

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
65	Cathy Maxwell, Bruce Banker	11/18/2019	10:00 am	C Maxwell, B Banker	11/22/19	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 21.4 °C	NIST 20.9 °C	NIST 22.3 °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water
	2	2	n/a		21.1	22.0			
	2	3	n/a		20.6				
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 9/20/19 date 34.3 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle
	2	2			0.05	34.7	0.04	34.5	
	2	3			0.05	34.3			
Dissolved Oxygen			1 year	Std Val	100%	100%	± 5 %		
	2	2			97.5%	98.2%			
	2	1			102.1%				
pH			3 weeks	Std Val	pH 7.00	pH 10.00	pH 7.00	± 0.1 pH of pH std value	Compare to Manufacturer pH Std value on bottle
	2	6	11/18/19		7.03	10.05	7.06	10.09	
	2	5	11/18/19		7.04	10.06			
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 5.72 NTU	BLANK <0.1	LOW 1-10 5.72 NTU	± 0.18 NTU Low 1-10
	NIBF	n/a	11/18/19		0.05	5.72	0.05	5.81	
		n/a							

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

* Delay times are ok?

* Other equipment issues?

Team	R2RS	Samplers (Last Name, 1st Initial)	Jarmakani, B - Abramaitis A, Morgan T							Meters and Probes ID				
Session	65									HQ40d:	2	2100Q: NBBF		
Date	11/19/19									pH:	6.6	DO:	2	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
Napili Bay RNS191119	NO	8:20	26.9	36.0	6.38	97.8	8.15	1.33	1.40	1.39	Clear/ 1 3 people 0
Pohaku RPO191119	NO	8:42	27.1	35.6	6.27	96.1	8.18	10.3	10.0	9.70	Clear 0 3 people 0
Kaanapali Sh RKS191119	NA	9:18	26.9	36.0	6.46	99.0	8.17	3.56	3.39	3.33	Clear 0 7 people 1 monk seal 1 raft 0
Canoe Beach RCB191119	NA	9:33	27.8	36.0	6.45	100.4	8.22	1.26	1.27	1.39	Clear 1' shore break Clear, sunny, 1 person 0 1' shore break 0
Wahikuli RWA191119	NA	9:51	27.7	36.2	6.33	98.5	8.24	7.7	7.21	7.23	Clear 0 Sunny 1' wave 1/2-1' wave 8 people Rock occasional high sets 0

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

Use the back of the form if needed.

NB - 2 SUP/ 3 people on beach/ 1 swimmer/ 1 life prescr/
Clouds & some sun - 3-5ft waves shore break

RPO - 3 people on beach high tide to drain outlet
- low lying clouds, clear, 1' wave

RKS - Monk seal on Beach - people observing
Clear/ 1' waves.

HQ40D - battery at half

RCB - Clear sunny

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.72	59.3	619
Pre-sampling	0.05	5.78	59.8	618
Post-sampling	0.05	5.76	59.9	618

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)	Jarmalcani, B
Session	65		Abromaitis, A
Date	11/19/19		Morgan, T

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS191119-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO191119-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:42	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS191119-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB191119-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:33	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA191119-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:51	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)	BAILEY, R HARRIS, K TYLER, L						Meters and Probes ID			
Session	65								HQ40d:	2	2100Q:	NBBF
Date	11/20/2019								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 PFF191120	Y	8:25	27.4	34.3	6.12	93.5	8.11	2.25	3.12	2.92	0
Lindsey Hale PLH191120	/	8:50	27.2	36.1	6.01	92.3	8.13	6.57	6.12	6.26	0
Lahaina Town PLT191120	/	9:09	27.3	35.8	5.96	91.7	8.12	13.1	15.3	15.9	0
Olowalu Pier OSF191120	/	9:40	27.4	36.4	6.26	96.7	8.09	1.43	1.60	1.43	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)

505 - GROUND STILL WET from RECENT RAIN
HOMELESS PERSON CAMPING ON SITE

H Th NTU Discrepancy - PLT

OSF - HIGH TDE UP TO PIER

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.72	59.3	619
Pre-sampling	0.06	5.77	60.0	617
Post-sampling	0.05	5.76	59.9	618

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

BRUCE H. BANKER

Team	Polanui	Samplers (Last Name, 1st Initial)	BARTF, R HARRIS, K TYLER, L			
Session	65					
Date	11/20/2019					

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF191120-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 µm disposable filters	
PLH191120-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 µm disposable filters	
PLT191120-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:09	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): *Bruce H-Banken* Printed Name: *Bruce H-Banken*

Team	Olowalu	Samplers (Last Name, 1st Initial)	SUND, K NOPONEN, R					Meters and Probes ID				
Session	65							HQ40d: 2		2100Q: NBBF		
Date	11/21/2019		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
Martin Hale OPM191121	N/A	0710	26.3	36.3	5.40	81.9	8.04	1.67 1.38	1.80	1.72	0	0	0
Camp Olowalu OCO191121	N/A	0733	26.5	36.3	6.03	91.7	8.10	1.94	2.01	1.88	0	1	0
Ukumehame OUB191121	N/A	0748	26.0	36.4	6.23	94.1	8.11	11.7	11.6	12.8	0	0	0
Papalaua Beach OPB191121	N/A	0805	26.1	36.4	6.53	98.7	8.15	4.39	4.22	4.66	0	0	0
Papalaua Pali OPP191121	N/A	0816	26.5	35.9	6.40	97.2	6.31 7.17	6.69	6.79	6.11	0	0	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)

- 4 turbidity readings at 1st site

WIND SHAKING CAR @ UKUMEHAME

TOOK 4TH READ FOR VALIDATION OF 3RD READ

> NO CHANGE

OPP - NO pH TAKEN

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.72	59.3	619
Pre-sampling	0.08	5.76	60.3	619
Post-sampling	0.05	5.77	60.0	619

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):

BH-B

Printed Name:

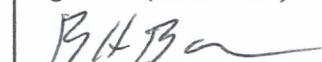
BRUCE BAKER

Team	Olowalu	Samplers (Last Name, 1st Initial)	GUND, K NUOPONEN, R			
Session	65					
Date	11/21/2019					

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)	Hutchings, L Berg, L Barker, B							Meters and Probes ID			
Session	65									HQ40d:	2	2100Q: NBBP	
Date	11/22/19									pH:	6	DO:	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 RHL191122	Y	7:50	25.5	34.8	6.28	93.3	8.13	43.4	41.6	43.8	0 3 0
Oneloa Bay RON191122	/	8:25	23.6	36.2	6.50	98.6	8.19	1.35	1.21	1.23	0 3 0
Kapalua Bay RFS191122	/	8:45	24.2	35.3	6.25	94.2	8.14	1.22	1.20	1.23	0 8 0
Ka'opala Bay RKO191122	N	9:10	26.0	35.3	6.44	96.7	8.13	6.40	7.85	7.27	0 0 0
Kahana Village RKV191122	/	9:25	25.8	35.4	6.69	100.3	8.14	8.82	8.16	8.80	2 0 0

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

Use the back of the form if needed.

Rain last night - RHL
outside surf

Large surf, windy - RON
rainning at end of testing

4th sample reading NTU 1.22 RFS

4th Reading RKO - 6.16

4th Reading RKV - 8.82

lots of debris in water

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.72	59.3	619
Pre-sampling	0.08	5.78	59.9	619
Post-sampling	0.05	5.81	59.9	620

CHAIN OF CUSTODY INFORMATION

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

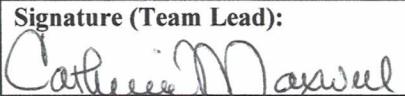
Signature (Team Lead):

Printed Name:

Team	R2RN	Samplers (Last Name, 1st Initial)	HUTCHINGS, L			
Session	65		BIERG, L.			
Date	11/22/19		BANKER, B			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL191122-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	07:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON191122-N-1	Onealoa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS191122-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO191122-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV191122-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:25	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