

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 **PSI #4**

RQ- **2017-04-24-03**

Project **VEC North**

- 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 **03/04/2016** **2-9-17**

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. Fredrick	5/3/17	0710	22.97	8.59	8.54	99.2	56.3	0.92	P	L
ICV			0712	22.90	8.59	8.46	98.7	56.3	0.92	P	L
CCV	A. Kalmbacher	5-3-17	1515	25.0	8.26	8.31	100.4	56.3	0.92	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 200	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. Fredrick	5/3/17	0715	170315B	3/18	1,000	1,001	P	L
ICV			0718	161101B	5/17	100	104	P	L
CCV	A. Kalmbacher	5-3-17	1520	170315B	3/18	1,000	992	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 mV	Pass / Fail	Lab / Field
Calibr.	A. Kalmbacher	5-3-17	0800	2702C47	2-2019	7.0	7.0 -14.8		
Calibr.			0802	2608G26	8-2018	4.0	4.0 -16.2		
Calibr.			0804	2608E35	2-2018	10.0	9.99 -128.4		
ICV			0807	2702C47	2-2019	7.0	7.03 -14.6	P	L
CCV	A. Kalmbacher	5-3-17	1522	2702C47	2-2019	7.0	7.07 -16.6		
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 **2-9-17**

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air	A. Kalmbacher	5-3-2017	0810	0.000	0.001	P	L

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 YSI # 3 RQ- 2017-03-27-04 Project UEC North

- 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 L-6

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.	Brian Davis	4/13/17	740	22.86	8.59	8.60	100	61.4		P	L
ICV			744	22.91	8.59	8.58	99.9	61.4		P	L
CCV	A. Kalmbacher	4-13-17	1235	23.5	8.49	8.56	100.6	62.5		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 hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	Brian Davis	4/13/17	747	161101A	11/17	1000	1000	P	L
ICV			750	161101B	5/17	100	101	P	L
CCV	A. Kalmbacher	4-13-17	1240	161101A	11/2017	1,000	1000	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.	A. Kalmbacher	4-13-17	0805	2702C47	2/2019	7.0	6.99	-13.6		
Calibr.			0807	2608626	8/2018	4.0	4.00	161.5		
Calibr.			0810	2608E35	2/2018	10.0	9.98	-137.1		
ICV			0812	2702C47	2/2019	7.00	7.03	-14.0	P	L
CCV	A. Kalmbacher	4-13-17	1243	2702C47	2/2019	7.00	7.05	-15.2	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	A. Kalmbacher	4-13-17	0815	0.000	0.000	P	L

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

NF 5/11/17