

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

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

Meter ID: DEPH 154181 RQ: 2018-07-16-19 Project: BMAP Trlks 2

- 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.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site 07-12-18  
 Temperature (Quarterly) FT 1400 Date of Last Temperature Verification 07-12-18

| DO<br>DEP SOP<br>FT 1500 | Name      | Date     | Time<br>CT-ET | Temp | D.O.<br>Chart<br>mg/L | Meter<br>D.O.<br>mg/L | % DO  | Probe<br>Charge | Probe<br>Gain | Pass<br>/ Fail | Lab<br>/ Field |
|--------------------------|-----------|----------|---------------|------|-----------------------|-----------------------|-------|-----------------|---------------|----------------|----------------|
| Calibr.                  | PO'Connor | 07-24-18 | 0707          | 23.4 | 8.51                  | 8.51                  | 100.0 | -               | -             | (P) F (L) F    | (L) F          |
| ICV                      | ✓         | ✓        | 0710          | 23.4 | 8.51                  | 8.51                  | 100.0 | -               | -             | (P) F (L) F    | (L) F          |
| CCV                      | PO'Connor | 07-24-18 | 1445          | 25.5 | 8.18                  | 8.25                  | 100.7 | -               | -             | (P) F (L) F    | (L) F          |
| CCV                      |           |          |               |      |                       |                       |       |                 |               | P / F          | L / F          |

DO Acceptance criteria from Table  $\pm 0.3$  mg/L. Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.  
 Optical: DO gain range 0.85 to 1.15; DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

| Spec.<br>Cond.<br>FT 1200 | Name      | Date     | Time<br>CT-ET | Lot #   | Expir.<br>Date | Standard<br>$\mu$ mhos/cm | Meter<br>Reading<br>$\mu$ mhos/cm | Pass<br>/ Fail | Lab<br>/ Field |
|---------------------------|-----------|----------|---------------|---------|----------------|---------------------------|-----------------------------------|----------------|----------------|
| Calibr.                   | PO'Connor | 07-24-18 | 0713          | 180711A | 07-2019        | 1000                      | 1000                              | (P) F (L) F    | (L) F          |
| ICV                       | ✓         | ✓        | 0715          | 180321A | 04-2019        | 100                       | 102.0                             | (P) F (L) F    | (L) F          |
| CCV                       | PO'Connor | 07-24-18 | 1447          | 180711A | 07-2019        | 1000                      | 1000                              | (P) F (L) F    | (L) F          |
| CCV                       |           |          |               |         |                |                           |                                   | P / F          | L / F          |

Conductivity Acceptance criteria  $\pm 5\%$

| pH<br>DEP SOP<br>FT 1100 | Name      | Date     | Time<br>CT-ET | Lot #   | Expir.<br>Date | pH<br>Buffer<br>SU | Meter<br>reading<br>SU | mV     | Pass<br>/ Fail | Lab<br>/ Field |
|--------------------------|-----------|----------|---------------|---------|----------------|--------------------|------------------------|--------|----------------|----------------|
| Calibr.                  | PO'Connor | 07-24-18 | 0718          | 2803E45 | 03-2020        | 7.0                | 7.00                   | -9.7   | (P) F (L) F    | (L) F          |
| Calibr.                  | ✓         | ✓        | 0725          | 2803D38 | 03-2020        | 4.0                | 4.00                   | 171.2  | (P) F (L) F    | (L) F          |
| Calibr.                  | ✓         | ✓        | 0727          | 2711527 | 04-2019        | 10.0               | 9.98                   | -181.8 | (P) F (L) F    | (L) F          |
| ICV                      | ✓         | ✓        | 0730          | 2803E45 | 03-2020        | 7.0                | 7.04                   | -9.0   | (P) F (L) F    | (L) F          |
| CCV                      | PO'Connor | 07-24-18 | 1450          | 2803D38 | 03-2020        | 4.0                | 4.09                   | 163.9  | (P) F (L) F    | (L) F          |
| CCV                      | ✓         | ✓        | 1453          | 2711527 | 04-2019        | 10.0               | 10.03                  | -184.6 | (P) F (L) F    | (L) F          |

pH Acceptance criteria  $\pm 0.2$  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 \_\_\_\_\_, slope from 4 to 7 \_\_\_\_\_ (both must be between 165 and 180 mV)

Is meter equipped with depth sensor? Yes / No If yes, list date of last quarterly depth verification 07-12-18

| Depth Sensor<br>(Daily Calibration &<br>ICV) | Name | Date | Time<br>CT-ET | Calibrated<br>Value (0.00 or<br>Offset), meters | ICV Value<br>meters | Pass /<br>Fail | Lab /<br>Field |
|----------------------------------------------|------|------|---------------|-------------------------------------------------|---------------------|----------------|----------------|
| Pressure mode in air                         |      |      |               |                                                 |                     | P / F          | L / F          |

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

## COMMENTS:

BP QC/Scanned 7/30/18 JP 7/27/18

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

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

Meter ID:

YSI 7

RQ:

2018-07-16-22

Project:

LSTR Coast

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.

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

L&E

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

7/18

| DO DEP SOP FT 1500 | Name | Date    | Time CT-ET | Temp | D.O. Chart mg/L | Meter D.O. mg/L | % DO  | Probe Charge | Probe Gain | Pass / Fail | Lab / Field |
|--------------------|------|---------|------------|------|-----------------|-----------------|-------|--------------|------------|-------------|-------------|
| Calibr.            | B-V- | 7/24/18 | 740        | 24.1 | 8.40            | 8.41            | 100.1 | /            | /          | (P) F       | (L) F       |
| ICV                |      |         | 742        | 24.1 | 8.40            | 8.40            | 100   | /            | /          | (P) F       | (L) F       |
| CCV                |      |         | 1245       | 24.2 | 8.38            | 8.35            | 99.7  | /            | /          | (P) F       | (L) F       |
| CCV                |      |         |            |      |                 |                 |       |              |            | P / F       | L / F       |

DO Acceptance criteria from Table  $\pm 0.3$  mg/L.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Optical: DO gain range 0.85 to 1.15; DO charge N/A.

Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

| Spec. Cond. FT 1200 | Name | Date    | Time CT-ET | Lot #   | Expir. Date | Standard $\mu$ hos/cm | Meter Reading $\mu$ hos/cm | Pass / Fail | Lab / Field |
|---------------------|------|---------|------------|---------|-------------|-----------------------|----------------------------|-------------|-------------|
| Calibr.             | B-V- | 7/24/18 | 744        | 180711A | 7/19        | 1000                  | 1000                       | (P) F       | (L) F       |
| ICV                 |      |         | 745        | 170720C | 8/18        | 400                   | 48975                      | (P) F       | (L) F       |
| CCV                 |      |         | 1247       | 180711A |             | 50K                   |                            | P / F       | L / F       |
| CCV                 |      |         | ↓          | ↓       | 7/19        | 1000                  | 1042                       | (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 | Meter reading SU | mV     | Pass / Fail | Lab / Field |
|--------------------|------|---------|------------|---------|-------------|--------------|------------------|--------|-------------|-------------|
| Calibr.            | B-V- | 7/24/18 | 752        | 2803E45 | 3/20        | 7.0          | 7.0              | -19.8  | (P) F       | (L) F       |
| Calibr.            |      |         | 755        | 2803D38 | 3/20        | 4.0          | 4.0              | 154.0  | (P) F       | (L) F       |
| Calibr.            |      |         | 758        | 2711527 | 4/19        | 10.0         | 9.99             | -189.9 | (P) F       | (L) F       |
| ICV                |      |         | 802        | 2803E45 | 3/20        | 7.0          | 7.04             | -20.4  | (P) F       | (L) F       |
| CCV                |      |         | 1248       | 2711527 | 4/19        | 10.0         | 10.06            | -194.6 | (P) F       | (L) F       |
| CCV                |      |         |            |         |             |              |                  |        | P / F       | L / F       |

pH Acceptance criteria  $\pm 0.2$  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 \_\_\_\_\_, slope from 4 to 7 \_\_\_\_\_ (both must be between 165 and 180 mV)

Is meter equipped with depth sensor? Yes / No If yes, list date of last quarterly depth 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                   | B-V- | 7/24/18 | 805        | 0.00                                      | 0.00             | (P) F       | (L) F       |

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

COMMENTS:

BP QC/Scanned 7/30/18 JP 7/27/18