

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

Session No:	Verifiers (pre-sampling):			Pre Date:	Pre Time:	Verifiers (post-sampling):		Post Date:	Post Time:
68	Cathy Maxwell	Bruce Banker		1/27/20	9:45 am	Bruce Banker	Cathy Maxwell	1/31/20	10:30

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value	POST: Verification Value	Acceptable Range	Comments/ Notes	QA?
Temperature	NIST	n/a	n/a	Std Val	NIST 23.1 °C	NIST 22.2 °C	NIST 23.0 °C	NIST °C	± 0.6 °C of NIST Compare to NIST Std value in tap water
	1	3	n/a		22.7		22.7		
	1	2	n/a		22.0				
Salinity			3 months	Std Val	Tap water 9/21/19 date 34.3 ppt	Salin Std 1/21/20 date 34.2 ppt	Tap water 1/21/20 date 34.2 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle
	1	3	1/6/20		0.05	34.4	0.05	34.1	
	1	2	1/6/20		0.05	34.4			
Dissolved Oxygen			1 year	Std Val	100%	100%	± 5 %		
	1	1	5/13/19		101.0%	101.5%			
	1	2	8/5/19		98.0%				
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	1/27/20		7.03	10.05	7.06	10.07	
	1	6	1/27/20		7.03	10.06	7.07		
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 5.59 NTU	BLANK <0.1	LOW 1-10 5.59 NTU	± 0.18 NTU Low 1-10 Compare to Gel LOW 1-10 Std Calibration value
	1	n/a	01/27/20		0.06	5.59	0.05	5.60	
		n/a							

QA: * Are pre- and post within one week?

* Delay times are ok?

* Other equipment issues?

Team	R2RS	Samplers (Last Name, 1st Initial)	Brunk Tarnakani/ Strickland, J Bunker, B						Meters and Probes ID			
Session	68								HQ40d:	/	2100Q: /	
Date	1/28/20				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
Napili Bay RNS200128	NA	8:16	24.6	35.8	6.89	100.8	8.15	0.57	0.60	0.62	4	1	0
Pohaku RPO200128	NA	8:44	24.7	35.1	6.89	100.7	8.13	8.91	8.72	9.00	0	0	0
Kaanapali Sh RKS200128	NA	9:10	24.7	35.8	6.83	100.4	8.15	3.26	3.33	3.49	0	5	0
Canoe Beach RCB200128	~	9:43	25.4	35.3	6.84	101.4	8.19	1.75	2.05	2.31	2	6	0
Wahikuli RWA200128	NA	10:01	25.2	34.9	6.97	101.4	8.20	3.35	3.86	3.66	0	0	0

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

Use the back of the form if needed.

NB - ocean calm w/ occ. 1/2 ft wave/clear sunny/still
 RKS - ocean calm, clear, sun & haze

RCB - High bacteria level posted
 by DOH. (posted 1/22/2020)

RCB - 4± Turbidity reading 2.36 NTU

RWA - 1-2 ft waves on shore - lots of sand in water
 ~ close to shore

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	5.59	58.7	640
Pre-sampling	0.07	5.51	58.9	639
Post-sampling	0.05	5.56	58.9	637

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

Team	R2RS	Samplers (Last Name, 1st Initial)	Brenda Jarmakani Strickland, J. Banker, B			
Session	68					
Date	1/28/20					

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS200128-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:16	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO200128-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	
RKS200128-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB200128-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:43	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA200128-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:01	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)	<i>Maxwell, J Bayley, R Harris, K</i>						Meters and Probes ID				
Session	68								HQ40d:	/	2100Q:	/	
Date	01/29/2020								pH:	5	DO:	/	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
505 Front St PFF200129	Y	8:12	24.2	35.5	6.30	91.7	8.10	5.59	5.40	5.51	0	1	4
Lindsey Hale PLH200129	N	8:34	24.1 35.4	35.4	6.40	92.8	8.09	9.94	9.82	9.80	0	2	0
Lahaina Town PLT200129	—	8:53	24.5	35.1	6.11	89.1	8.07	10.1	9.36	9.01	3	4	0
Olowalu Pier OSF200129	—	9:30	24.6	35.8	6.70	98.3	8.07	2.38	2.39	2.40	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)

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.59	58.7	640
Pre-sampling	0.07	5.49	58.8	639
Post-sampling	0.05	5.50	58.9	638

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

BLB

Printed Name:

Bruce H. Banker

Team	Polanui	Samplers (Last Name, 1st Initial)	<i>MAXWELL, J HARRIS, K BAILEY, R</i>				
Session	68						
Date	01/29/2020						

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF200129-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 µm disposable filters	
PLH200129-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:34	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 µm disposable filters	
PLT200129-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:53	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):

BH.Baker

Printed Name:

Bruce H. Baker

Team	Olowalu	Samplers (Last Name, 1st Initial)	GUND, K NORONEN, R RANIERI, L						Meters and Probes ID			
Session	68								HQ40d:	1	2100Q:	1
Date	01/30/2020		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
Martin Hale OPM200130	N	7:15	23.8	35.7	6.09	88.1	8.05	5.37	5.29	5.17	0
Camp Olowalu OCO200130	N	7:35	24.7	35.8	6.55	96.4	8.08	3.27	3.40	3.44	4
Ukumehame OUB200130	N	7:49	24.6	35.8	6.46	94.9	8.12	14.6	15.5	15.4	0
Papalaua Beach OPB200130	N	8:01	24.8	35.9	6.73	99.2	8.14	6.51	5.80	6.23	0
Papalaua Pali OPP200130	N	8:10	25.0	35.8	6.68	98.8	8.12	11.9	13.0	12.7	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)

Large group of kayakers at site 2 - Camp Olowalu

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.59	50.7	640
Pre-sampling	0.07	5.50	58.9	642
Post-sampling	0.08	5.50	59.1	639

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):

Bruce H. Bunker

Printed Name:

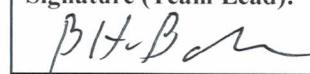
BRUCE H. BUNKER

Team	Olowalu	Samplers (Last Name, 1st Initial)	GUNDO, K NAPOMEN, R RAMIER, L			
Session	68					
Date	01/30/2020					

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

		<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. BAKKEN

Team	R2RN	Samplers (Last Name, 1st Initial)	Berg, L. Miller, T. Strickland, J						Meters and Probes ID			
Session	68								HQ40d:	1	2100Q: 1	
Date	1/31/20								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
Honolua Bay RHL200131	N	8:05	23.3	34.9	6.58	94	8.12	7.35	7.90	8.68	0	0	0
Onealoa Bay RON200131	N	8:48	24.7	35.9	6.94	102.3	8.15	0.67	0.73	0.69	1	1	0
Kapalua Bay RFS200131	N	9:14	24.9	35.2	6.87	101.3	8.14	3.42	3.24	3.23	11	23	0
Ka'opala Bay RKO200131	N	9:38	24.5	35.0	6.87	100.3	8.12	12.0	13.0	12.6	3	1	0
Kahana Village RKV200131	N	10:08	25.0	35.4	7.12	106.1	8.17	4.90	5.19	5.02	1	7	0

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

Use the back of the form if needed.

CLEARED TURBIDITY CELL IN USE ✓

- RHL → Turbidity #4: 8.98
- RON - Avg

- RKO Turbidity: It is what it is.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.59	58.7	640
Pre-sampling	0.06	5.52	58.9	639
Post-sampling	0.05	5.60	59.0	637

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	UHHS	C. MAXWELL
Bacteria	-	-	-

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Cathy Maxwell

Team	R2RN	Samplers (Last Name, 1st Initial)	Berg, L. Miller, T. Struckland, J.			
Session	68					
Date	1/31/20					

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL200131-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON200131-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:48	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS200131-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:14	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO200131-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:38	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV200131-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):

Catherine Maxwell

Printed Name:

Cathy Maxwell