

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

Meter ID:

Acya

RQ-

2202

Project:

SMP

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

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 1/18/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	3/14/22	717	19.9	761	9.1	9.10	100.2%	—	1.07	P/F	L/F
ICV	"	"	720	20.2	762	9.1	9.06	100.1%	—	1.07	P/F	L/F
CCV	S. Fischer	"	1300	22.9	763	8.6	8.63	100.5	—	1.07	P/F	L/F
CCV	D. Liddick	"	1800	22.9	763	8.6	8.6	100.1	—	1.07	P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	3/14/22	726	1105C52	5/2023	5000	5000	P/F	L/F
ICV	"	"	731	1102712	1/2023	100	100.5	P/F	L/F
CCV	S. Fischer	"	1302	1105C52	05/23	5000	5005	P/F	L/F
CCV	Drew Liddick	"	1804	1105C51	05/23	50,000	49,977	P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	3/14/22	735	217473	10/2023	7.0	21.3	-48.1	7.02	P/F	L/F
Calibr.	"	"	739	2110P40	9/2023	4.0	21.3	131.5	4.00	P/F	L/F
Calibr.	"	"	743	1106829	11/2022	10.0	21.3	-219.5	10.04	P/F	L/F
ICV	"	"	745	1106829	11/2022	10.0	21.3	-219.7	10.02	P/F	L/F
CCV	S. Fischer	"	1304	206704	11/22	4.0	21.7	124.8	4.10	P/F	L/F
CCV	D. Liddick	"	1808	2110P40	09/23	4.0	21.6	4.0	132.1	P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 $\pm$ 50;

mV pH 4 Range +180 $\pm$ 50;

mV pH 10 Range -180 $\pm$ 50;

If mV are recorded: slope from 7 to 10 171.4, slope from 4 to 7 79.6 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 01/18/22

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: ; Date of last verification:

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	3/14/22	749	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: **AR4A**

RQ- **2022-01-31-59**

Project: **HAB**

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification **01/18/2022**

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	3/29/22	804	21.7	759	8.8	8.78	99.9	—	1.07	P/F	L/F
ICV	"	"	800	21.5	759	8.8	8.85	100.2	—	1.07	P/F	L/F
CCV	Charlie Hoey	3/29/22	1310	23.4	759	8.5	8.50	100.5	—	1.07	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	3/29/22	809	2203030	02/24	1000	1000	P/F	L/F
ICV	"	"	812	2110002	9/23	100	99.0	P/F	L/F
CCV	Charlie Hoey	3/29/22	1319	2203030	02/24	1000	1001	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C CM	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	3/29/22	814	217473	10/23	7.01	22.5	7.01	-49.0	P/F	L/F
Calibr.	"	"	817	200704	11/22	4.00	22.3	4.00	120.2	P/F	L/F
Calibr.	"	"	820	1100829	11/22	10.03	22.3	10.03	-219.4	P/F	L/F
ICV	"	"	822	1100829	11/22	10.03	22.3	10.04	-220.8	P/F	L/F
CCV	Charlie Hoey	3/29/22	1323	200704	11/22	4.00	22.5	3.80	130.0	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU;

mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 **170.4**, slope from 4 to 7 **175.2** (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? **YES** / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: **01/18/2022**

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	3/29/22	824	0.00	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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Meter ID: Hod05

RQ: 2022-01-31-57

Project: HAB

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 4/18/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	4/19/22	722	22.8	755	8.6	8.55	99.4%	-	1.08	P/F	L/F
ICV	"	"	723	22.9	755	8.6	8.55	99.5%	-	1.08	P/F	L/F
CCV	"	"	1103	23.2	757	8.5	8.50	99.6%	-	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	4/19/22	725	2203036	2/2024	1000	1000	P/F	L/F
ICV	"	"	727	2110062	9/2023	100	100.0	P/F	L/F
CCV	"	"	1106	1105051	5/2023	50,000	50,506	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	4/19/22	730	217473	10/2023	7.0	24.1	7.01	-36.4	P/F	L/F
Calibr.	"	"	732	206704	11/2022	4.0	24.0	4.00	139.2	P/F	L/F
Calibr.	"	"	734	1106829	11/2022	10.0	24.0	10.01	-206.1	P/F	L/F
ICV	"	"	736	1106829	11/2022	10.0	24.0	10.00	-206.50	P/F	L/F
CCV	"	"	1108	217473	10/2023	7.0	24.0	7.05	-36.6	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 169.7, slope from 4 to 7 175.6 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 4/18/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	4/19/2022	737	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: ARJA

RQ- 2022-01-31-59

Project: HAB

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 04/18/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	4/25/22	803	23.7	758	8.4	8.44	99.7	—	1.08	P/F	L/F
ICV	"	"	800	23.5	758	8.5	8.48	99.9	—	1.08	P/F	L/F
CCV	S. Fischer	4/25/22	1600	24.8	757	8.3	8.27	99.8	—	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	4/25/22	808	2203030	02/24	1000	1000	P/F	L/F
ICV	"	"	810	220328C	04/23	100	100.9	P/F	L/F
CCV	S. Fischer	4/25/22	1602	2112668	04/11/23	100.000	102.813	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	4/25/22	813	217473	10/23	7.01	24.0	7.01	-52.0	P/F	L/F
Calibr.	"	"	815	206704	11/22	4.00	24.0	4.00	122.8	P/F	L/F
Calibr.	"	"	817	1100829	11/22	10.01	24.0	10.01	-222.5	P/F	L/F
ICV	"	"	819	1100829	11/22	10.01	24.0	10.01	-223.4	P/F	L/F
CCV	S. Fischer	4/25/22	1604	206704	11/22	4.	23.7	3.94	126.0	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 170.5, slope from 4 to 7 174.8 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 04/18/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____ Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	4/25/22	820	0.00	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hedon

RQ- 2022-01-31-59

Project: NAB Response

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 04/18/2022

DO DEP SOP FT 1500	Name	Date	Time GT-ET	Temp °C	Baro- meter mmHg	DO Chart mg/L	Meter DO mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Drew Liddick	06/01/22	0730	23.6	756	8.4	8.45	100.1	-	1.09	☒ F	☒ F
ICV	//	//	0734	23.7	756	8.4	8.45	100.1	-	1.09	☒ F	☒ F
CCV	//	//	1645	23.6	755	8.4	8.40	99.7	-	1.09	☒ F	☒ F
CCV											P / F	L / F

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 (Pro DSS 0.75 to 1.50); 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 mos/cm	Meter Reading μ mos/cm	Pass / Fail	Lab / Field
Calibr.	Drew Liddick	06/01/22	0736	220328A	04/23	1000	1000	☒ F	☒ F
ICV	//	//	0738	220328C	04/23	100	101.1	☒ F	☒ F
CCV	//	//	1648	220328A	04/23	1000	998.7	☒ F	☒ F
CCV								P / F	L / F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Drew Liddick	06/01/22	0740	217473	10/23	7.0	24.1	7.00	-42.7	☒ F	☒ F
Calibr.	//	//	0742	206704	11/22	4.0	24.1	4.00	131.7	☒ F	☒ F
Calibr.	//	//	0744	4110A80	03/23	10.0	24.2	10.00	207.8	☒ F	☒ F
ICV	//	//	0746	4110A80	03/23	10.0	24.2	10.00	208.1	☒ F	☒ F
CCV	//	//	1650	206704	11/22	4.0	24.2	4.01	131.4	☒ F	☒ F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 165.1, slope from 4 to 7 174.4 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 04/18/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Drew Liddick	06/01/22	0748	0.00	0.00	☒ F	☒ F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

CALIBRATION AND VERIFICATION

RQ-2022-05-09-16

RQ-2022-05-16-11

"X" this
here are
data on
page.

Meter ID:

Araya

RQ-

Z6LL2205

Z6LL2205

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

04/18/22

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	S Fischer	06/04/22	1615	24.8	751	8.2	8.22	99.4	—	1.08	P/F	L/F
ICV	"	"	1617	24.7	751	8.2	8.25	99.2	—	1.08	P/F	L/F
CCV	Charlie Hoey	06/07/22	1549	21.0	753	8.7	8.74	99.2	—	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	S Fischer	06/04/22	1619	220328A	04/23	1000	1000	P/F	L/F
ICV	"	"	1621	220328C	04/23	100	100.4	P/F	L/F
CCV	Charlie Hoey	06/07/22	1551	220328A	04/23	1000	970	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	S Fischer	06/04/22	1623	217473	10/23	7.	24.2	7.01	-6.4	P/F	L/F
Calibr.	"	"	1625	206701	11/22	4.	24.1	4.00	-69.8	P/F	L/F
Calibr.	"	"	1627	4110A80	03/23	10.	24.1	9.99	-81.4	P/F	L/F
ICV	"	"	1629	4110A80	03/23	10.	24.1	10.00	-81.6	P/F	L/F
CCV	Charlie Hoey	06/07/22	1553	206764	11/22	4.00	23.4	4.13	102.0	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 174.8 , slope from 4 to 7 174.4 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 04/18/22

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: ; Date of last verification:

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	S Fischer	06/04/22	1631	0.00	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hodor

RQ: 2022-06-06-52 (3MP)

2022-06-06-70 (HAB)

Subject: 5MP / HAB

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 04/18/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Drew Liddick	06/18/22	0740	24.4	758	8.3	8.33	99.8	—	1.08	☒ F	☒ F
ICV	//	//	0742	24.4	758	8.3	8.33	99.8	—	1.08	☒ F	☒ F
CCV	//	//	1648	24.3	758	8.3	8.33	99.8	—	1.07	☒ F	☒ F
CCV											P / F	L / F

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 (Pro DSS 0.75 to 1.50); 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.	Drew Liddick	06/14/22	0744	220328A	04/23	1000	1000	☒ F	☒ F
ICV	//	//	0746	220328C	04/23	100	101	☒ F	☒ F
CCV	//	//	1650	220328A	04/23	1000	1001.7	☒ F	☒ F
CCV								P / F	L / F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Drew Liddick	06/14/22	0748	217473	10/22	7.01	24.2	7.01	-39.3	☒ F	☒ F
Calibr.	I	I	0750	206704	11/22	4.00	24.2	4.00	137.3	☒ F	☒ F
Calibr.	I	I	0752	4110A80	03/23	10.01	24.2	10.01	-209.3	☒ F	☒ F
ICV	I	I	0754	4110A80	03/23	10.01	24.2	10.02	-209.1	☒ F	☒ F
CCV	I	I	1658	206704	11/22	4.00	24.1	4.01	137.5	☒ F	☒ F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU;

mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 170, slope from 4 to 7 -176.6 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? ☒ YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 04/18/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Drew Liddick	06/14/22	0756	0.00	0.00	☒ F	☒ F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hodor

RQ- 2022-0613-52

Project: HAB

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 4/18/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	6/16/22	717	23.6	757	8.4	8.46	99.6	-	1.08	P/F	L/F
ICV	"	"	718	23.6	757	8.4	8.47	99.8	-	1.08	P/F	L/F
CCV	S. Fischer	6/16/22	1446	27.0	757	7.9	7.91	99.3	-	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	6/16/22	720	220328A	4/2023	1000	1000	P/F	L/F
ICV	"	"	722	220328C	4/2023	100	101.1	P/F	L/F
CCV	S. Fischer	6/16/22	1448	220328A	04/23	1000	1002	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	6/16/22	724	217473	10/2023	7.0	23.8	7.01	-40.6	P/F	L/F
Calibr.	"	"	726	217876	1/2024	4.0	23.9	4.00	132.5	P/F	L/F
Calibr.	"	"	728	4110A80	3/2023	10.0	23.8	10.01	-210.2	P/F	L/F
ICV	"	"	730	4110A80	3/2023	10.0	23.8	10.01	-210.6	P/F	L/F
CCV	S. Fischer		1450	217876	01/24	4.	24.1	3.97	134.4	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 169.6, slope from 4 to 7 173.1 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 4/18/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	6/16/22	731	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

RQ-2022-05-16-11

Meter ID: AR4A

RQ-

Project

Z6LL2205

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Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 04/18/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	6/20/22	747	23.9	757	8.4	8.39	99.6	—	1.07	P/F	L/F
ICV	"	"	749	23.6	757	8.4	8.44	99.6	—	1.07	P/F	L/F
CCV	Charlie Hoey	6/20/22	11041	26.6	757	8.0	8.04	99.9	—	1.07	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	6/20/22	752	220328A	04/23	1000	1000	P/F	L/F
ICV	"	"	754	220328C	04/23	100	100.7	P/F	L/F
CCV	Charlie Hoey	6/20/22	1644	220328B	04/23	5000	4997	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	6/20/22	756	217473	10/23	7.00	24.0	7.00	-13.2	P/F	L/F
Calibr.	"	"	800	200704	11/22	4.00	24.2	4.00	163.2	P/F	L/F
Calibr.	"	"	803	4110A80	03/23	10.01	24.0	10.01	-183.6	P/F	L/F
ICV	"	"	805	4110A80	03/23	10.01	24.0	10.00	-184.1	P/F	L/F
CCV	Charlie Hoey	6/20/22	11047	200704	11/22	4.00	24.1	4.11	150.3	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 170.4, slope from 4 to 7 170.4 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 04/18/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: ; Date of last verification:

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	6/20/22	807	0.00	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hodor

RQ: 2022-06-27-40

Project: SMP/HAB

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 4/18/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	6/27/22	707	23.8	756	8.4	8.40	99.4%	-	1.08	P/F	L/F
ICV	"	"	708	23.9	756	8.4	8.40	99.5%	-	1.08	P/F	L/F
CCV	"	"	1311	23.0	756	8.5	8.52	99.2%	-	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	6/27/22	711	220328A	4/2023	1000	1000	P/F	L/F
ICV	"	"	713	220328C	4/2023	100	100	P/F	L/F
CCV	"	"	1313	220328A	4/2023	1000	999	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	6/27/22	716	217473	10/2023	7.0	24.1	7.01	-46.4	P/F	L/F
Calibr.	"	"	718	217876	11/2024	4.0	24.1	4.00	128.6	P/F	L/F
Calibr.	"	"	721	4110A80	3/2024	10.0	24.0	10.01	-213.4	P/F	L/F
ICV	"	"	722	4110A80	3/2024	10.0	24.0	9.99	-213.4	P/F	L/F
CCV	"	"	1315	217876	1/2024	4.0	23.9	4.16	119.1	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 167, slope from 4 to 7 175 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 4/18/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	6/27/22	723	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hodor

RQ: 2022-06-20-68

Project: SAAP HAB

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

4/18/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	7/7/22	702	25.8	756	8.1	8.10	99.5	-	1.08	P/F	L/F
ICV	"	"	703	25.8	757	8.1	8.10	99.5	-	1.08	P/F	L/F
CCV	"	"	1048	26.1	757	8.1	8.06	99.6	-	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	7/7/22	706	220328A	4/2023	1000	1000	P/F	L/F
ICV	"	"	708	220328C	4/2023	100	99.7	P/F	L/F
CCV	"	"	1051	220328A	4/2023	1000	1000	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	7/7/22	710	214693	9/2023	7.0	24.1	7.01	-47.7	P/F	L/F
Calibr.	"	"	712	217876	1/2024	4.0	24.2	4.00	128.6	P/F	L/F
Calibr.	"	"	715	4110A80	3/2023	10.0	24.1	10.01	-214.9	P/F	L/F
ICV	"	"	716	4110A80	3/2023	10.0	24.1	9.99	-214.8	P/F	L/F
CCV	"	"	1052	214693	9/2023	7.0	24.2	7.00	-43.6	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ; mV pH 4 Range $+180 \pm 50$; mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 167.2, slope from 4 to 7 176.3 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 4/18/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	7/7/22	718	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hodor

RQ: 2022-07-11-54

Project: SMP / HAB

2022-06-20-68

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 7/7/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	7/13/22	717	26.7	757	8.0	8.04	99.7	-	1.09	P/F	L/F
ICV	"	"	"	719	26.3	758	8.0	8.08	100	-	1.09	P/F
CCV	"	"	"	1430	24.5	758	8.41	8.3	100.9	-	1.09	P/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	7/13/22	721	220328A	4/2023	1000	1000	P/F	L/F
ICV	"	"	"	723	220328C	4/2023	100	99.5	P/F
CCV	"	"	"	1432	220328A	4/2023	1000	999	P/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	7/13/22	725	214693	9/2023	7.0	23.7	7.01	-49.5	P/F	L/F
Calibr.	"	"	"	728	217876	1/2024	4.0	23.7	4.06	124.5	P/F
Calibr.	"	"	"	730	4110A80	3/2023	10.0	23.7	10.02	-215.3	P/F
ICV	"	"	"	732	4110A80	3/2023	10.0	23.7	9.99	-214.9	P/F
CCV	"	"	"	1436	214693	9/2023	7.0	23.5	6.95	-43.0	P/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 165.8, slope from 4 to 7 174 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 7/7/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	7/13/22	733	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

RQ-2022-06-20-68AB

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT

RQ-2022-07-11-25

Meter ID:

ARYA

RQ-

Z6SS2207

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

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

07/07/22

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	7/21/22	731	23.2	750	8.5	8.49	99.4	—	1.07	P/F	L/F
ICV	"	"	733	23.1	755	8.5	8.48	99.2	—	1.07	P/F	L/F
CCV	S. Fischer	7/21/22	1540	28.1	755	7.8	7.73	99.0	—	1.07	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	7/21/22	735	220328A	04/23	1000	1000	P/F	L/F
ICV	"	"	737	220328C	04/23	100	100.8	P/F	L/F
CCV	S. Fischer	7/21/22	1542	2112008	11/23	100 000	103850	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	7/21/22	740	214093	09/23	7.01	23.4	7.01	-17.6	P/F	L/F
Calibr.	"	"	743	217870	01/24	4.00	23.3	4.00	158.9	P/F	L/F
Calibr.	"	"	745	4110A80	03/23	10.01	23.0	10.01	188.9	P/F	L/F
ICV	"	"	747	4110A80	03/23	10.01	23.0	10.00	188.9	P/F	L/F
CCV	S. Fischer	7/21/22	1544	217874	01/24	4.	23.8	3.86	167.0	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU;mV pH 7 Range 0 ± 50 ;mV pH 4 Range $+180 \pm 50$;mV pH 10 Range -180 ± 50 ;If mV are recorded: slope from 7 to 10 171.3, slope from 4 to 7 170.5 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 07/07/22

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: ; Date of last verification:

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	7/21/22	749	0.00	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hodor

RQ: 2022-06-20-68

Project: HAR

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 7/7/22

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	8/2/22	658	24.4	758	8.3	8.34	99.7	-	1.08	P/F	L/F
ICV	"	"	"	659	758	8.3	8.34	99.8	-	1.08	P/F	L/F
CCV	"	"	"	1333	757	7.9	7.94	99.2	-	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	8/2/22	701	220328A	4/2023	1000	1000	P/F	L/F
ICV	"	"	"	706	220328C	100	100.5	P/F	L/F
CCV	"	"	"	1335	220328A	1000	999	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	8/2/22	708	214693	9/2023	7.0	24.2	7.01	-43.4	P/F	L/F
Calibr.	"	"	"	710	217876	4.0	24.3	4.00	128.6	P/F	L/F
Calibr.	"	"	"	712	4110A80	10.0	24.3	10.01	-212.7	P/F	L/F
ICV	"	"	"	713	4110A80	10.0	24.3	10.02	-213.7	P/F	L/F
CCV	"	"	"	1337	214693	7.0	23.7	7.04	-44.5	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 169.3, slope from 4 to 7 172 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 7/7/22

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	8/2/22	715	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID:

ARYA

RQ:

2022-08-01-54

Project:

SMDIAB

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

07/07/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	8/2/22	148	23.8	751	8.4	8.43	99.0	—	1.07	P/F	L/F
ICV	"	"	150	23.0	751	8.4	8.47	99.9	—	1.07	P/F	L/F
CCV	Charlie Hoey	8/2/22	1322	25.5	751	8.2	8.23	100.5	—	1.07	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	8/2/22	152	220328A	04/23	1000	1000	P/F	L/F
ICV	"	"	154	220328C	04/23	100	101.2	P/F	L/F
CCV	Charlie Hoey	8/2/22	1323	2112667	11/23	50000	49799	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	8/2/22	157	214093	09/23	7.00	24.1	7.00	-14.0	P/F	L/F
Calibr.	"	"	800	217870	01/24	4.00	24.0	4.00	159.2	P/F	L/F
Calibr.	"	"	803	4110A80	03/23	10.01	23.9	10.01	-189.4	P/F	L/F
ICV	"	"	805	4110A80	03/23	10.01	23.9	10.01	-189.2	P/F	L/F
CCV	Charlie Hoey	8/2/22	1327	217870	01/24	4.00	23.1	4.05	156.0	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 174.8, slope from 4 to 7 173.8 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 07/07/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: ; Date of last verification:

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	8/2/22	807	0.00	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: ARYA

RQ: 2022-08-08-100

Project: HAB

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 07/07/22

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	8/8/22	749	23.0	757	8.4	8.43	99.6	—	1.07	P/F	L/F
ICV	"	"	751	23.5	757	8.5	8.48	99.8	—	1.07	P/F	L/F
CCV	Charlie Hoey	8/8/22	1134	24.9	757	8.2	8.32	100.5	—	1.07	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	8/8/22	753	220328A	04/23	1000	1000	P/F	L/F
ICV	"	"	755	220328C	04/23	100	100	P/F	L/F
CCV	Charlie Hoey	8/8/22	1130	220328A	04/23	1000	998	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	8/8/22	757	214093	09/23	7.01	23.8	7.01	-15.8	P/F	L/F
Calibr.	"	"	800	217870	01/24	4.00	23.7	4.00	157.2	P/F	L/F
Calibr.	"	"	803	217505	11/23	10.02	23.6	10.02	-193.0	P/F	L/F
ICV	"	"	805	217505	11/23	10.02	23.6	10.01	-193.2	P/F	L/F
CCV	Charlie Hoey	8/8/22	1139	217870	01/24	4.00	23.2	4.00	159.1	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ; mV pH 4 Range $+180 \pm 50$; mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 177.2, slope from 4 to 7 173 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 07/07/22

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	8/8/22	808	0.00	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

CALIBRATION AND VERIFICATION

RQ-2022-07-11-25

1000-FD 4000)

Meter ID:

AR1A

RQ-

Z6SS2207

2022-08-08-06

Project:

Status

HAB

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

- Notes: (1) Always wait for meter to stabilize before recording any readings.
(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

07/07/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	8/15/22	927	23.4	753	8.4	8.43	99.1	—	1.07	P/F	L/F
ICV	"	"	929	23.5	753	8.4	8.41	99.0	—	1.07	P/F	L/F
CCV	Charlie Hoey	8/15/22	1223	24.7	753	8.2	8.31	100.2	—	1.07	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	8/15/22	931	220328A	04/23	1000	1000	P/F	L/F
ICV	"	"	934	220328C	04/23	100	99.9	P/F	L/F
CCV	Charlie Hoey	8/15/22	1220	2112608	11/23	100 000	99000	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	8/15/22	930	214093	09/23	7.01	23.7	7.01	-17.0	P/F	L/F
Calibr.	"	"	939	217870	01/24	4.00	23.0	4.00	157.9	P/F	L/F
Calibr.	"	"	942	217505	11/23	10.02	23.7	10.02	-195.9	P/F	L/F
ICV	"	"	940	217505	11/23	10.02	23.7	10.01	-194.4	P/F	L/F
CCV	Charlie Hoey	8/15/22	1232	214093	09/23	7.01	23.4	6.93	-13.3	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU;

mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 178.9, slope from 4 to 7 174.9 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? **YES** / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 07/07/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	8/15/22	948	0.00	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Anya

RQ- 2022-08-08-166

Project: HAB

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 7/7/22

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Sabrina Fischer	08/16/22	0830	24.0	752	8.3	8.35	99.0	✓	1.07	P/F	L/F
ICV	S Fischer	"	"	0832	23.9	752	8.3	8.35	99.0	✓	P/F	L/F
CCV	"	"	"	1430	28.8	752	7.6	7.67	99.5	✓	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	S Fischer	8/16/22	0834	220328B	04/23	5000	5000	P/F	L/F
ICV	"	"	"	0836	220328C	04/23	100	P/F	L/F
CCV	"	"	"	1432	220328A	04/23	1000	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	S Fischer	8/16/22	0838	214693	09/23	7.	23.6	6.93	-13.6	P/F	L/F
Calibr.	"	"	"	0840	217876	01/24	4.	23.6	3.91	P/F	L/F
Calibr.	"	"	"	0842	217565	11/23	10.	23.5	9.93	P/F	L/F
ICV	"	"	"	0844	217565	11/23	10.	23.5	9.99	P/F	L/F
CCV	"	"	"	1434	214693	09/23	7.	23.3	6.98	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 176.4, slope from 4 to 7 177.5 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 7/7/22

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	S Fischer	8/16/22	0846	0.00	0.0	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hador

RQ-

2022-08-15-37

Project:

SMP/HAB

- Notes: (1) Always wait for meter to stabilize before recording any readings. (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth). (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 7/07/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luerling	8/16/22	712	24.3	754	8.3	8.30	99.1	-	1.08	P/F	L/F
ICV	"	"	713	24.3	754	8.3	8.30	99.2	-	1.08	P/F	L/F
CCV	Charlie Hoey	8/10/22	1242	20.8	754	7.9	7.97	99.7	-	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luerling	8/16/22	715	220328A	4/2023	1000	1000	P/F	L/F
ICV	"	"	717	220328C	4/2023	100	100.3	P/F	L/F
CCV	Charlie Hoey	8/10/22	1245	220328A	04/23	1000	984	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luerling	8/16/22	719	214693	9/2023	7.0	23.9	7.01	-474	P/F	L/F
Calibr.	"	"	721	217876	01/2024	4.0	23.9	4.00	125.6	P/F	L/F
Calibr.	"	"	723	217565	11/2023	10.0	23.8	10.01	-2240	P/F	L/F
ICV	"	"	725	217565	11/2023	10.0	23.8	10.02	-2233	P/F	L/F
CCV	Charlie Hoey	8/10/22	1248	217870	01/24	4.00	23.9	4.11	121.1	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 176.6, slope from 4 to 7 173 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 07/07/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luerling	8/16/22	727	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID:

Hodor

RQ:

2022-08-15-37
2022-08-08-66

Project:

SMP / HAB

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 07/07/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luerking	9/12/22	656	23.6	755	8.4	8.43	99.3		1.09	P / F	L / F
ICV	"	"	657	23.6	755	8.4	8.43	99.5		1.09	P / F	L / F
CCV	"	"	1120	25.6	756	8.1	8.15	99.9		1.09	P / F	L / F
CCV											P / F	L / F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luerking	9/12/22	659	220328A	4/2023	1000	1000	P / F	L / F
ICV	"	"	702	220328C	4/2023	100	99.2	P / F	L / F
CCV	"	"	1121	220328A	4/2023	1000	1001	P / F	L / F
CCV								P / F	L / F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luerking	9/12/22	704	214143	9/2023	7.0	23.9	7.01	-52.7	P / F	L / F
Calibr.	"	"	707	217876	1/2024	4.0	23.9	4.00	120.2	P / F	L / F
Calibr.	"	"	711	217565	11/2023	10.0	23.9	10.01	-229.0	P / F	L / F
ICV	"	"	712	217565	11/2023	10.0	23.9	10.01	-228.0	P / F	L / F
CCV	"	"	1123	214693	9/2023	7.0	23.6	7.10	-58.6	P / F	L / F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU;

mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 176.3, slope from 4 to 7 172.9 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 07/07/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: ; Date of last verification:

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luerking	9/12/22	713	0.00	0.00	P / F	L / F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hodor

RQ- 2022-10-03-29

Project: SMP/HAR

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 10/3/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luerling	10/4/22	656	22.5	754	8.6	8.58	99.27	-	1.08	P / F	L / F
ICV	"	"	657	22.6	754	8.6	8.57	99.26	-	1.08	P / F	L / F
CCV	"	"	1611	26.4	753	8.0	7.98	99.36	-	1.08	P / F	L / F
CCV											P / F	L / F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luerling	10/4/22	700	220328A	4/2023	1000	1000	P / F	L / F
ICV	"	"	701	220328C	4/2023	100	104.2	P / F	L / F
CCV	"	"	1612	220328A	4/2023	1000	990	P / F	L / F
CCV								P / F	L / F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luerling	16/4/22	705	217879	12/2023	7.0	23.5	7.01	-55.2	P / F	L / F
Calibr.	"	"	708	217876	1/2024	4.0	23.4	4.00	116.1	P / F	L / F
Calibr.	"	"	710	217565	11/2023	10.0	23.4	10.02	-25.7	P / F	L / F
ICV	"	"	711	217565	11/2023	10.0	23.4	10.00	-24.2	P / F	L / F
CCV	"	"	1614	217876	1/2024	4.0	23.4	4.15	108.4	P / F	L / F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 170.5, slope from 4 to 7 171.3 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/3/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luerling	10/4/22	713	0.00	0.00	P / F	L / F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hodor

RQ-

2022-08-08-66

Project:

HAB/ Hurricane

Ion / SMP

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

10/3/22

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	10/19/22	709	22.5	759	8.6	8.65	99.9	-	1.09	P/F	L/F
ICV	"	"	710	22.5	759	8.6	8.66	100.1	-	1.09	P/F	L/F
CCV	"	"	1416	20.6	761	9.0	9.01	100.5	-	1.09	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	10/19/22	712	220328A	4/2023	1000	1000	P/F	L/F
ICV	"	"	715	220328C	4/2023	100	98.9	P/F	L/F
CCV	"	"	1418	220725C	8/2023	1000	992	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	10/19/22	717	217879	12/2023	7.0	23.2	7.01	-48.1	P/F	L/F
Calibr.	"	"	719	220725A	2/2024	4.0	23.2	4.00	124.1	P/F	L/F
Calibr.	"	"	722	217565	11/2023	10.0	23.1	10.02	-223.0	P/F	L/F
ICV	"	"	724	217565	11/2023	10.0	23.1	10.01	-221.4	P/F	L/F
CCV	"	"	1420	220725A	2/2024	4.0	23.0	3.98	125.8	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ; mV pH 4 Range $+180 \pm 50$; mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 174.9, slope from 4 to 7 172.2 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/3/22

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	10/19/22	725	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Hodor

RQ: 2022-10-24-27

Project: SMP/HAB

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 10/3/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	10/24/22	7:16	22.5	763	8.7	8.68	100.3%	-	1.09	P/F	L/F
ICV	"	"	7:17	22.6	763	8.7	8.67	100.4%	-	1.09	P/F	L/F
CCV	Jordan Skeggs	"	14:30	23.5	762	8.5	8.48	99.8	-	1.09	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	10/24/22	7:19	220725C	8/2023	1000	1000	P/F	L/F
ICV	"	"	7:22	220328C	4/2023	100	99.5	P/F	L/F
CCV	Jordan Skeggs	"	14:35	220725C	8/2023	1000	1002	P/F	L/F
CCV							1000	P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	10/24/22	7:24	217879	12/2023	7.0	23.1	7.01	-51.2	P/F	L/F
Calibr.	"	"	7:26	220725A	2/2024	4.0	23.1	4.01	126.7	P/F	L/F
Calibr.	"	"	7:29	217565	11/2023	10.0	23.1	10.02	-223.3	P/F	L/F
ICV	"	"	7:30	217565	11/2023	10.0	23.1	10.00	-223.3	P/F	L/F
CCV	Jordan Skeggs	"	14:40	220725A	2/2024	4.0	23.0	4.04	124.2	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 172.1, slope from 4 to 7 177.9 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/3/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	10/24/22	7:31	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

2022-08-08-66 HAB

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

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

Meter ID:

Hodor

RQ-

702022-10-31-27

Project:

Hurricane Ian

HAB

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 10/31/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	10/31/22	752	22.7	760	8.6	8.63	100.0	-	1.11	P/F	L/F
ICV	"	"	758	22.8	760	8.6	8.62	100.0	-	1.11	P/F	L/F
CCV	Jordan Skaggs	10/31/22	1306	23.0	760	8.6	8.71	101.6	-	1.11	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	10/31/22	759	220725C	8/2023	1000	1000	P/F	L/F
ICV	"	"	802	220328C	4/2023	100	99.9	P/F	L/F
CCV	Jordan Skaggs	10/31/22	1310	220725C	8/2023	1000	1005	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	10/31/22	804	217879	12/2023	7.0	23.3	7.01	-48.5	P/F	L/F
Calibr.	"	"	866	220725A	2/2024	4.0	23.3	4.00	126.9	P/F	L/F
Calibr.	"	"	808	207460	2/2023	10.0	23.2	10.02	-225.7	P/F	L/F
ICV	"	"	810	207460	2/2023	10.0	23.2	10.02	-225.4	P/F	L/F
CCV	Jordan Skaggs	10/31/22	1316	220725A	2/2024	4.0	23.3	4.13	119.9	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;mV pH 4 Range $+180 \pm 50$;mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 177.2, slope from 4 to 7 175.4 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/31/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: ; Date of last verification:

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	10/31/22	811	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

RQ-2022-08-29-42

RQ-2022-10-31-30

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

SMP

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

Meter ID: HODOR

RQ-2022-11-14-51

Project: TREND/HAB

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 10/03/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	11/10/22	022	23.4	763.2	8.5	8.55	100.4	—	1.08	P/F	L/F
ICV	"	"	024	23.3	763.1	8.0	8.50	100.5	—	1.08	P/F	L/F
CCV	Charlie Hoey	11/10/22	1320	23.8	762.0	8.5	8.47	100.4	—	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	11/10/22	027	220725C	08/23	1000	1000	P/F	L/F
ICV	"	"	030	220328C	04/23	100	100.1	P/F	L/F
CCV	Charlie Hoey	11/10/22	1322	220725C	08/23	1000	981	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	11/10/22	035	217819	12/23	7.01	23.7	7.01	-54.2	P/F	L/F
Calibr.	"	"	040	220725A	02/24	4.01	23.9	4.01	122.4	P/F	L/F
Calibr.	"	"	044	207400	02/23	10.01	23.9	10.01	-230.5	P/F	L/F
ICV	"	"	040	207400	02/23	10.01	23.8	10.01	-230.1	P/F	L/F
CCV	Charlie Hoey	11/10/22	1324	220725A	02/24	4.01	23.7	4.15	114.4	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;mV pH 4 Range $+180 \pm 50$;mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 170.3, slope from 4 to 7 170.0 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/03/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: ; Date of last verification:

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	11/10/22	048	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

2022-11-28-20
CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)
2022-08-29-22

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

Meter ID: **Hodor**

RQ: **2022-12-12-19**

Project: **SMP/Hurricane Ian**

Trend / HAB

- Notes:** (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification **10/3/2022**

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	11/28/22	736	24.0	762	8.4	8.45	100.2	-	1.09	P/F	L/F
ICV	"	"	738	24.1	762	8.4	8.44	100.4	-	1.09	P/F	L/F
CCV	"	"	1420	23.8	761	8.5	8.49	100.4	-	1.09	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	11/28/22	740	220725C	8/2023	1000	1000	P/F	L/F
ICV	"	"	742	220328C	4/2023	100	106.6	P/F	L/F
CCV	"	"	1422	220725C	8/2023	1000	998	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	11/28/22	744	220725B	2/2024	7.0	24.9	7.00	-52.0	P/F	L/F
Calibr.	"	"	746	220725A	2/2024	4.0	24.8	4.01	121.3	P/F	L/F
Calibr.	"	"	748	207460	2/2023	10.0	24.8	10.00	-226.9	P/F	L/F
ICV	"	"	749	207466	2/2023	10.0	24.8	10.00	-225.9	P/F	L/F
CCV	"	"	1424	220725A	2/2024	4.0	24.4	3.99	122.1	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ; mV pH 4 Range $+180 \pm 50$; mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 **174.9**, slope from 4 to 7 **173.3** (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? **YES** NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: **10/3/2022**

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	11/28/22	750	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: **HODOR**

RQ- **2022-08-29-42**

Project: **HAB**

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification **10/03/2022**

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Barometer mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	11/30/22	1031	23.1	702.4	8.0	8.58	100.3	—	1.08	P/F	L/F
ICV	"	"	1033	23.2	702.4	8.0	8.58	100.3	—	1.08	P/F	L/F
CCV	Charlie Hoey	11/30/22	1412	24.2	702.3	8.4	8.42	100.5	—	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	11/30/22	1035	220725C	08/23	1000	1000	P/F	L/F
ICV	"	"	1037	220328C	04/23	100	98.4	P/F	L/F
CCV	Charlie Hoey	11/30/22	1414	220725C	08/23	1000	987	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	11/30/22	1042	220725B	02/24	7.01	23.0	7.01	-55.9	P/F	L/F
Calibr.	"	"	1040	220725A	02/24	4.01	23.4	4.01	124.1	P/F	L/F
Calibr.	"	"	1050	207400	02/23	10.02	23.4	10.02	-230.0	P/F	L/F
ICV	"	"	1053	207400	02/23	10.02	23.4	9.99	-229.0	P/F	L/F
CCV	Charlie Hoey	11/30/22	1410	220725A	02/24	4.01	23.0	4.14	115.9	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ; mV pH 4 Range $+180 \pm 50$; mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 **174.1**, slope from 4 to 7 **180** (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? **YES** / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: **10/03/2022**

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	11/30/22	1055	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: Exo3 (Drew)

RQ: 2022-12-05-57

Project: SMP/HAR

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 10/31/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	12/5/22	8:50	23.3	763	8.6	8.55	100.5%		1.07	P/F	L/F
ICV	"	"	9:00	23.4	763	8.5	8.55	100.4%		1.07	P/F	L/F
CCV	"	"	14:51	25.9	762	8.2	8.18	100.1%		1.07	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luering	12/5/22	9:03	220725C	8/2023	1000	1000	P/F	L/F
ICV	"	"	9:05	220328C	4/2023	100	101.4	P/F	L/F
CCV	"	"	14:54	220725C	8/2023	1006	994	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luering	12/5/22	9:07	220725B	2/2024	7.0	23.7	7.01	-122	P/F	L/F
Calibr.	"	"	9:10	220725A	2/2024	4.0	23.5	4.00	120.3	P/F	L/F
Calibr.	"	"	9:12	207460	2/2023	10.0	23.6	10.02	-230.0	P/F	L/F
ICV	"	"	9:14	207460	2/2023	10.0	23.6	10.945		P/F	L/F
CCV	"	"	14:57	220725A	2/2024	4.0	23.6	4.17		P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU;

mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 167.8, slope from 4 to 7 182.5 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/31/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luering	12/5/22	9:15	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

RQ-2022-08-29-42

CALIBRATION AND VERIFICATION LOG (FDEI)

RQ-2022-10-17-19

Meter ID:

Hodor

RQ-

Z6UA2210

HAB

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

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

10/03/22

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	S Fischer	12/5/22	1700	23.3	762.4	8.6	8.57	100.3	—	1.09	P/F	L/F
ICV	" "	" "	1702	23.3	762.5	8.6	8.56	100.3	—	1.09	P/F	L/F
CCV	Charlie Hoey	12/16/22	1445	23.9	764.4	8.5	8.46	100.4	—	1.09	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	S Fischer	12/5	1704	220728C	08/23	1000	1000	P/F	L/F
ICV	" "	" "	1706	220328C	04/23	100	100.2	P/F	L/F
CCV	Charlie Hoey	12/16/22	1447	220725C	08/23	1000	984	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	S Fischer	12/5	1708	220725B	02/24	7.01	23.7	50.8	50.6	P/F	L/F
Calibr.	" "	" "	1710	220725A	02/24	4.00	23.7	397	125.6	P/F	L/F
Calibr.	" "	" "	1712	207460	02/23	10.02	23.4	9.91	224.8	P/F	L/F
ICV	" "	" "	1714	207460	02/23	10.02	23.6	10.01	224.4	P/F	L/F
CCV	Charlie Hoey	12/16/22	1449	220725A	02/24	4.01	23.4	4.18	114.9	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;mV pH 4 Range $+180 \pm 50$;mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 174.2, slope from 4 to 7 174.2 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/03/22

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: ; Date of last verification:

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	S Fischer	12/5	1714	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

RQ-2022-08-29-42
RA-2022-12-12-33

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

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

Meter ID: HODOR

RQ- 2022-12-12-12

Project: TREND / HAB

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 10/03/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	12/12/22	1030	22.7	700.4	8.0	8.04	100.2	—	1.09	P/F	L/F
ICV	"	"	1038	22.7	701.4	8.0	8.08	100.0	—	1.09	P/F	L/F
CCV	Charlie Hoey	12/12/22	1437	21.3	700.8	8.9	8.90	100.5	—	1.09	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	12/12/22	1040	220725C	08/23	1000	1000	P/F	L/F
ICV	"	"	1043	220328C	04/23	100	100.2	P/F	L/F
CCV	Charlie Hoey	12/12/22	1439	220725C	08/23	1600	984	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	12/12/22	1040	220725B	02/24	7.01	23.2	7.01	-50.3	P/F	L/F
Calibr.	"	"	1049	220725A	02/24	4.01	23.3	4.01	120.8	P/F	L/F
Calibr.	"	"	1053	2074100	02/23	10.02	23.1	10.02	229.1	P/F	L/F
ICV	"	"	1050	2074100	02/23	10.02	23.1	10.01	229.0	P/F	L/F
CCV	Charlie Hoey	12/12/22	14	220725A	02/24	4.01	22.8	4.13	113.2	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ; mV pH 4 Range $+180 \pm 50$; mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 172.8, slope from 4 to 7 177.1 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/03/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	12/12/22	702	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

RQ-2022-12-12-33

CALIBRATION AND VERIFICATION LOG (FDEP SOP F1)

RQ-2022-10-17-19

Meter ID: HODOR

RQ-

Z6UA2210

HAB

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

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

10/03/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	12/13/22	1031	21.0	701.1	8.8	8.81	100.1	—	1.08	P/F	L/F
ICV	"	"	1033	21.7	701.1	8.8	8.81	100.2	—	1.08	P/F	L/F
CCV	Charlie Hoey	12/13/22	1429	23.0	701.2	8.0	8.01	100.4	—	1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	12/13/22	1035	220725C	08/23	1000	1000	P/F	L/F
ICV	"	"	1038	220328C	04/23	100	99.7	P/F	L/F
CCV	Charlie Hoey	12/13/22	1433	220725C	08/23	1000	994	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	12/13/22	1040	220725B	02/24	7.01	22.3	7.01	-54.0	P/F	L/F
Calibr.	"	"	1044	220725A	02/24	4.01	22.0	4.01	125.0	P/F	L/F
Calibr.	"	"	1049	207400	02/23	10.04	22.0	10.04	-229.3	P/F	L/F
ICV	"	"	1052	207400	02/23	10.04	22.0	10.01	-228.8	P/F	L/F
CCV	Charlie Hoey	12/13/22	1435	220725A	02/24	4.01	22.8	4.18	114.0	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU;mV pH 7 Range 0 ± 50 ;mV pH 4 Range $+180 \pm 50$;mV pH 10 Range -180 ± 50 ;If mV are recorded: slope from 7 to 10 174.7, slope from 4 to 7 179.0 (both must be between 165 and 180 mV)Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/03/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	12/13/22	1054	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

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

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

Meter ID: H0D0R

RQ: 2022-12-12-33

Project: HAB. + HA

Notes: (1) Always wait for meter to stabilize before recording any readings.

(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).

(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 10/03/2022

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	12/19/22	1034	22.1	705.7	8.8	8.80	100.8	—	1.09	P F	L F
ICV	"	"	1037	22.1	705.8	8.8	8.79	100.9	—	1.09	P F	L F
CCV	Charlie Hoey	12/19/22	11007	22.5	705.2	8.7	8.74	101.0	—	1.09	P F	L F
CCV											P / F	L / F

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 (Pro DSS 0.75 to 1.50); 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.	Charlie Hoey	12/19/22	1039	220725C	08/23	1000	1000	P F	L F
ICV	"	"	1042	220328C	04/23	100	99.0	P F	L F
CCV	Charlie Hoey	12/19/22	11009	220725C	08/23	1200	988	P F	L F
CCV								P / F	L / F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Charlie Hoey	12/19/22	1045	220725B	02/24	7.01	23.0	7.01	-53.0	P F	L F
Calibr.	"	"	1048	220725A	02/24	4.01	22.4	4.01	123.7	P F	L F
Calibr.	"	"	1052	207400	02/23	10.03	22.8	10.03	-220.5	P F	L F
ICV	"	"	1055	207400	02/23	10.03	22.7	10.01	-226.2	P F	L F
CCV	Charlie Hoey	12/19/22	11012	220725A	02/24	4.01	22.5	4.14	110.8	P F	L F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 173.5, slope from 4 to 7 176.7 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/03/2022

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Charlie Hoey	12/19/22	1057	0.00	0.00	P F	L F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

NO HA SAMPLED

2022-12-12-33

HAB

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

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

Meter ID:

Arya

RQ:

2022-08-29-42

Project:

Trend / HAB

- Notes: (1) Always wait for meter to stabilize before recording any readings. (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth). (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Andrew Luerling	12/20/22	748	21.0	765	9.0	8.98	100.7		1.08	P/F	L/F
ICV	"	"	750	21.0	765	9.0	8.98	100.9		1.08	P/F	L/F
CCV	Jordan Skaggs	11	1310	20.6	765	9.0	9.0	100.6		1.08	P/F	L/F
CCV											P/F	L/F

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 (Pro DSS 0.75 to 1.50); 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.	Andrew Luerling	12/20/22	752	220725C	8/2023	1000	1000	P/F	L/F
ICV	"	"	755	220328C	4/2023	100	100.8	P/F	L/F
CCV	Jordan Skaggs	11	1315	220725C	8/23	1000	995	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Andrew Luerling	12/20/22	757	220725B	2/2024	7.0	22.6	7.01	-12.3	P/F	L/F
Calibr.	"	"	759	220725A	2/2024	4.0	22.4	4.00	165.4	P/F	L/F
Calibr.	"	"	802	207460	2/2023	10.0	22.5	10.03	-189.7	P/F	L/F
ICV	"	"	803	207460	2/2023	10.0	22.5	10.02	-188.7	P/F	L/F
CCV	Jordan Skaggs	11	1330	221122	06/24	4.0	21.5	4.03	163.4	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 177.4, slope from 4 to 7 177.7 (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/03/22

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Andrew Luerling	12/20/22	806	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS: