

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 YSI#3

RQ- 2017-08-07-12

Project LSJR

- 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 06-2017

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>PO Com</u>	<u>08-21-17</u>	<u>0730</u>	<u>24.1</u>	<u>8.40</u>	<u>8.4</u>	<u>100.0</u>	<u>61.4</u>	<u>0.98386</u>	<u>P</u>	<u>L</u>
ICV	<u>↓</u>	<u>↓</u>	<u>0733</u>	<u>24.1</u>	<u>8.40</u>	<u>8.41</u>	<u>100.0</u>	<u>62.6</u>	<u>0.98386</u>	<u>P</u>	<u>L</u>
CCV	<u>PO Com</u>	<u>08-21-17</u>	<u>1200</u>	<u>23.8</u>	<u>8.44</u>	<u>8.60</u>	<u>101.7</u>	<u>62.5</u>	<u>0.98386</u>	<u>P</u>	<u>L</u>
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 hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	<u>PO Com</u>	<u>08-21-17</u>	<u>0735</u>	<u>170315B</u>	<u>03-2018</u>	<u>1000</u>	<u>0.98386</u>	<u>P</u>	<u>L</u>
ICV	<u>↓</u>	<u>↓</u>	<u>0738</u>	<u>170315A</u>	<u>03-2018</u>	<u>100</u>	<u>102</u>	<u>P</u>	<u>L</u>
CCV				<u>170315B</u>	<u>03-2018</u>				
CCV	<u>PO Com</u>	<u>08-21-17</u>	<u>1205</u>	<u>170315B</u>	<u>03-2018</u>	<u>1000</u>	<u>1007</u>	<u>P</u>	<u>L</u>

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.	<u>PO Com</u>	<u>08-21-17</u>	<u>0740</u>	<u>1607A12</u>	<u>06-2018</u>	<u>7.0</u>	<u>7.00</u>	<u>-12.2</u>	<u>P</u>	<u>L</u>
Calibr.	<u>↓</u>	<u>↓</u>	<u>0745</u>	<u>2702743</u>	<u>01-2019</u>	<u>4.0</u>	<u>4.00</u>	<u>156.4</u>	<u>P</u>	<u>L</u>
Calibr. ICV	<u>↓</u>	<u>↓</u>	<u>0750</u>	<u>2611998</u>	<u>05-2018</u>	<u>10.0</u>	<u>9.94</u>	<u>-163.8</u>	<u>P</u>	<u>L</u>
ICV CCV	<u>↓</u>	<u>↓</u>	<u>0753</u>	<u>1607A12</u>	<u>06-2018</u>	<u>7.0</u>	<u>7.03</u>	<u>-8.3</u>	<u>P</u>	<u>L</u>
CCV	<u>↓</u>	<u>↓</u>	<u>1207</u>	<u>2702743</u>	<u>01-2019</u>	<u>4.0</u>	<u>4.03</u>	<u>152.7</u>	<u>P</u>	<u>L</u>
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	<u>PO Com</u>	<u>08-21-17</u>	<u>0755</u>	<u>0.000</u>	<u>0.024</u>	<u>1</u>	

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

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 YSI #4 RQ- 2017-08-21-19 Project Kansas W

- 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 _____

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.	N. Fredeh	8/21/17	0700	23.47	8.51	8.49	99.8	2.3	0.87	P	L
ICV			0705	23.80	8.53	8.49	99.8	56.3	0.37	P	L
CCV	A. Kumbacher	8/21/17	1235	23.4	8.51	8.52	100.1	57.4	0.879	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.	N. Fredeh	8/21/17	0715	170720A	8/18	1,000	1,000	P	L
ICV			0720	170720B	8/18	100	105	P	L
CCV	A. Kumbacher	8/21/17	1238	170720A	8/18	1,000	1034	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.	N. Fredeh	8/21/17	0725	1607A12	6/18	7.0	7.0	-24.0	P	L
Calibr.			0730	2702743	1/19	4.0	4.0	155.7	P	L
Calibr.			0735	261888	5/18	10.0	9.98	-196.0	P	L
ICV			0740	1607A12		7.0	7.0	-24.0	P	L
CCV	A. Kumbacher	8/21/17	1240	1607A12	6/18	7.0	7.06	-24.8	P	L
CCV										

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 _____

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air				0.000			

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