

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 Betty 67

RQ- 2016-10-17-63

Project STATUS

SMP

-LB

- 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 8/16

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	8-24-16	8:15	21.9	8.8	8.8	100	56	9.7	P	L
ICV				22.0	8.7	8.8	101	56		P	L
CCV			14:30	22.0	8.7	8.7	100	56	9	P	L
CCV				22.3							

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.	Leif Boman	8-24-16	8:15	1601607	6/17	1000	1000	P	L
ICV				2604736	3/18	100	101	P	L
CCV			14:30	2601855	1/18	50,000	50,972	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	8-24-16	8:15	161856	4/18	7.0	7.0	-32	P	L
Calibr.				161855	4/18	4.0	4.0	142	P	L
Calibr.				160126	2/18	10.0	10.0	-204	P	L
ICV				161855	4/18	4.0	4.0	141	P	L
CCV			14:30	161856	4/18	7.0	7.0	-29	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

+0-21-16 PU membrane changed
 (Date clarification: 10/24/16 LB.)

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

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Meter ILC/AB

RQ-

2016
2016-10-17-64
2016-10-24-72

Project

SMP
3 mi AI?

- 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

8/16

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.	Terry Riordan	10/24/16	845	22.0	8.7	8.8	101	98	1.1	F	L
ICV				22.0	8.7	8.9	101	98	1.1	F	L
CCV	Mike Ling	10/24/16	1250	22.0	8.7	8.8	101	72	1.1	P	L
CCV	Natalie Ayala	10/25/16	715	21.6	8.8	8.8	100	75	1.1	P	L

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.	Terry Riordan	10/24/16	845	160607	6/17	1000	1000	P	L
ICV				2604736	3/18	100	100	P	L
CCV	Natalie Ayala	10/25/16	722	2604736	3/18	100	103	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.	Terry Riordan	10/24/16	845	161856	4/18	7.0	7.0	-22	P	L
Calibr.				161855	4/18	4.0	4.0	154	P	L
Calibr.				160126	2/18	10.0	9.0	-200	P	L
ICV				161855	4/18	4.0	4.0	155	P	L
CCV	Natalie Ayala	10/25/16	720	161855	4/18	4.0	4.0	148	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

10-21-16

DO membrane changed

no sampling

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

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Meter B&P Betty/NOV RQ- 2016-10-17-64 2016-10-24-72 Project 5 mp BmAP

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

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 8/16

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.	Terry Riordan	10/24/16	0915	21.3	8.9	8.9	100	57	1.1	P	L
ICV				21.2	8.9	8.9	100	56	1.1	P	L
CCV	Terry Riordan	10/24/16	1650	21.8	8.8	8.8	100	52	1.1	P	L
CCV	Natalie Ayala	10/25/16	715	21.6	8.8	8.8	100	75		P	L

NA

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.

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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.	Terry Riordan	10/24/16	0915	160607	6/17	1000	1000	P	L
ICV				2604736	3/18	100	103	P	L
CCV	Terry Riordan	10/24/16	1650	2601855	1/18	50,000	51,206	P	L
CCV				2604736	3/18	100		P	L

NA

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.	Terry Riordan	10/24/16	0915	161856	4/18	7.0	7.0	-20	P	L
Calibr.				161855	4/18	4.0	4.0	156	P	L
Calibr.				160126	2/18	10.0	10.0	-196	P	L
ICV				161855	4/18	4.0	4.0	156	P	L
CCV	Terry Riordan	10/24/16	1650	160126	2/18	10.0	10.1	-199	P	L
CCV	Natalie Ayala	10/24/16	720	161855	4/18	4.0	4.0	148	P	L

NA
NA

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

10-24-16 DO membrane changed