

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
62	Maxwell, C, Banker, B	9/16/19	10:00 am	Banker, B, Maxwell, C	4/20/19 9/20/19 ESM	11:00 am

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature	NIST Z	n/a	n/a	Std Val	NIST 21.7°C	NIST 21.3 °C	NIST 26.0 °C	NIST °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	21	3	n/a		21.4		25.7				
	21	2	n/a			21.2					
Salinity			3 months	Std Val	Tap water	Salin Std 10/22 date 35.0 ppt	Tap water	Salin Std 10/22 date 35.0 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle Used Hach saln std due to expire 10/22 - no date for opening	
	1	3	6/24/19		0.05	35.1	0.05	34.9			
	1	2	6/24/19		0.05	35.4					
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	1	1	5/13/19		102.0		102.8%				
	1	2	4/5/19		99.5						
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	9/16/19		7.01	10.05	7.04	10.09			
	1	6	9/16/19		7.01	10.05					
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 6.36 NTU	BLANK <0.1	LOW 1-10 6.36 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	3	n/a	6/24/19		0.03	6.47	0.05	6.47			
		n/a									

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

Team	R2RS	Samplers (Last Name, 1st Initial) FREIBERG, T. MORGAN, T. JARMAKAN, B. ABZOMATIS, A.	Meters and Probes ID				
Session	62		HQ40d:	1	2100Q:	3	
Date	9/17/19		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
Napili Bay RNS190917	NA	8:15	27.2	35.3	6.62	102.1	8.11	3.25	3.07	3.26	4	6	NA
Pohaku RPO190917	NO	8:35	27.6	35.5	6.54	101.5	8.14	8.48	8.65	8.80	1	1	NA
Kaanapali Sh RKS190917	-	8:55	28.0	36.0	6.50	101.7	8.15	2.05	2.45	2.65	3	4	NA
Canoe Beach RCB190917	-	9:15	28.2	35.6	6.57	103.1	8.20	1.46	1.65	1.54	0	8	NA
Wahikuli RWA190917	-	9:35	28.2	35.3	6.58	103.1	8.21	1.56	1.62	1.63	0	0	NA

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

RNS - calm small/zero waves -
 RPO - small shore break

RKS - more sand on beach than usual. 30'

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.03	6.36	56.8	585
Pre-sampling	0.05	6.41	56.9	585
Post-sampling	0.03	6.44	56.9	585

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

Catherine Maxwell

Catherine Maxwell

Team	R2RS	Samplers (Last Name, 1st Initial)	Freiberg, T. Jarmakani, B Abrameitis, A	Morgan, T
Session	62			
Date	9/17/19			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS190917-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	
RPO190917-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS190917-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB190917-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA190917-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:35	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)	Boyle, B. Maxwell, J. Tyler, L.	Meters and Probes ID			
Session	62			HQ40d:	1	2100Q:	3
Date	09/18/2019			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 PFF190918	Y	8:15	28.2	35.5	6.40	101.0	8.08	4.50	4.54	4.91	8	0	0
Lindsey Hale PLH190918	N*	8:45	27.8	35.8	6.40	99.7	8.11	24.5	25.4	24.9	0	8	0
Lahaina Town PLT190918	N/A	9:05	28.1	35.5	5.90	92.2	8.07	11.5	11.5	11.8	0	2	0
Olowalu Pier OSF190918	N/A	9:37	28.4	36.4	7.17	113.1	8.18	1.27	1.57	1.40	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)

STEADY FLOW OF STREAM 505 FRONT ST
(REGULAR)

* PLH - culvert blocked by sand

5% CLOUD COVERAGE

No Wind

OSF - waves (0.5') passing over reef b/c of
high tide

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.03	6.36	56.8	585
Pre-sampling	0.05	6.41	56.9	584
Post-sampling	0.03	6.47	57.2	584

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

BH-B

Printed Name:

BANKER H. BANKER

Team	Polanui	Samplers (Last Name, 1st Initial)	BAYLY, R MAXWELL, J. TYLER, L
Session	62		
Date	09/18/2019		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF190918-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH190918-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT190918-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:05	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. BARKER

Team	Olowalu	Samplers (Last Name, 1st Initial)	GUND, K RANIERI, L	Meters and Probes ID			
Session	62			HQ40d:	1	2100Q:	3
Date	09/19/2019			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 OPM190919	N	7:16	27.5	36.3	6.11	94.3	8.07	10.4	10.4	11.3	0	0	0
Camp Olowalu OCO190919	N	7:35	28.6	36.3	6.29	99.6	8.09	9.51	9.60	10.1	3	5	0
Ukumehame OUB190919	N	7:52	27.7	36.3	6.55	102.1	8.12	22.4	24.0	22.8	10	0	0
Papalaua Beach OPB190919	N	8:08	28.1	36.3	6.48	101.7 100.8	8.11	4.55	5.09	5.09	0	0	0
Papulua Pali OPP190919	N	8:22	28.3	36.2	6.54	102.8	8.10	8.60	8.69	8.83 KVG 9.49	1	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)

HQ sensors took a little time to connect properly at site 4, it also turned off in the middle of a read.
Took 4th read Turbidity at site 5 after big truck passed during read.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.03	6.36	56.8	585
Pre-sampling	0.07	6.42	56.9	584
Post-sampling	0.05	6.46	57.2	584

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):

Blk Bol

Printed Name:

BRUCE H. BANKEN

Team	Olowalu	Samplers (Last Name, 1st Initial)	GUMD, K RANIERI, L
Session	62		
Date	09/19/2019		

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):

BH-B

Printed Name:

BRUCE H. BAKER

Team	R2RN	Samplers (Last Name, 1st Initial) Hutchings, L Berg, L Strickland, J Hehe Mann, E	Meters and Probes ID				
Session	62		HQ40d:	1	2100Q:	3	
Date	9/20/19		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 RHL190920	Y	7:50A	26.8	36.0	6.03	92.5	8.14	0.81	0.89	1.00	1	6	0
Oneloa Bay RON190920	✓	8:30A	26.9	36.3	6.69	103.1	8.18	0.63	0.64	0.65	1	0	0
Kapalua Bay RFS190920	✓	8:55A	27.2	36.0	6.52	107.0	8.13	3.16	2.33	2.60	3	6	0
Ka'opala Bay RKO190920	N	9:20A	27.1	35.4	6.40	98.4	8.09	14.2	13.9	14.0	0	1	0
Kahana Village RKV190920	Y	9:40A	27.2	35.9	6.46	99.6	8.09	31.2	29.0	30.1	0	2	0

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

RHL - Took 2nd Salinity Reading - 35.9 ppt

Landscaping crew in parking lot,
mowing and blowing

RON - Took 2nd Salinity reading - 36.3

RFS - took 2nd Salinity reading 36.0

RKV - Wood debris in ocean

Took 2nd Salinity reading 35.4

Ongoing sewer construction
south of site

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	6.36	56.8	585
Pre-sampling	0.08	6.43	57.1	584
Post-sampling	0.05	6.47	56.9	584

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	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L Berg, L Streckland, J Heheman, C
Session	62		
Date	9/20/19		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL190920-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:50 am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON190920-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:30 am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS190920-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55 am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO190920-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:20 am	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV190920-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:40 am	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