

FIELD EQUIPMENT VERIFICATION (PRE/POST A WEEKLY SAMPLING):

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
77	M. Beeson, J. Strickland	9/28/20	9:00 AM	M. Beeson ; G. Silver	10/1/20	10:15 AM

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature	NIST 3	n/a	n/a	Std Val	NIST 30.0 °C	NIST 28.9 °C	NIST 30.6 °C	NIST	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	2	2	n/a		29.6		30.1			NIST Exp 6/11/21	
	2	3	n/a			28.5		—			
Salinity			3 months	Std Val	Tap water	Salin Std 08/24 date 35.0 ppt	Tap water	Salin Std 8/24 date 35.0 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	2	2	8/17/20		0.60	34.7	0.62	34.8			
	2	3	8/17/20		0.59	34.8	—	—			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	2	2	9/8/20		100.0		101.8				
	2	1	9/28/20		102.1		—				
pH			3 weeks	Std Val	pH 7.00	pH 10.00	pH 7.00	pH 10.00	± 0.1 pH of pH std value	Compare to Manufacturer pH Std value on bottle	
	2	6	9/8/20		7.01	9.97	7.01	9.96			
	2	5	9/8/20		7.01	9.97	—	—			
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 5.57 NTU	BLANK <0.1	LOW 1-10 5.57 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	1	n/a	8/17/20		0.06	5.56	0.08	5.65		5.57	
	NBBF	n/a	8/17/20		0.06	5.73	—	—		5.74	

QA: * Are pre- and post within one week?
* Delay times are ok?
* Other equipment issues?

Jess was here observing.

Team	R2RS	Samplers (Last Name, 1st Initial)	J. Strickland (J. Scott) M. Beeson G. Silver	Meters and Probes ID		
Session	77			HQ40d: 2	2100Q: 1	
Date	9/29/2020			pH: MB 6	DO: 2	Salinity: 2

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Napili Bay RNS200929	N	8:13	26.7	33.5	6.71	101.1 JES	8.10	3.52	3.29	3.58	0	1	0
Pohaku RPO200929	N	8:44	26.9	33.2	6.56	99	8.15	5.36	5.41	5.58	0	0	0
Kaanapali Sh RKS200929	N	9:07	26.9	34.8	6.48	98.5	8.12	3.03	3.13	2.90	0	0	0
Kahekili Beach Two RKT200929	N	9:29	27.4	34.9	6.66	102.3	8.18	1.41	1.47	1.32	0	2	0
Canoe Beach RCB200929	N	9:57	27.6	33.9	6.72	102.9	8.21	6.11	5.78	5.72	0	2	0
Wahikuli RWA200929	N	10:15	27.6	34.1	6.56	100.7	8.19	3.32	3.36	3.19	0	0	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).

Use the back of the form if needed.

RNS - Looks like it rained recently (damp road)

 $\frac{1}{2}$ - 1 ft waves (RNS)> $\frac{1}{2}$ ft waves (RPO)Slight brown water, flat ~~no~~ waves (RKS)

flat, no waves (RKT)

flat, no waves (RCB), sand-bar looks disturbed

flat, no waves but rough shore break (RWA)

* weather: clear skys mauka to makai

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	5.57	57.5	599
Pre-sampling	0.07	5.66	57.3	600
Post-sampling	0.08	5.61	57.4	599

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	6	TMO	G. Silver
Bacteria	-	-	-

Signature (Team Lead):

Grace Silver

Printed Name:

Grace Silver

Team	R2RS	Samplers (Last Name, 1st Initial)	J. Strickland (J. Scott) M. Beeson G. Silver
Session	77		
Date	9/29/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS200929-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:13	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO200929-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:44	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS200929-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:07	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT200929-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:29	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB200929-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:57	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA200929-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

Sediments							
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Grace Silver

Printed Name:

Grace Silver

Team	Polanui	Samplers (Last Name, 1st Initial)	G. Silver	R. Bayly	Meters and Probes ID			
Session	77		M. Beeson	K. Gund	HQ40d: 2		2100Q: 1	
Date	9/30/2020		(J. Scott)		pH: 6	DO: 2	Salinity: 2	

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
505 Front St PFF200930	Y	8:23	27.3	33.2	6.07	92.0	8.05	3.31	3.31	3.42	0	2	0
Lindsey Hale PLH200930	N	8:44	27.6	34.4	5.61	86.1	8.07	13.5	12.5 12.5 JES	13.2	0	1	0
Lahaina Town PLT200930	N	8:59	27.6	34.6	6.63 5.63 JES	102	8.12	1.72	1.64 2.77 JES	1.34	0	2	0
Camp Oluwalu OCO200930	N N JES	9:44 9:29 JES	28.6	35	6.17	96.5	8.06	3.24	3.23	3.43	05 05 JES	150 150 JES	0
Papalaua Pali OPP200930	N	10:00	28.6	35.1	6.57	103	8.14	4.84	5.39	5.05	1	0 0 JES	0
Oluwalu Pier OSF200930	N	9:29	28.1	35.1	6.42	99.8	8.02	4.19	3.84 3.13 JES	4.93	5	0	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).

Use the back of the form if needed.

PFF - 1/2 ft waves w/ ~ 6 surfers by harbor
 PLH - flat, no waves. turbid waters due to fine silt/sedimentation in sand
 PLT - flat, no waves. very turbid waters at shore due to fine silt/sedimentation in sand deposit. (took fourth reading)
 OSF - flat, no waves. found 5 ppl + 1 dog in the water. took 4th reading on turbidity!
 OCO - flat, no waves
 OPP - 1/2 ft waves to flat, several campers/cars at camp

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.08	5.57	57.5	599
Pre-sampling	0.10	5.66	57.4	600
Post-sampling	0.09	5.59	57.5	598

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	0		
Nutrients	6	TMO	G. Silver
Bacteria			

Signature (Team Lead):

Grace Silver

Printed Name:

Grace Silver

weather: partly cloudy skys in Lahaina;
 over-cast skys heading towards central mavi.

Team	Polanui	Samplers (Last Name, 1st Initial)	G. Silver	R. Bayly
Session	77		M. Beeson	K. Gund
Date	9/30/2020		(J. Scott)	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF200930-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:23	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH200930-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:44	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT200930-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:59	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO200930-N-1	Camp Oluwalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:44	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP200930-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OSF200930-N-1	Oluwalu Pier	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:29	125ml	" "	

Sediments							
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):



Printed Name:

Grace Silver

Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L. Beeson, M Silver, G. C. Heheman	Meters and Probes ID		
Session	77			HQ40d: 2	2100Q: 1	
Date	10/01/2020			pH: 6	DO: 2	Salinity: 2

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Honolua Bay RHL201001	N	8:00A	26.3	33.6	6.55	98.1	8.11	56.9	64.0	60.7	0	1 0 _{GS}	0
Oneloa Bay RON201001	N	8:38	27.3	35.1	6.58	101.0	8.16	1.46	1.57	1.49	0	0	0
Kapalua Bay RFS201001	N	8:55	27.4	34.4	6.73	103.2	8.16	4.71	4.70	4.90	1	4	0
Ka'opala Bay RKO201001	N	9:20	26.8	34.2	6.55	99.2	8.08	9.33	9.15	9.20 GS 10.30	2	0	0
Kahana Village RKV201001	N	9:40	27.9	34.9	6.96	107.7	8.21	6.56	6.49 7.51 GS	6.74	0	0	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).
Use the back of the form if needed.

RHL: Big waves
4th reading for turbidity: 53.1 NTU

*Note: West Maui fire by Kapalua Airport yesterday

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.09	5.57	57.5	599
Pre-sampling	0.07	5.54	57.4	600
Post-sampling	0.08	5.65	57.6	599

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	TMO	G. Silver
Bacteria	-	-	-

Signature (Team Lead):

Grace Silver

Printed Name:

Grace Silver

Team	R2RS	Samplers (Last Name, 1st Initial) Hutchings, L. Hehemann, C. Beeson, M. Silver, G.
Session	77	
Date	10/01/2020	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL201001-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON201001-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:38	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS201001-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO201001-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV201001-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

Sediments							
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Grace Silver

Printed Name:

Grace Silver