

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

Boldly "X" this box if there is qualified data on this name.

Meter ID: YSI #4

RQ- 2018-04-09-21

Project: LSJR SW 1

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.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site Lab

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 4/18

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	<u>B-V-</u>	<u>4/16/18</u>	<u>752</u>	<u>22.01</u>	<u>8.74</u>	<u>8.74</u>	<u>100</u>	<u>59.4</u>	<u>0.937</u>	P/F	L/F
ICV			<u>753</u>	<u>22.01</u>	<u>8.74</u>	<u>8.74</u>	<u>100</u>	<u>59.4</u>	<u>0.937</u>	P/F	L/F
CCV			<u>1620</u>	<u>21.7</u>	<u>8.79</u>	<u>8.70</u>	<u>98.8</u>	<u>59.4</u>	<u>0.937</u>	P/F	L/F
CCV										P/F	L/F

DO Acceptance criteria from Table ± 0.3 mg/L.

Optical: DO gain range 0.85 to 1.15; DO charge N/A.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

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.	<u>B-V-</u>	<u>4/16/18</u>	<u>755</u>	<u>180321B</u>	<u>4/19</u>	<u>1000</u>	<u>1000</u>	P/F	L/F
ICV			<u>758</u>	<u>171129B</u>	<u>12/18</u>	<u>100</u>	<u>98</u>	P/F	L/F
CCV			<u>1622</u>	<u>180321B</u>	<u>4/19</u>	<u>1000</u>	<u>997</u>	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	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	<u>B-V-</u>	<u>4/16/18</u>	<u>825</u>	<u>2711C81</u>	<u>11/19</u>	<u>7.0</u>	<u>7.0</u>	<u>-35.6</u>	P/F	L/F
Calibr.			<u>830</u>	<u>2711517</u>	<u>10/19</u>	<u>4.0</u>	<u>4.0</u>	<u>143.6</u>	P/F	L/F
Calibr.			<u>835</u>	<u>2711527</u>	<u>4/19</u>	<u>10.0</u>	<u>9.98</u>	<u>-209.0</u>	P/F	L/F
ICV			<u>838</u>	<u>2711C81</u>	<u>11/19</u>	<u>7.0</u>	<u>7.04</u>	<u>-36.1</u>	P/F	L/F
CCV			<u>1625</u>	<u>2711517</u>	<u>10/19</u>	<u>4.0</u>	<u>4.07</u>	<u>138.8</u>	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)

Is meter equipped with depth sensor? Yes / No If yes, list date of last quarterly depth 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 4/23/18 JP 4/19/18

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

Boldly "X" this box if there is qualified data on this name.

Meter ID: YSI #4 RQ: 2018-04-09-19 Project: LSR SW

- 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.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site _____

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification 04-10-18

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	PO'Connor	04-16-18	0722	21.9	8.75	8.75	100.0	—	1.04273	(P) F	(L) F
ICV	↓	↓	0725	22.0	8.74	8.74	100.0	—	1.04273	(P) F	(L) F
CCV	PO'Connor	04-16-18	1505	22.2	8.70	8.80	100.9	—	1.04237	(P) F	(L) F
CCV										P / F	L / F

DO Acceptance criteria from Table ± 0.3 mg/L.

Optical: DO gain range 0.85 to 1.15; DO charge N/A.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	PO'Connor	04-16-18	0727	171129A	12-2018	1000	1000	(P) F	(L) F
ICV	↓	↓	0729	171129B	12-2018	100	105	(P) F	(L) F
CCV	PO'Connor	04-16-18	1510	171129A	12-2018	1000	991	(P) F	(L) F
CCV								P / F	L / F

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	PO'Connor	04-16-18	0745	2711C81	11-2019	7.0	7.00	-5.6	(P) F	(L) F
Calibr.	↓	↓	0747	2711517	10-2019	4.0	4.00	162.4	(P) F	(L) F
Calibr.	↓	↓	0750	2711521	04-2019	10.0	10.00	-12.3	(P) F	(L) F
ICV	↓	↓	0752	2711C81	11-2019	7.0	7.01	-5.9	(P) F	(L) F
CCV	PO'Connor	04-16-18	1512	2711517	10-2019	4.0	4.01	161.6	(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 ± 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)

Is meter equipped with depth sensor? Yes / No If yes, list date of last quarterly depth verification 04-10-18

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 ± 5 % or ± 0.05m, whichever is greater.

COMMENTS:

QC/Scanned BT 4/23/18 JP 4/19/18