

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
64	Banker, B, Maxwell, C	10/28/19	9:54am	Maxwell, C.	11/1/19	10:40am

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 21.1 °C	NIST 20.9 °C	NIST 23.9 °C	NIST 20.4 °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	1	3	n/a		20.8		23.7			New NIST in use - #3 - 1st time	
	1	2	n/a			20.7		20.3			
Salinity			3 months	Std Val	Tap water 9/20/19 date 34.3 ppt	Salin Std 9/20/19 date 34.3 ppt	Tap water 0.05	Salin Std 34.1	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	1	3	10/7/19		0.05	34.3	0.05	34.1			
	1	2	10/7/19		0.05	34.7					
Dissolved Oxygen			1 year	Std Val	100%	100%	100%	100%	± 5 %		
	1	1	5/13/19		102.2 %	102.8 %	98.5 %	98.5 %			
	1	2	8/5/19		98.5 %						
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	10/28/19		7.03	10.05	7.06	10.07			
	1	6	10/28/19		7.03	10.05					
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	10/28/19		0.06	5.57	0.04	5.60			
		n/a									

QA: * Are pre- and post within one week? 10/28/19 Rm temp at beg testing 19.9 °C
* Delay times are ok? Rm temp at end testing 20.5 °C
* Other equipment issues?

Team	R2RS	Samplers (Last Name, 1st Initial)	Kranberg, J / Jarmakani, B Miller, T Fallon, M.	Meters and Probes ID			
Session	64			HQ40d:	1	2100Q:	1
Date	10/29/19			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 RNS191029	N	8:24	26.8	36.0	6.72	103.2	8.13	1.44	1.54	1.71	0	4	0
Pohaku RPO191029	N	8:55	26.2	34.3	6.80	102.4	8.11	11.5	11.1	11.0	1	1	0
Kaanapali Sh RKS191029	—	9:22	27.5	36.1	6.60	102.6	8.16	3.74	3.40	3.17	7	6	0
Canoe Beach RCB191029	N	9:46	27.8 ^{27.7} JK	34.6	6.83	105.6	8.20	1.41	1.18	1.24	11	5	0
Wahikuli RWA191029	N	10:09	27.7	35.3	6.59	102.3	8.18	3.20	3.77	3.21	1	5	0

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

RCB: 4 people straight out / close proximity to sample
Site in water.
RWA: 4th Turbidity Sample 3.08

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	5.57	58.9	635
Pre-sampling	0.09	5.61	59.2	636
Post-sampling	0.06	5.57	58.9	633

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Catherine Maxwell

Team	R2RS	Samplers (Last Name, 1st Initial)	Kranberg, J. / Jarmakeani, B. Miller, T. Fallon, M.
Session	64		
Date	10/29/19		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS191029-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:24	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO191029-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS191029-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:22	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB191029-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:46	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA191029-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:09	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):

Catherine Maxwell

Printed Name:

Catherine Maxwell

Team	Polanui	Samplers (Last Name, 1st Initial)	Bayly, R Maxwell, J Harris, K Tyler, L	Meters and Probes ID			
Session	64			HQ40d:	2100Q:		
Date	10/30/2019			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
505 Front St PFF191030	Y	8:15	27.2	35.9	6.26	96.8	8.05	3.88	4.28	4.11	0	0	0
Lindsey Hale PLH191030	N	8:41	27.2	35.7	5.99	92.5	8.06	14.5	14.8	15.2	0	7	0
Lahaina Town PLT191030	—	8:59	27.7	35.6	5.68	88.4	8.04	11.4	10.8	10.8	1	3	0
Olowalu Pier OSF191030	—	9:31	27.8	36.1	6.68 8.17	104.3 104.5	8.10	1.12	1.28	1.15	0	0	0

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

DO NOT TAKE NUTRIENT SAMPLE FROM OLOWALU PIER THIS EVENT
(Will Only Be Taken Quarterly)

H240D-1 instrument turned off w/out
prompt. Reset date + back on. Okay
(HAPPENED 2ND TIME @ PLT SITE)

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	5.57	58.9	635
Pre-sampling	0.08	5.58	58.9	637
Post-sampling	0.09	5.56	59.0	633

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	3	LLHS	BIT-BANKER
Bacteria	-	-	-

Signature (Team Lead):

BIT-BANKER

Printed Name:

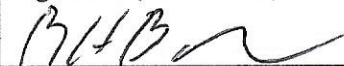
BRUCE H-BANKER

Team	Polanui	Samplers (Last Name, 1st Initial)	BAYLY, R. MAXWELL, J. HARRIS, K. TYLER, L.
Session	64		
Date	10/30/2019		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF191030-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 µm disposable filters	
PLH191030-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:41	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 µm disposable filters	
PLT191030-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:59	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 µm 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. BARKER

Team	Olowalu	Samplers (Last Name, 1st Initial)	Ranieri, Lindsay Grund, Kristy Napone, Richard	Meters and Probes ID			
Session	64			HQ40d:	1	2100Q:	1
Date	10/31/2019			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 OPM191031	N	7:10	26.8	36.1	5.95	91.6	8.04	8.92	10.3	9.91	0	0	0
Camp Olowalu OCO191031	N	7:30	27.4	36.0	6.09	94.6	8.09	3.45	3.85	3.92	0	0	0
Ukumehame OUB191031	N	7:45	27.6	36.2	6.25	97.4	8.09	21.7	22.0	22.2	0	0	0
Papalaua Beach OPB191031	N	7:56	27.6	36.2	6.31	98.4	8.11	4.74	4.89	4.99	0	0	0
Papulua Pali OPP191031	N	8:08	27.7	36.1	6.40	99.7	8.11	11.1	11.3	11.2	0	1	0

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

DO NOT TAKE NUTRIENT SAMPLES THIS EVENT

(Will Only Be Taken Quarterly)

NEW TURBIDITY SAMPLE CELL IN USE

FIRST TURBIDITY SAMPLE BOTTLED WAS SCRATCHED.

WE USED THE BACKUP GLASS BOTTLE.

SCRATCHED CELL DISCARDED

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.57	58.9	635
Pre-sampling	0.05	5.63	59.0	634
Post-sampling	0.05	5.59	59.0	633

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	0	N/A	N/A
Nutrients	0	N/A	N/A
Bacteria	0	N/A	N/A

Signature (Team Lead):

Bill B

Printed Name:


BRUCE H. BARKER

Team	Olowalu	Samplers (Last Name, 1st Initial)	RANIERI, L GUMD, K NOPOKON, R
Session	64		
Date	10/31/2019		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							

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. BARKER

Team	R2RN	Samplers (Last Name, 1st Initial) Strickland, J Hutchings, L Berg, L Heikemann, C	Meters and Probes ID				
Session	64		HQ40d:	1	2100Q:	1	
Date	11/1/19		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 RHL191101	N	7:50	26.	35.9	6.25	94.7	8.14	3.61	3.93	3.68	0	0	0
Oneloa Bay RON191101	✓	8:35	27.0	36.0	6.71	103.6	8.15	1.03	.99	1.10	1	1	0
Kapalua Bay RFS191101	-	8:55	27.5	35.9	6.47	100.2	8.12	1.47	1.39	1.31	9	5	0
Ka'opala Bay RKO191101	N	9:20	27.2	35.7	6.24	96.4	8.10	4.41	4.48	4.00	1	0	0
Kahana Village RKV191101	-	9:45	27.5	35.7	6.48	100.5	8.11	10.5	10.7	10.8	0	10	0

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

RHL - eel & fish at collection site
RKV - Kahana Reef Seawall Construction

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.57	58.9	635
Pre-sampling	0.06	5.55	59.0	633
Post-sampling	0.04	5.60	58.9	633

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Catherine J Maxwell

Printed Name:

Catherine J Maxwell

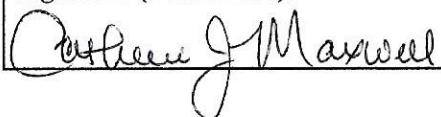
Team	R2RN	Samplers (Last Name, 1st Initial)	Stackland, J Hutchings, L Berg, L Hehemann, C
Session	64		
Date	11/1/19		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL191101-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON191101-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS191101-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	
RKO191101-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	
RKV191101-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:45	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 J Maxwell