICV			<u>817</u>	<u>2809841</u>	<u>8/20</u>	<u>7.0</u>	<u>21.9</u>	<u>7.06</u>	<u>-34.4</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u>AKelmbacher</u>	<u>1-15-19</u>	<u>1510</u>	<u>1806F51</u>	<u>10/2019</u>	<u>10.0</u>	<u>22.0</u>	<u>10.02</u>	<u>-208.3</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 _____, slope from 4 to 7 _____ (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>B Davis</u>	<u>8/15/19</u>	<u>820</u>	<u>0.00</u>	<u>0.00</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:

JP 1/17/19 BT 1/28/19 QC/Scanned