

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: Bathy 67

Project: SMP

RQ:

- 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 5/14/17 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>6/20/17</u>	<u>8:10</u>	<u>22.8</u>	<u>8.6</u>	<u>8.6</u>	<u>100</u>	<u>32</u>	<u>1.0</u>	<u>P</u>	<u>L</u>
ICV	<u>1</u>	<u>1</u>	<u>1</u>	<u>22.9</u>	<u>8.6</u>	<u>8.6</u>	<u>100</u>	<u>32</u>		<u>P</u>	<u>L</u>
CCV	<u>1</u>	<u>1</u>	<u>15:35</u>	<u>22.4</u>	<u>8.7</u>	<u>8.7</u>	<u>100</u>	<u>32</u>	<u>1.0</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>Leif Boman</u>	<u>6/20/17</u>	<u>8:10</u>	<u>170220</u>	<u>03/18</u>	<u>1000</u>	<u>1000</u>	<u>P</u>	<u>L</u>
ICV	<u>1</u>	<u>1</u>	<u>1</u>	<u>2703G21</u>	<u>03/19</u>	<u>100</u>	<u>101</u>	<u>P</u>	<u>L</u>
CCV	<u>1</u>	<u>1</u>	<u>15:35</u>	<u>2703G21</u>	<u>03/19</u>	<u>100</u>	<u>101</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>6/20/17</u>	<u>8:10</u>	<u>165674</u>	<u>08/18</u>	<u>7.0</u>	<u>7.0</u>	<u>-12</u>	<u>P</u>	<u>L</u>
Calibr.	<u>1</u>	<u>1</u>	<u>1</u>	<u>165544</u>	<u>08/18</u>	<u>4.0</u>	<u>4.0</u>	<u>165</u>	<u>P</u>	<u>L</u>
Calibr.	<u>1</u>	<u>1</u>	<u>1</u>	<u>165833</u>	<u>08/18</u>	<u>10.0</u>	<u>10.0</u>	<u>-187</u>	<u>P</u>	<u>L</u>
ICV	<u>1</u>	<u>1</u>	<u>1</u>	<u>165544</u>	<u>10/18</u>	<u>4.0</u>	<u>4.0</u>	<u>165</u>	<u>P</u>	<u>L</u>
CCV	<u>1</u>	<u>1</u>	<u>15:35</u>	<u>165833</u>	<u>08/18</u>	<u>10.0</u>	<u>10.0</u>	<u>-188</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				0.000			

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)

Boldly "X" this box if there is qualified data on this page.

Meter ID: 500P Non

Project: SMP

RQ: 2017-06-19-40

- 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

5/17

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.	Mike Dransan	6/19/17	740	22.8	8.6	8.6	100	40	1.0	P	L
ICV			1	22.8	8.6	8.6	100	40	1.0	P	L
CCV			1345	27.0	8.4	8.4	99	40	1.0	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.			740	170220	3/18	1000	1000	P	L
ICV			1	2703621	3/18	100	101	P	L
CCV			1345	2703621	3/18	100	101	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.			740	165674	8/18	7.0	7.0	-24	P	L
Calibr.				166544	10/18	4.0	4.0	153	P	L
Calibr.				165833	8/18	10.0	10.0	-203	P	L
ICV				165833	8/18	10.0	10.0	-202	P	L
CCV			1345	165833	8/18	10.0	10.0	-204	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 ± 0.05 m, 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 ID: Bathy 167

Project: SMP

RQ:

- 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.
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Circle/Fill In: Lab Calibration or Calibration/Verification on Site

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 5/17

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.	Leif Boman	6/20/17	8:15	22.6	8.6	8.6	100	31	1.0	P	L
ICV	1	1	1	22.6	8.6	8.6	100	31		P	L
CCV	T. Riordan	1	1710	23.6	8.5	8.6	101	32	1.0	P	L
CCV											

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DO Acceptance criteria from Table ± 0.3 mg/L.

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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.	Leif Boman	6/20/17	8:15	170220	03/18	1000	1000	P	L
ICV	1	1	1	2703621	03/19	100	102	P	L
CCV	T. Riordan	1	1710	170220	3/18	100	102	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.	Leif Boman	6/20/17	8:15	1165674	08/18	7.0	7.0	-12	P	L
Calibr.	1	1	1	1166544	10/18	4.0	4.0	165	P	L
Calibr.	1	1	1	1165833	08/18	10.0	10.0	-189	P	L
ICV	1	1	1	1166544	10/18	4.0	4.0	165	P	L
CCV	T. Riordan	1	1710	1165544	10/18	4.0	4.0	161	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