

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 YSI #3 RQ- 2017-10-30-19 Project LSJR West

- Notes:** (1) Numbers ≤ 4 , are rounded down; numbers ≥ 5 are rounded up (e.g., 5.15 becomes 5.2).
 (2) Always wait for meter to stabilize before recording any readings.
 (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 1/1

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.	A Kalmbacher	11/1/17	0800	22.2	8.70	8.71	100	59.4	0.94348		
ICV			0810	22.3	8.69	8.67	99.8	59.4	0.94318	P	L
CCV	A Kalmbacher	11/1/17	1300	22.6	8.64	8.67	100.4	58.4	0.94318	P	L
CCV											

Report DO mg/L with one decimal figure and DO % saturation as a whole number with no decimals.

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; 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.	A Kalmbacher	11/1/17	0810	170720A	8/2018	1.000	1.000		
ICV			0815	170720B	8/2018	100	101	P	L
CCV	A Kalmbacher	11/1/17	1305	170720A	8/2018	1.000	998	P	L
CCV									

Report specific conductance as a whole number with no decimal figure.

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.	A Kalmbacher	11/1/17	0820	2708860	7/2019	7.0	7.00	-26.2		
Calibr.			0823	2710816	9/2019	4.0	4.00	143.7		
Calibr.			0825	2704798	9/2018	10.0	9.99	-193.0		
ICV			0830	2708860	7/2019	7.0	7.02	-26.1	P	L
CCV	A Kalmbacher	11/1/17	1308	2708860	7/2019	7.0	7.00	-25.0	P	L
CCV										

Report pH with one decimal place; pH Acceptance criteria ± 0.2 SU;

mV pH7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

Slope from 7 to 10 and 4 to 7 must be between 165 and 180 mV

Depth (Quarterly)

Date of Last Depth Verification _____

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass/ Fail	Lab/ Field
Pressure mode in air	A Kalmbacher	11/1/17	0832	0.000	0.00	P	L

ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater

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

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Meter YSI 114 RQ- 2017-10-30-12 Project SUW-Springs

- Notes: (1) Numbers ≤ 4 , are rounded down; numbers ≥ 5 are rounded up (e.g., 5.15 becomes 5.2).
 (2) Always wait for meter to stabilize before recording any readings.
 (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

10/01/17

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 Comm	10-01-17	0720	21.2	8.88	8.87	100.0	59.4	0.97692	P	C
ICV	✓	✓	0728	21.3	8.86	8.86	99.9	59.4	0.97692	P	C
CCV	PO Comm	11-01-17	1610	22.1	8.72	8.87	101.6	59.4	0.97692	P	C
CCV											

Report DO mg/L with one decimal figure and DO % saturation as a whole number with no decimals.

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; 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 Comm	11-01-17	0730	170720A	08-2018	1000	1000	P	C
ICV	✓	✓	0733	170720B	08-2018	100	104	P	C
CCV	PO Comm	11/01/17	1613	170720A	08-2018	1000	1000	P	C
CCV									

Report specific conductance as a whole number with no decimal figure.

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading mV	Pass / Fail	Lab / Field
Calibr.	PO Comm	11-01-17	0735	270765L	06-2019	7.0	7.00 -26.4	P	C
Calibr.			0738	270816	09-2019	4.0	4.00 152.5	P	C
Calibr.			0745	2704798	09-2018	10.0	9.98 -198.3	P	C
ICV	✓	✓	0748	270765L	06-2019	7.0	7.03 -25.7	P	C
CCV	27 PO Comm	11/01/17	1615	2710816	09-2019	4.0	4.03 150.3	P	C
CCV	✓	✓	1618	2704798	09-18	10.0	9.99 -199.2	P	C

Report pH with one decimal place; pH Acceptance criteria ± 0.2 SU;

mV pH7 Range 0 $\pm$ 50;

mV pH 4 Range +180 $\pm$ 50;

mV pH 10 Range -180 $\pm$ 50;

Slope from 7 to 10 and 4 to 7 must be between 165 and 180 mV

Depth (Quarterly)

Date of Last Depth Verification

10-10-17

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air	PO Comm	11-01-17	0745	0.000	0.001	P	C

ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater