

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 BOOP/NON

RQ- 2017-04-03-69

Project SMP

- 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 2/17

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.	N. Ayala	4/12	813	23.1	8.6	8.6	100	50	1.1	P	L
ICV	↓	↓	↓	23.1	8.6	8.5	100	50	1.1	P	L
CCV	N. Ayala	4/12	1620	28.5	7.6	7.7	100	52	1.1	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 $\mu\text{mhos/cm}$	Meter Reading $\mu\text{mhos/cm}$	Pass / Fail	Lab / Field
Calibr.	N. Ayala	4/12	815	170220	3/18	1000	1000	P	L
ICV	↓	↓	↓	2611962	10/18	100	102	P	L
CCV	N. Ayala	4/12	1623	2605694	5/18	100,000	102,000	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. Ayala	4/12	815	165674	8/18	7.0	7.0	-19.6	P	L
Calibr.	↓	↓	↓	166544	10/18	4.0	4.0	158	P	L
Calibr.	↓	↓	↓	165833	8/18	10.0	10.0	-198	P	L
ICV	↓	↓	↓	165833	10/18	10.0	10.0	-197	P	L
CCV	N. Ayala	4/12	1625	166544	10/18	4.0	3.9	161	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				0.000			

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

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

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Meter Betta 67

RQ- 2017-04

Project SMP

- 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

02/2017 02/2017
LB

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>Leif Boman</u>	<u>4/12/17</u>	<u>8:15</u>	<u>23.3</u>	<u>8.5</u>	<u>8.5</u>	<u>100</u>	<u>50</u>	<u>1.1</u>	<u>P</u>	<u>L</u>
ICV	<u> </u>	<u> </u>	<u>1</u>	<u>23.3</u>	<u>8.5</u>	<u>8.5</u>	<u>100</u>	<u>50</u>		<u>P</u>	<u>L</u>
CCV			<u>10:10</u>	<u>24.6</u>	<u>8.3</u>	<u>8.5</u>	<u>101</u>	<u>50</u>	<u>1.1</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 mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	<u>Leif Boman</u>	<u>4/12/17</u>	<u>8:15</u>	<u>170220</u>	<u>03/18</u>	<u>1000</u>	<u>1000</u>	<u>P</u>	<u>L</u>
ICV	<u> </u>	<u> </u>	<u>1</u>	<u>2611962</u>	<u>10/18</u>	<u>100</u>	<u>102</u>	<u>P</u>	<u>L</u>
CCV			<u>16:10</u>	<u>2611962</u>	<u>10/18</u>	<u>100</u>	<u>102</u>	<u>P</u>	<u>L</u>
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.	<u>Leif Boman</u>	<u>4/12/17</u>	<u>8:15</u>	<u>105674</u>	<u>08/18</u>	<u>7.0</u>	<u>7.0</u>	<u>-43</u>	<u>P</u>	<u>L</u>
Calibr.	<u> </u>	<u> </u>	<u> </u>	<u>106544</u>	<u>10/18</u>	<u>4.0</u>	<u>4.0</u>	<u>133</u>	<u>P</u>	<u>L</u>
Calibr.	<u> </u>	<u> </u>	<u> </u>	<u>105833</u>	<u>08/18</u>	<u>10.0</u>	<u>10.0</u>	<u>-214</u>	<u>P</u>	<u>L</u>
ICV				<u>106544</u>	<u>10/18</u>	<u>4.0</u>	<u>4.0</u>	<u>132</u>	<u>P</u>	<u>L</u>
CCV			<u>16:10</u>	<u>105833</u>	<u>08/18</u>	<u>10.0</u>	<u>10.1</u>	<u>-218</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 180mV

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