

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: Bruce RQ- 2021-09-27-47 Project: CH2A1501/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 8/16/21

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.	J. Lee	9/29/21	0706	19.9	761.8	9.29.1	9.2	100.2	—	1.03	P/F	L/F
ICV			0708	20.0	761.9	9.1	9.1	100.2	—	1.03	P/F	L/F
CCV	Bruce Davis		1610	21.6	760.4	8.8	8.87	100.8	/	1.03	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.	J. Lee	9/29/21	0715	210426B	05/22	1000	1000	P/F	L/F
ICV			0718	210426D	05/22	20000	19830	P/F	L/F
CCV	Bruce Davis		1605	210426C	5/22	1413	1401	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.	J. Lee	9/29/21	0722	210426A	05/22	7.02	20.9	7.02	-38.1	P/F	L/F
Calibr.			0726	2107640	07/23	4.00	21.2	4.00	134.1	P/F	L/F
Calibr.			0731	2107A04	12/22	10.04	21.0	10.04	-206.9	P/F	L/F
ICV			0737	210426B	04/23	7.02	21.2	7.07	-39.7	P/F	L/F
CCV	Bruce Davis		1608	2107A04	12/22	10.03	21.7	10.03	-207.3	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 10 166.2, slope from 4 to 7 171.8 (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: 8/18/21

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	J. Lee	9/29/21	0735	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:

Cyanobacteria Bloom Response Field Data Sheet

RQ-2021-09-27-47		Collected By:	B. Davis							
Customer		Field Report Prepared By:	J. Lee							
Project ID:	BLOOM_RESP	Sampling Agency:	FDEP							
Field ID:		Comments:								
NE HAB 0046 LSR @ 20 Plummer's Cove		Collection Equipment:	ortho #7							
Matrix:	Fresh	Grab	Coordinates: 30.193960, -81.639500							
Tide:	☐ Rising ☒ Falling ☐ Slack ☐ N/A	High Tide Time:	1551	Low Tide Time: 0841						
Water Quality										
Date	Time ☒ EST ☐ CEN	D.O. (mg/L)	D.O. (%)	Temp °C	pH (SU)	Sample Depth (m)	Cond. (umho/cm)	Salinity (PPTH)	Secchi Disk (m)	Total Depth (m)
9/29/21	1100	7.27	91.2	27.3	7.78	0.3	773	0.38	0.8	1.711
	1105	6.92	85.8	27.0	7.76	1.2	776	0.38		
Bloom Observations										
Algal Bloom Observed? ☒ Yes ☐ No										
Water Surface	☒ Clear	☐ Scum	☐ Globs		☐ Slick					
Water Clarity	☐ Clear	☒ Slightly Turbid	☐ Turbid		☐ Opaque					
Bloom Color	☒ Green	☐ Red	☐ Brown		☐ Other: _____					
Algae Distribution	☒ Suspended in water column		☐ On surface		☐ Other: _____					
Water Odors	☒ Normal	☐ Sewage	☐ Petroleum		☐ Chemical		Other: _____			
Parameter Suite	Parameter Methods				Preservation	pH Check	#Bottles Sent to Lab	Bottle Group		
Bloom ID (PT-50ML)	☒ BLOOM-ID				☒ Ice		1	A		
Chlorophyll (BP-1L)	☒ CHLSUITE-W				☒ Ice		1	B		
Toxins (BG-WD250)	☒ W-MCYST-AA				☒ Ice		1	B		
Preserved Nutrients (500mL HDPE)	☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP				☒ Ice ☐ H2SO4	☒ 2	1	B		
	Lot	SA1105060		Exp:	04/30/22		☒ 2			
Filtered Nutrients (P125mL)	☒ W-PO4-F		☒ Field Filtered 0.45um Filter		☒ Ice		1	B		
Quantitative Algae	☐ DTY-QN-C / PKD-QN-C				☐ Ice ☐ Lugols					
Relinquished By:	Date/Time	Number of Coolers Shipped			Received By:	Date/Time				
J. Lee	9/29/21 1600	2								

LIMs QC: BD 10/21/2021

Cyanobacteria Bloom Response Field Data Sheet

2021-09-27-47		Collected By:		B. Davis						
Customer		WQMP		Field Report Prepared By:		J. Lee				
Project ID:		BLOOM_RESP		Sampling Agency:		FDEP				
Field ID:				Comments:						
NE HAB 0047										
mouth of Deep Bottom Creek										
Matrix:		Fresh		Collection Equipment:		Ortho kit #7				
Tide:		☐ Rising ☒ Falling ☐ Slack ☐ N/A		Coordinates:		30.77290, -81.643110				
		☐ Grab		High Tide Time:		1551				
				Low Tide Time:		0841				
Water Quality										
Date	Time	D.O. (mg/L)	D.O. (%)	Temp °C	pH (SU)	Sample Depth (m)	Cond. (umho/cm)	Salinity (PPTH)	Secchi Disk (m)	Total Depth (m)
9/29/21	1125	7.40	92.3	26.6	7.39	0.3	639	0.31	0.416	0.416
									VOS	
Bloom Observations										
Algal Bloom Observed? ☒ Yes ☐ No										
Water Surface ☒ Clear ☐ Scum ☐ Globbs ☐ Slick										
Water Clarity ☐ Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque										
Bloom Color ☒ Green ☐ Red ☐ Brown ☐ Other: _____										
Algae Distribution ☒ Suspended in water column ☐ On surface ☐ Other: _____										
Water Odors ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Other: _____										
Parameter Suite		Parameter Methods			Preservation		pH Check	#Bottles Sent to Lab	Bottle Group	
Bloom ID (PT-50ML)		☒ BLOOM-ID			☒ Ice			1	A	
Chlorophyll (BP-1L)		☒ CHLSUITE-W			☒ Ice			1	B	
Toxins (BG-WD250)		☒ W-MCYST-AA			☒ Ice			1	B	
Preserved Nutrients (500mL HDPE)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP			☒ Ice ☒ H2SO4		☒ <2	1	B	
		Lot SA110506			Exp: 4/30/22		☒ <2	300	B/O	
Filtered Nutrients (P125mL)		☒ W-PO4-F ☒ Field Filtered 0.45um Filter			☒ Ice			1	B	
Quantitative Algae		☐ DTY-QN-C / PKD-QN-C			☐ Ice ☐ Lugols					
Relinquished By:		Date/Time		Number of Coolers Shipped		Received By:		Date/Time		
J. Lee		9/29/21 1600		2						

LIMs QC: BD 10/21/2021

Cyanobacteria Bloom Response Field Data Sheet

2021 RQ-2019-09-27-47		Collected By: B Davis, J Lee								
Customer: WQMP	Field Report Prepared By: B Davis									
Project ID: BLOOM_RESP	Sampling Agency: FDEP									
Field ID: NEHABCO048 Cedar River @ San Juan		Comments:								
Matrix: Fresh		Collection Equipment: O-L-H # 7								
Tide: ☐ Rising ☒ Falling ☐ Slack ☐ N/A		Coordinates: 10.281580, -81.740280								
		High Tide Time: 1639	Low Tide Time: 1037							
Water Quality										
Date	Time ☐ EST ☐ CEN	D.O. (mg/L)	D.O. (%)	Temp °C	pH (SU)	Sample Depth (m)	Cond. (umho/cm)	Salinity (PPTH)	Secchi Disk (m)	Total Depth (m)
9/29/21	1320	6.20	76.7	26.0	7.39	0.3	295.1	0.14	0.8	1.1
Bloom Observations										
Algal Bloom Observed? ☐ Yes ☒ No										
Water Surface	☒ Clear	☐ Scum	☐ Globs	☐ Slick						
Water Clarity	☒ Clear	☐ Slightly Turbid	☐ Turbid	☐ Opaque						
Bloom Color	☐ Green	☐ Red	☐ Brown	☐ Other: _____						
Algae Distribution	☐ Suspended in water column	☐ On surface	☐ Other: _____							
Water Odors	☒ Normal	☐ Sewage	☐ Petroleum	☐ Chemical	Other: _____					
Parameter Suite	Parameter Methods		Preservation		pH Check	#Bottles Sent to Lab	Bottle Group			
Bloom ID (PT-50ML)	☒ BLOOM-ID		☐ Ice			1	A			
Chlorophyll (BP-1L)	☒ CHLSUITE-W		☒ Ice			1	B			
Toxins (BG-WD250)	☒ W-MCYST-AA		☒ Ice			1	B			
Preserved Nutrients (500mL HDPE)	☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP		☒ Ice	☒ H2SO4	☒ <2	1	B			
	Lot: SA1105060	Exp: 4/10/22		☒ <2						
Filtered Nutrients (P125mL)	☒ W-PO4-F	☒ Field Filtered 0.45um Filter	☒ Ice			1	B			
Quantitative Algae	☐ DTY-QN-C / PKD-QN-C		☐ Ice	☐ Lugols						
Relinquished By:	Date/Time	Number of Coolers Shipped		Received By:		Date/Time				
J. Lee	9/29/21 1600	2								

LIMs QC: BD 10/21/2021

Cyanobacteria Bloom Response Field Data Sheet

RQ-2021-09-27-47		Collected By: B. Davis								
Customer: WQMP		Field Report Prepared By: J. Lee								
Project ID: BLOOM_RESP		Sampling Agency: FDEP								
Field ID: NE HAB 0050 Trout R @ BM ramp		Comments:								
Matrix: fresh		Collection Equipment: ortho kit #7								
Tide: ☒ Rising ☐ Falling ☐ Slack ☐ N/A		Coordinates: 30.403710, -81.663580								
Grab		High Tide Time: 1242 Low Tide Time: 0637								
Water Quality										
Date	Time ☒ EST ☐ CEN	D.O. (mg/L)	D.O. (%)	Temp °C	pH (SU)	Sample Depth (m)	Cond. (umho/cm)	Salinity (PPT)	Secchi Disk (m)	Total Depth (m)
9/29/2021	1405	8.59	115.5	29.7	7.94	0.3	7211	3.93	0.621	0.621
									V0B	
Bloom Observations										
Algal Bloom Observed? ☒ Yes ☐ No										
Water Surface		☐ Clear	☒ Scum	☐ Globs		☐ Slick				
Water Clarity		☐ Clear	☐ Slightly Turbid	☒ Turbid		☐ Opaque				
Bloom Color		☒ Green	☐ Red	☐ Brown		☐ Other: _____				
Algae Distribution		☒ Suspended in water column		☒ On surface		☐ Other: _____				
Water Odors		☐ Normal	☐ Sewage	☐ Petroleum		☐ Chemical		☒ Other: Fishy		
Parameter Suite	Parameter Methods			Preservation		pH Check	#Bottles Sent to Lab	Bottle Group		
Bloom ID (PT-50ML)	☒ BLOOM-ID			☒ Ice			1	A		
Chlorophyll (BP-1L)	☒ CHLSUITE-W			☒ Ice			1	B		
Toxins (BG-WD250)	☒ W-MCYST-AA			☒ Ice			1	B		
Preserved Nutrients (500mL HDPE)	☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP			☒ Ice ☒ H2SO4		☒ <2	1	B		
	Lot SA1105060			Exp: 4/30/22		☐ <2		XBB		
Filtered Nutrients (P125mL)	☒ W-PO4-F		☒ Field Filtered 0.45um Filter		☒ Ice			1	B	
Quantitative Algae	☐ DTY-QN-C / PKD-QN-C			☐ Ice		☐ Lugols				
Relinquished By:		Date/Time		Number of Coolers Shipped		Received By:		Date/Time		
J. Lee		9/29/21 1600		2						

LIMs QC: BD 10/21/2021

Cyanobacteria Bloom Response Field Data Sheet

RQ-2021- 09- 27-47		Collected By:		B. Davis						
Customer		WQMP		Field Report Prepared By: J. Lee						
Project ID:		BLOOM_RESP		Sampling Agency: FDEP						
Field ID:			Comments:							
NEHAB 0045			Trout river @ Main St							
Matrix:			Collection Equipment:							
Fresh			ortho kit #7							
Tide: ☒ Rising ☐ Falling ☐ Slack ☐ N/A			Coordinates: 30.394090, -81.647410							
			High Tide Time: 1242 Low Tide Time: 0637							
Water Quality										
Date	Time ☒ EST ☐ CEN	D.O. (mg/L)	D.O. (%)	Temp °C	pH (SU)	Sample Depth (m)	Cond. (umho/cm)	Salinity (PPT)	Secchi Disk (m)	Total Depth (m)
9/29/2021	1440	7.30	94.5	27.9	7.81	0.3	3546	1.86	0.8	6.24
	1445	6.88	88.3	27.7	7.70	5.7	4070	2.15		
Bloom Observations										
Algal Bloom Observed? ☒ Yes ☐ No										
Water Surface		☐ Clear	☒ Scum	☐ Globs		☐ Slick				
Water Clarity		☐ Clear	☒ Slightly Turbid	☐ Turbid		☐ Opaque				
Bloom Color		☒ Green	☐ Red	☐ Brown		☐ Other: _____				
Algae Distribution		☒ Suspended in water column		☒ On surface		☐ Other: _____				
Water Odors		☒ Normal	☐ Sewage	☐ Petroleum		☐ Chemical Other: _____				
Parameter Suite		Parameter Methods		Preservation		pH Check	#Bottles Sent to Lab	Bottle Group		
Bloom ID (PT-50ML)		☒ BLOOM-ID		☒ Ice			1	A		
Chlorophyll (BP-1L)		☒ CHLSUITE-W		☒ Ice			1	B		
Toxins (BG-WD250)		☒ W-MCYST-AA		☒ Ice			1	B		
Preserved Nutrients (500mL HDPE)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP		☒ Ice ☒ H2SO4		☒ <2	1	B		
		Lot SA1105060		Exp: 4/30/22		☒ <2				
Filtered Nutrients (P125mL)		☒ W-PO4-F		☒ Field Filtered 0.45um Filter		☒ Ice	1	B		
Quantitative Algae		☐ DTY-QN-C / PKD-QN-C		☐ Ice ☐ Lugols						
Relinquished By:		Date/Time		Number of Coolers Shipped		Received By:		Date/Time		
J. Lee		9/29/21 1600		2						

LIMs QC: BD 10/21/2021