

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 page.

Meter ID: Puo Dss

RQ: 2018-09-17-11

Project: LSJR Lake

- 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

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>9/18/18</u>	<u>758</u>	<u>8.43</u>	<u>8.43</u>	<u>8.41</u>	<u>100</u>	<u>/</u>	<u>/</u>	<u>P/F</u>	<u>L/F</u>
ICV			<u>800</u>	<u>8.40</u>	<u>8.41</u>	<u>8.42</u>	<u>100.1</u>	<u>/</u>	<u>/</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u>A. Kalmbacher</u>	<u>9-18-18</u>	<u>1530</u>	<u>25.5</u>	<u>8.18</u>	<u>8.13</u>	<u>99.3</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.

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 hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	<u>B-V</u>	<u>9/18/18</u>	<u>802</u>			<u>1000</u>	<u>1000</u>	<u>P/F</u>	<u>L/F</u>
ICV			<u>805</u>			<u>100</u>	<u>101</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u>A. Kalmbacher</u>	<u>9-18-18</u>	<u>1535</u>	<u>180711A</u>	<u>7/2019</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	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	<u>B-V</u>	<u>9/18/18</u>	<u>816</u>			<u>7.0</u>	<u>7.0</u>	<u>-19.2</u>	<u>P/F</u>	<u>L/F</u>
Calibr.			<u>818</u>			<u>4.0</u>	<u>4.0</u>	<u>162.8</u>	<u>P/F</u>	<u>L/F</u>
Calibr.			<u>822</u>			<u>10.0</u>	<u>10.0</u>	<u>-190.5</u>	<u>P/F</u>	<u>L/F</u>
ICV			<u>825</u>			<u>7.0</u>	<u>7.11</u>	<u>-22.2</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u>A. Kalmbacher</u>	<u>9-18-18</u>	<u>1540</u>	<u>2803038</u>	<u>3/2020</u>	<u>4.0</u>	<u>4.02</u>	<u>159.9</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 _____, 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	<u>B-V</u>	<u>9/18/18</u>	<u>829</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:

BVP 9/24/18 JP 9/21/18

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 6920

RQ: 2018-09-17-14

Project: LSSR Downtown

- 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 07-11-18

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.	C. Ruben	9/18/18	0740	23.3	760	8.53	8.56	100.5	-	-	(P) F (L) F	
ICV	↓	↓	0744	23.4	760	8.61	8.54	100.6	-	-	(P) F (L) F	
CCV	PO Connor	09-18-18	1445	27.6	760	7.88	8.04	102.1	-	-	(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	9/18/18	0747	180711A	7/2019	1000	1000	(P) F (L) F	
ICV	↓	↓	0748	180321A	4/2019	100	99	(P) F (L) F	
CCV	PO Connor	09-18-18	1448	1124820	04-2019	24820	25,077	(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	9/18/18	0751	2803E45	3/2020	7.	25.2	7.00	-18.5	(P) F (L) F	
Calibr.	↓	↓	0754	2803D38	3/2020	4.	25.2	4.00	141.1	(P) F (L) F	
Calibr.	↓	↓	0757	2712B55	1/2019	10.	25.3	9.98	-173.2	(P) F (L) F	
ICV	↓	↓	0800	2803E45	3/2020	7	25.3	7.03	-18.4	(P) F (L) F	
CCV	PO Connor	09-18-18	1455	2712855	06-2019	10	25.2	9.88	-162.6	(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 $+180 \pm 50$; 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: 07-11-18

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:

BT 9/24/18 JT 9/21/18