

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- 2018-11-12-12

Project: Santa Fe RSCI

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>AKalmbacher</u>	<u>11/13/18</u>	<u>0825</u>	<u>23.4</u>	<u>760</u>	<u>8.51</u>	<u>8.53</u>	<u>100.2</u>		<u>1.1223</u>	<u>P/F</u>	<u>L/F</u>
ICV			<u>0827</u>	<u>23.4</u>	<u>760</u>	<u>8.51</u>	<u>8.59</u>	<u>100.9</u>		<u>1.1223</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u>AKalmbacher</u>	<u>11/13/18</u>	<u>1626</u>	<u>25.3</u>	<u>760</u>	<u>8.21</u>	<u>8.37</u>	<u>101.8</u>		<u>1.1223</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 mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	<u>AKalmbacher</u>	<u>11/13/18</u>	<u>0830</u>	<u>181102</u>	<u>11/2019</u>	<u>11000</u>	<u>11000</u>	<u>P/F</u>	<u>L/F</u>
ICV			<u>0834</u>	<u>180321A</u>	<u>4/2019</u>	<u>100</u>	<u>102</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u>AKalmbacher</u>	<u>11/13/18</u>	<u>1625</u>	<u>181102</u>	<u>11/2019</u>	<u>11000</u>	<u>11001</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>AKalmbacher</u>	<u>11/13/18</u>	<u>0835</u>	<u>2803E45</u>	<u>3/2020</u>	<u>7.</u>	<u>23.7</u>	<u>7.00</u>	<u>-20.7</u>	<u>P/F</u>	<u>L/F</u>
Calibr.			<u>0837</u>	<u>2806A73</u>	<u>6/2020</u>	<u>4.</u>	<u>23.8</u>	<u>4.00</u>	<u>155.6</u>	<u>P/F</u>	<u>L/F</u>
Calibr.			<u>0840</u>	<u>1806F51</u>	<u>12/2019</u>	<u>10.</u>	<u>23.6</u>	<u>9.98</u>	<u>-190.1</u>	<u>P/F</u>	<u>L/F</u>
ICV			<u>0845</u>	<u>2803E45</u>	<u>3/2020</u>	<u>7.0</u>	<u>23.4</u>	<u>7.02</u>	<u>-19.6</u>	<u>P/F</u>	<u>L/F</u>
CCV	<u>AKalmbacher</u>	<u>11/13/18</u>	<u>1630</u>	<u>21806F51</u>	<u>12/2019</u>	<u>10.0</u>	<u>23.9</u>	<u>10.0</u>	<u>9.99</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 ± 50 ;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 169.4, slope from 4 to 7 176.3 (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: 10/18/18

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	<u>AKalmbacher</u>	<u>11/13/2018</u>	<u>0850</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:

BD 11/27/18 JP 11/19/18

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:

VSI PROSS

RQ:

2018-11-12-21

Project:

Fossum Creek SE

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.	J. Pann	11/13/18	748	23.6	788	8.48	8.48	100			P/F	L/F
ICV	J	J	742	23.6	758.6	8.48	8.47	99.8			P/F	L/F
CCV	P. O'Connor	11/13/18	1545	23.2	757.2	8.54	8.58	100.3			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.	J. Pann	11/13/18	745	181102	11/19	1000	1000	P/F	L/F
ICV	J	J	749	1470718	6/19	147	148	P/F	L/F
CCV	P. O'Connor	11-13-18	1550	181102	11/2019	1000	1005	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.	J. Pann	11/13/18	750	2803645	3/20	7.01	23.7	7.01	39	P/F	L/F
Calibr.			751	2803645	6/20	4.00	23.3	4.00	143	P/F	L/F
Calibr.			752	1806FS1	12/19	10.02	23.7	10.01	206	P/F	L/F
ICV	J	J	758	2803645	3/20	7.0	23.8	7.0	36	P/F	L/F
CCV	P. O'Connor	11-13-18	1555	1806FS1	12/2019	10.00	24.0	9.96	205.2	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: 10-10-2018

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	J. Pann	11/13/18	755	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: