

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
56	Strickland, J, Maxwell, C Bauker, B	5/13/19	10:20 am	Bauker, B ; Strickland, J	5/17/19	10:30 Am

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature	NIST 2	n/a	n/a	Std Val	NIST 24.7 °C	NIST 23.8 °C	NIST 24.5 °C	NIST °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	1	3	n/a		24.4		24.9			PROBE #3 READING HIGHER THAN NIST. RETEST NIST-24.7, #3-24.6°	
	1	2	n/a			23.6		—			
Salinity			3 months	Std Val	Tap water	Salin Std 11/26/18 date 35 ppt	Tap water	Salin Std 11/26/18 date 35 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	1	3	2004 gm 3/11/19		0.04	34.8	0.04	34.7		used Hach standard	
	1	2	3/11/19		0.04	34.8	—	—			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	1	1	5/13/19		100.0		103.0			parts changed or calibrated	
	1	2	95 cm 8/6/18		95.3		—				
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	
	1	5	5/13/19		7.00	10.01	7.07	10.09			
	1	6	5/13/19		7.00	10.01	—	—			
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 6.60 NTU	BLANK <0.1	LOW 1-10 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	3	n/a	3/12/19		0.05	6.58	0.03	6.61			
	—	n/a			—	—	—	—			

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

Team	R2RS	Samplers (Last Name, 1st Initial)	FREIDEL, T. JARMAKANI, B. MORGAN, T.	Meters and Probes ID			
Session	56			HQ40d:	1	2100Q:	3
Date	5/14/19			pH:	5	DO:	1

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 RNS190514	NA	8:15	26.1	34.9	6.82	101.8	8.18	2.21	2.46	2.49	3	5	NA
Pohaku RPO190514	NO	8:45	26.7	34.0	6.90	102.3	8.20	6.78	7.18	7.48	2	4	NA
Kaanapali Sh RKS190514	-	9:02	26.4	35.7	6.79	102.5	8.17	5.16	5.28	5.11	6	7	NA
Canoe Beach RCB190514	-	9:22	26.1	34.7	6.83	102.1	8.19	6.51	7.47	7.35	0	2	NA
Wahikuli RWA190514	-	9:42	26.5	34.6	6.82	102.5	8.22	17.4	17.4	16.9	0	0	-

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

WINDY, WITH choppy surf

RNS - sprinkling.

RWA - STRONG WAVES.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	6.68	57.1	575
Pre-sampling	0.07	6.68	57.6	576
Post-sampling	0.03	6.64	57.7	575

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	LLHS	C Maxwell
Bacteria	-	-	-

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Catherine Maxwell

Team	R2RS	Samplers (Last Name, 1st Initial)	Freiburg, T., Jarmakani, B., Morgan, T.
Session	56		
Date	5/14/19		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS190514-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO190514-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS190514-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:02	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB190514-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:22	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA190514-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:42	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):

Printed Name:

Catherine Maxwell

Catherine Maxwell

Team	Polanui	Samplers (Last Name, 1st Initial)	K. Horris R. Bayler J. Maxwell	Meters and Probes ID		
Session	56			HQ40d: 1	2100Q: 3	
Date	5/15/2019			pH: 5	DO: 1	Salinity: 3

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 PFF190515	Y	8:14	25.7	35.6	6.22	93.1	8.09	2.02	2.00	1.89	1	3	0
Lindsey Hale PLH190515	N	8:35	26.0	35.3	6.00	90.0	8.08	1.80	1.51	1.41	0	15	0
Lahaina Town PLT190515	—	8:53	26.2	35.1	6.50	97.8	8.14	2.02	1.80	2.17	2	34	0
Olowalu Pier OSF190515	—	9:24	26.4	35.9	6.71	101.6	8.13	3.86	4.75	4.87	0	0	0

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

Use the back of the form if needed.

minus
- low tide

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.03	6.60	57.1	575
Pre-sampling	0.25	6.69	57.7	576
Post-sampling	0.04	6.67	57.8	575

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	—		
Nutrients	4	LLHS	B. BANKER
Bacteria	—		

Signature (Team Lead):

B.H. Banker

Printed Name:

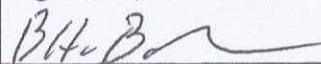
BRUCE H. BANKER

Team	Polanui	Samplers (Last Name, 1st Initial) HARRIS, K BAYLER, R MAXWELL, J
Session	56	
Date	5/15/2019	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF190515-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:14	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH190515-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT190515-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:53	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OSF190515-N-1	Olowalu Pier	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:24	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):



Printed Name:

BRUCE H. BAKER

Team	Olowalu	Samplers (Last Name, 1st Initial)	BRUCE BANKER JAMES STRICKLAND	Meters and Probes ID			
Session	56			HQ40d:	1	2100Q:	3
Date	5/16/2019			pH:	5	DO:	1

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
Martin Hale OPM190516	—	07:20	25.8	35.9	5.85	87.8	8.08	1.36	1.24	1.36	⊗	⊗	⊗
Camp Olowalu OCO190516	—	07:40	26.2	35.5	6.54	98.6	8.07	10.6	12.2	10.7	⊗	⊗	⊗
Ukumehame OUB190516	—	07:55	26.1	35.9	6.72	101.5	8.15	5.87	5.94	6.06	⊗	⊗	⊗
Papalaua Beach OPB190516	—	08:20	26.1	36.0	7.07	106.7	8.20	3.09	3.24	3.31	⊗	⊗	⊗
Papulua Pali OPP190516	—	08:40	26.2	35.9	6.94	104.9	8.20	1.61	1.91	2.00	⊗	⊗	⊗

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

OPM- VERY LOW TIDE

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.60	57.1	575
Pre-sampling	0.03	6.59	57.6	576
Post-sampling	0.03	6.58	57.8	575

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	—		
Nutrients	5	LLHS	B. BANKER
Bacteria	—		

Signature (Team Lead):

BH.B

Printed Name:

BRUCE H. BANKER

Team	Olowalu	Samplers (Last Name, 1st Initial)	BANKER, B STRICKLAND, J
Session	56		
Date	5/16/2019		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
OPM190516-N-1	Martin Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	07:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO190516-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	07:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OUB190516-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	07:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPB190516-N-1	Papalaua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP190516-N-1	Papulua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:40	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):

B.H. Banker

Printed Name:

BRUCE H. BANKER

Team	R2RN	Samplers (Last Name, 1st Initial) BANKER, B STICKLAND, J HEHENANN, C	Meters and Probes ID				
Session	56		HQ40d:	1	2100Q:	3	
Date	5/17/19		pH:	5	DO:	1	Salinity:

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 RHL190517	Y	07:53	23.9	23.0	7.14	96.3	8.19	4.24	4.96	4.86	6	7	0
Oneloa Bay RON190517	-	08:39	25.4	35.5	6.98	102.8	8.22	0.33	0.36	0.32	2	0	0
Kapalua Bay RFS190517	-	09:08	25.2	33.1	6.99	102.3	8.13	1.75	2.16	1.77	19	41	0
Ka'opala Bay RKO190517	N	09:30	25.3	34.4	6.80	102.0	8.16	6.75	6.56	6.68	0	3	0
Kahana Village RKV190517	N A C.H.	10:08	26.1	34.4	6.46	96.6	8.16	5.45	5.50	6.15	1	5	0

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

RHL- LIGHT RAIN, HEAVY STREAM FLOW

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.03	6.60	57.1	575
Pre-sampling	0.05	6.61	57.5	576
Post-sampling	0.03	6.61	57.6	575

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	LLHS	B. BANKER
Bacteria	-	-	-

Signature (Team Lead):

B.H. Banker

Printed Name:

BRUCE H. BANKER

Team	R2RN	Samplers (Last Name, 1st Initial)	BANKER, B STRICKLAND, J HEHEMANN, C
Session	56		
Date	5/17/19		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL190517-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	07:53	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON190517-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:39	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS190517-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO190517-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV190517-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:08	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):

BH. Banker

Printed Name:

BRUCE H. BANKER