

765.2

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:

132237

RQ:

2018-09-24-14

Project:

SMP

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

8/27/18

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.										P / F	L / F
ICV					8.32					P / F	L / F
CCV	Mike King	10/2	0815	24.6	8.17	8.42	101.0			(P) F	(L) F
CCV	m	10/2	1530	27.9	7.88	7.89	100.9			(P) F	(L) F

DO Acceptance criteria from Table ± 0.3 mg/L. 1530

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.	m	10/2	0820	180124L	02/2019	10000	10015	(P) F	(L) F
ICV	m	10/2	0821	180517B	05/2019	1000	1007	(P) F	(L) F
CCV	m	10/2	1540	180125B	02/2019	100	103	(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.	m	10/2/18	0825	1710655	10/2019	7.0	7.00	-40.7	(P) F	(L) F
Calibr.			0826	2803729	02/2020	4.0	4.00	134.0	(P) F	(L) F
Calibr.			0827	2709963	03/2019	10.0	9.99	-203.1	(P) F	(L) F
ICV			0828	2803729	02/2020	4.0	4.03		(P) F	(L) F
CCV			1545	2709963	03/2019	10.0	10.02		(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

4/19/18

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	m King	10/2	0830	0.000	0.000	(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:

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: 113529

RQ: 2018-09-17-21

Project: SMP

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

8/27/18

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.										P / F	L / F
ICV										P / F	L / F
CCV	<u>N/M</u>	<u>10/2/18</u>	<u>0730</u>	<u>23.85</u>	<u>8.434</u>	<u>8.58</u>	<u>101.2</u>			<u>P</u> / <u>F</u>	<u>L</u> / <u>F</u>
CCV	<u>✓</u>	<u>10/3/18</u>	<u>0700</u>	<u>23.64</u>	<u>8.482</u>	<u>8.51</u>	<u>100.6</u>			<u>P</u> / <u>F</u>	<u>L</u> / <u>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; 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 µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	<u>N/M</u>	<u>10/2/18</u>	<u>0732</u>	<u>180517B</u>	<u>5/19</u>	<u>1000</u>	<u>1000</u>	P / F	<u>L</u> / <u>F</u>
ICV	<u>✓</u>	<u>✓</u>	<u>0734</u>	<u>180125B</u>	<u>2/19</u>	<u>100</u>	<u>104</u>	<u>P</u> / <u>F</u>	<u>L</u> / <u>F</u>
CCV	<u>N/M</u>	<u>10/3/18</u>	<u>0705</u>	<u>180125B</u>	<u>2/19</u>	<u>100</u>	<u>104</u>	<u>P</u> / <u>F</u>	<u>L</u> / <u>F</u>
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.	<u>N/M</u>	<u>10/2/18</u>	<u>0740</u>	<u>180517B</u>	<u>4/20</u>	<u>7.0</u>	<u>7.0</u>	<u>8.5</u>	P / F	<u>L</u> / <u>F</u>
Calibr.	<u>✓</u>	<u>✓</u>	<u>0742</u>	<u>2803729</u>	<u>2/20</u>	<u>4.0</u>	<u>4.0</u>		P / F	<u>L</u> / <u>F</u>
Calibr.	<u>✓</u>	<u>✓</u>	<u>0744</u>	<u>280420</u>	<u>10/19</u>	<u>10.0</u>	<u>10.0</u>	<u>-123.5</u>	P / F	<u>L</u> / <u>F</u>
ICV	<u>✓</u>	<u>✓</u>	<u>0745</u>	<u>2803729</u>	<u>2/20</u>	<u>4.0</u>	<u>3.99</u>	<u>150.0</u>	<u>P</u> / <u>F</u>	<u>L</u> / <u>F</u>
CCV	<u>N/M</u>	<u>10/2/18</u>	<u>0710</u>	<u>280420</u>	<u>10/19</u>	<u>10.0</u>	<u>9.70</u>	<u>-121.6</u>	<u>P</u> / <u>F</u>	<u>L</u> / <u>F</u>
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 _____

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:

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: 154679 RQ: 2018-09-03-58 Project: SMP Eglh

- 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 8/27/18

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.											P / F	L / F
ICV											P / F	L / F
CCV	J. P. H. S.	10/2/18	0730	24.8	769.4	8.294	8.42	102	—	—	P / F	L / F
CCV	J. P. H. S.	10/2/18	1517	24.8	767.7	8.294	8.40	101	—	—	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. P. H. S.	10/2/18	0732	180517B	5/2019	1000	1000	P / F	L / F
ICV	J. P. H. S.	10/2/18	0734	180525B	2/2019	100	102	P / F	L / F
CCV	J. P. H. S.	10/2/18	1519	180525B	2/2019	100	102	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. P. H. S.	10/2/18	0736	1805E95	4/2020	7.	25.1	7.0	-28.1	P / F	L / F
Calibr.	J. P. H. S.	10/2/18	0738	2803729	2/2020	4.	25.2	4.0	156.1	P / F	L / F
Calibr.	J. P. H. S.	10/2/18	0740	2804020	10/2019	10.	25.2	10.0	-16.6	P / F	L / F
ICV	J. P. H. S.	10/2/18	0742	2804020	10/2019	10.0	25.2	10.0	—	P / F	L / F
CCV	J. P. H. S.	10/2/18	1521	2803729	2/2020	4.0	24.3	4.1	—	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 10 168.5, slope from 4 to 7 184.2 (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: 8/27/18

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: 8/27/18

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	J. P. H. S.	10/2/18	0744	0.00	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: