

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 **# 3 VSI**

RQ- **2017-04-17-10**

Project **Gull 1**

- 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 / 2017**

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.	J. Parn	4/25/17	724	22.4	8.69	8.69	100	57.7	-	P	L
ICV	J	J	726	22.5	8.66	8.68	100.0	57.4	-	P	L
CCV	J. Parn	4/25/17	1507	23.9	8.43	8.37	99.4	57.4	-	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.	J. Parn	4/25/17	731	11/17	161101A	1000	1000	P	L
ICV	J	J	732	12/17	21472017	147	143	P	L
CCV	J. Parn	4/25/17	1511	5/17	161101B	100	100	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.	J. Parn	4/25/17	733	2702C47	2/18	7.0	7.0	-	L	L
Calibr.	J	J	735	2610F42	10/18	4.0	4.0	159.9	P	L
Calibr.	J	J	736	2608E35	2/18	10.0	9.98	189.2	P	L
ICV	J	J	737	2610F42	10/18	4.0	4.05	157.1	P	L
CCV	J. Parn	4/25/17	1513	2608E35	2/18	10.0	10.01	191.8	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	J. Parn	4/25/17	739	0.000	0.00	P	

ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater

Scanned 5/2/17

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 Quanta #1

RQ- 2017-04-24-26

Project

- 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

DO FDEP 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>P. O'Connor</u>	<u>04-25-17</u>	<u>0655</u>	<u>22.5</u>	<u>8.66</u>	<u>8.63</u>	<u>100.0</u>	<u>-</u>	<u>-</u>	<u>Pass</u>	<u>LAB</u>
ICV	<u>✓</u>	<u>✓</u>	<u>0700</u>	<u>22.5</u>	<u>8.66</u>	<u>8.63</u>	<u>100.1</u>	<u>-</u>	<u>-</u>	<u>Pass</u>	<u>LAB</u>
CCV	<u>B = P</u>	<u>4/25/17</u>	<u>1607</u>	<u>25.43</u>	<u>8.20</u>	<u>8.27</u>	<u>100.8</u>	<u>-</u>	<u>-</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>P. O'Connor</u>	<u>04-25-17</u>	<u>0703</u>	<u>161101A</u>	<u>11/2017</u>	<u>1000</u>	<u>1000</u>	<u>Pass</u>	<u>LAB</u>
ICV	<u>✓</u>	<u>✓</u>	<u>00705</u>	<u>161101B</u>	<u>05/2017</u>	<u>1000</u>	<u>100</u>		
CCV	<u>B = P</u>	<u>4/25/17</u>	<u>1609</u>	<u>1298113</u>	<u>12/17</u>	<u>12,900</u>	<u>13,090</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 FDEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter Reading SU	mV	Pass / Fail	Lab Field
Calibr.	<u>P. O'Connor</u>	<u>04-25-17</u>	<u>0707</u>	<u>270247</u>	<u>02/2019</u>	<u>7.0</u>	<u>7.00</u>	<u>-</u>	<u>Pass</u>	<u>LAB</u>
Calibr.	<u>✓</u>	<u>✓</u>	<u>0717</u>	<u>2610F42</u>	<u>10/2018</u>	<u>4.0</u>	<u>4.00</u>	<u>-</u>	<u>Pass</u>	<u>LAB</u>
Calibr.	<u>✓</u>	<u>✓</u>	<u>0725</u>	<u>2608E35</u>	<u>02/2018</u>	<u>10.0</u>	<u>9.96</u>	<u>-</u>	<u>Pass</u>	<u>LAB</u>
ICV	<u>B = P</u>	<u>4/25/17</u>	<u>1617</u>	<u>408E35</u>	<u>02/18</u>	<u>10</u>	<u>9.97</u>	<u>-</u>	<u>P</u>	<u>L</u>
CCV										
CCV										

Report pH with one decimal place; pH Acceptance criteria ± 0.2 SU;

mV pH 7 Range 0 ± 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 N/A

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab Field
Pressure mode				0.000			
In air							

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