

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
54	C. Maxwell, J. Strickland	4/1/19	10:00 am	J. Strickland, C. Maxwell	4/5/19	10:15 am

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value	POST: Verification Value	Acceptable Range	Comments/ Notes	QA?
Temperature	NIST Z	n/a	n/a	Std Val	NIST 21.1 °C	NIST 20.8 °C	NIST °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water
	Z 2	2	n/a		21.0				
	Z 3	3	n/a		20.6		22.9		
Salinity			3 months	Std Val	Tap water 11/26/18 date 35.0 ppt	Tap water 11/26/18 date 35.0 ppt	Salin Std ± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	Z 2	2	3/11/19		0.04	35.0		for Salinity Std used Hach Standard	
	Z 3	3	3/11/19		0.04	34.8	0.04	34.8	
Dissolved Oxygen			1 year	Std Val	100%	100%	± 5 %		
	Z 2	2	8/6/18		98.1				
	Z 1	1	4/2/18		99.2	98.8			
pH			3 weeks	Std Val	pH 7.00	pH 10.00	pH 7.00	pH 10.00	± 0.1 pH of pH std value
	Z 6	6	4/1/19		7.00	10.01			Compare to Manufacturer pH Std value on bottle
	Z 5	5	4/1/19		7.00	10.01	7.05	10.08	
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 6.60 NTU	BLANK <0.1	LOW 1-10 6.60 NTU	± 0.18 NTU Low 1-10
	Z n/a		3/12/19		0.06	6.56	0.05	6.59	Compare to Gel LOW 1-10 Std Calibration value
		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. Maxwell, C., Abromaitis, A.							Meters and Probes ID			
Session	54						HQ40d: 1			2100Q: 3			
Date	4/02/19						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 RNS190402	N	8:05	24.5	34.9	7.00	101.5	8.15	0.98	0.85	1.00	1
Pohaku RPO190402	N	8:51	24.3	32.5	7.24	103.2	8.21	3.59	3.81	4.10	0
Kaanapali Sh RKS190402	—	9:09	24.4	35.3	6.82	99.2	8.19	2.95	2.92	3.08	2
Canoe Beach RCB190402	—	9:37	25.0	35.1	6.73	98.7	8.22	2.37	2.24	2.37	2
Wahikuli RWA190402	—	10:07	24.8	33.1	6.91	100.0	8.23	1.45	1.39	1.57	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).
Use the back of the form if needed.~~camera/videos (AIAKAU) - Anne Reiter
RNS/RPO/RCB~~RCB - water a little brown where sampling - out
about 10 ft - mostly sand

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.60	57.1	575
Pre-sampling	0.05	6.60	57.3	575
Post-sampling	0.06	6.62	57.5	575

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Cathy Maxwell

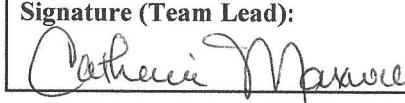
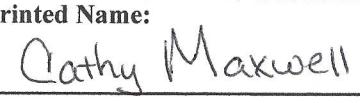
Printed Name:

Cathy Maxwell

Team	R2RS	Samplers (Last Name, 1st Initial)	Freiberg, T., Maxwell, C., Abramaitis, A.				
Session	54						
Date	4/02/19						

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS190402-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO190402-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:51	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS190402-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:09	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB190402-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:37	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA190402-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:07	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 Cathy Maxwell

Team	Polanui	Samplers (Last Name, 1st Initial)	maxwell, J Bayly, R Harris, K						Meters and Probes ID			
Session	54						HQ40d: 1 2100Q: 3					
Date	4/3/19						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 PFF190403	Y	8:09	24.3	35.8	6.51	94.9	8.09	1.78	1.69	1.37	0	5	0
Lindsey Hale PLH190403	N	8:30	24.5	35.2	6.20	90.4	8.10	3.94	3.83	4.52	2	0	0
Lahaina Town PLT190403	—	8:47	24.9	35.7	6.34	93.3	8.13	1.54	1.26	1.37	2	0	0
Olowalu Pier OSF190403	—	9:24	25.1	35.7	6.75	99.8	8.14	5.37	6.27	4.91	0	0	0

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

Use the back of the form if needed.

*PLT 2 monk seals were frolicking approx. 40ft to the right of our sample path. Rich had to walk out about 90ft from shore and 30ft beyond the seals.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.60	57.1	575
Pre-sampling	0.09	6.60	57.3	575
Post-sampling	0.05	6.63	57.5	575

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment			
Nutrients	4	LHS	J. Strickland
Bacteria			

Signature (Team Lead):

Printed Name:

James Strickland

Team	Polanui	Samplers (Last Name, 1st Initial)	MAXWELL, J			
Session	54		BAILEY, R			
Date	4/3/19		HANAU, K			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF190403-N-1	505 Front St	<input type="checkbox"/>	<input type="checkbox"/>	8:09	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH190403-N-1	Lindsey Hale	<input type="checkbox"/>	<input type="checkbox"/>	8:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT190403-N-1	Lahaina Town	<input type="checkbox"/>	<input type="checkbox"/>	9:47	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OSF190403-N-1	Olowalu Pier	<input type="checkbox"/>	<input type="checkbox"/>	9:24	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:

James Strickland

Team	Olowalu	Samplers (Last Name, 1st Initial)							Meters and Probes ID			
Session	54								HQ40d: 1	2100Q: 3		
Date	4/4/19								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 OPM190404	N	0112	22.9	35.8	6.09	86.7	8.11	2.59	2.26	2.43	0	0	0
Camp Olowalu OCO190404	N	0724	23.9	35.8	6.25	90.6	8.12	1.72	1.70	1.78	0	5	0
Ukumehame OUN190404	N	0739	24.7	35.9	6.46	94.6	8.15	3.17	2.95	3.10	0	7	0
Papalaau Beach OPB190404	N	0750	24.3	36.0	6.80	99.3	8.15	4.36	4.17 (R) 5.62	4.12	0	0	0
Papulua Pali OPP190404	N	0803	24.0	35.7	6.71	97.3	8.17	3.21	3.17	3.42	0	0	0

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

Use the back of the form if needed.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	6.60	57.1	575
Pre-sampling	0.04	6.68	57.4	575
Post-sampling	0.04	6.62	57.4	575

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment			
Nutrients	5	LHS	J. Strickland
Bacteria			

Signature (Team Lead):



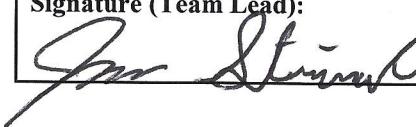
Printed Name:

Team	Olowalu	Samplers (Last Name, 1st Initial)	L, Ronieri				
Session	54		L, OTOMO				
Date	4/4/19		J, Strickland				

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
OPM190404-N-1	Martin Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO190404-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:24	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OUN190404-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:39	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPB190404-N-1	Papalaua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP190404-N-1	Papulua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:02	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:

James Strickland

Team	R2RN	Samplers (Last Name, 1st Initial)	<i>Hutchings, L Bentley, B Hechmann, C</i>						Meters and Probes ID			
Session	54								HQ40d: 1		2100Q: 3	
Date	4/05/19		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
Honolua Bay RHL190405	N	7:45A	23.0	34.0	6.57	92.9	8.13	13.9	17.0	15.7	1	0	0
Oneloa Bay RON190405	/	8:30A	24.4	35.9	6.86	100.5	8.22	0.25	0.23	0.23	2	11	0
Kapalua Bay RFS190405	/	9:00A	24.4	32.9	6.68	96.2	8.11	0.93	1.08	1.01	19	40	0
Ka'opala Bay RKO190405	X	9:30A	24.2	34.7	6.69	97.1	8.15	4.26	4.41	4.14	60 ⁴⁴	6	0
Kahana Village RKV190405	N	9:50A	25.0	34.2	7.14	104.5	8.20	3.28	3.65	4.41	7	1	0

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

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.60	57.1	575
Pre-sampling	0.05	6.59	57.2	575
Post-sampling	0.05	6.59	57.3	575

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	LHS	J. Strickland
Bacteria	-	-	-

Signature (Team Lead):

James Strickland

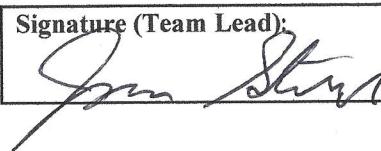
Printed Name:

James Strickland

Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L Bonker, B Heinemann, C				
Session	54						
Date	4/05/19						

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL190405-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON190405-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS190405-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO190405-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV190405-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:50	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: James Strickland