

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

Hui O Ka Wai Ola

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
55	J. Strykland	4/23/19	10:00 AM	J. Strykland	4/26/2019	10:30 AM

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 21.8 °C	NIST 21.7 °C	NIST 24.5 °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water
	2	2	n/a		21.6		24.8		
	2	3	n/a		21.5				
Salinity			3 months	Std Val	Tap water 11/26/18 35.0 ppt	Tap water 11/26/18 35.0 ppt	11/26/18 35.0 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle
	2	2	3/11/19		0.04	35.0	0.04	34.8	
	2	3	3/11/19		0.04	34.9			
Dissolved Oxygen			1 year	Std Val	100%	100%	± 5 %		
	2	2	8/6/18		98.1	99.1			
	2	1	4/23/19		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
	2	6	4/22/19		7.00	10.01	6.97	10.08	
	2	5	4/22/19		7.00	10.01			
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 6.46 NTU	BLANK <0.1	LOW 1-10 6.46 NTU	± 0.18 NTU Low 1-10 Compare to Gel LOW 1-10 Std Calibration value
	2	n/a	4/5/19		0.05	6.48	0.06	6.82	
		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. JARMAKANI, B. ABROMATIS, A.						Meters and Probes ID				
Session	55								HQ40d:	2	2100Q:	2	
Date	4/23/19								pH:	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 RNS190423	NA	8:12	24.2	35.0	6.89	99.9	8.18	0.79	1.00	0.83	0	10	NA
Pohaku RPO190423	NO	8:32	24.2	34.3	6.67	96.1	8.18	2.95	2.92	2.72	0	2	NA
Kaanapali Sh RKS190423	NA	8:51	23.8	34.9	6.64	95.3	8.14	2.86	2.79	2.93	1	2	NA
Canoe Beach RCB190423	NO	9:12	25.1	34.9	6.75	99.3	8.22	5.39	5.58	5.20	5	4	NA
Wahikuli RWA190423	NA	9:32	24.9	33.8	6.82	99.3	8.23	1.69	1.83	1.96	0	0	NA

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

Use the back of the form if needed.

RNS - Part of Napili Bay, small waves, light breeze

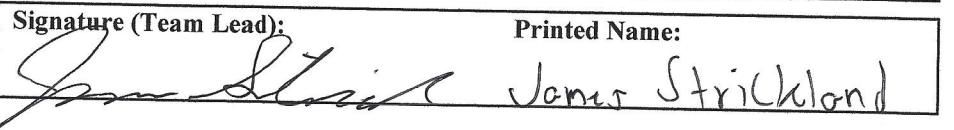
TURBIDITY VERIFICATION

	Blank (must be < 0.10)	Low	Med	High
Standard	0.05	6.46	60.0	577
Pre-sampling	0.07	6.69	60.6	576
Post-sampling	0.06	6.68	60.6	576

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):



Printed Name:

Janis Strickland

Team	R2RS	Samplers (Last Name, 1st Initial)
Session	55	
Date	4/23/19	

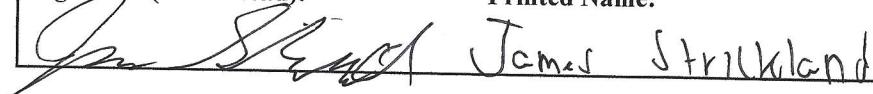
Freiberg, T Abromaitis, A
Jarmakani, B

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS190423-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO190423-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:32	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS190423-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:51	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB190423-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA190423-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:32	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	Polanui	Samplers (Last Name, 1st Initial)	<i>Maxwell, T Bayly, R Harris, K</i>						Meters and Probes ID			
Session	55								HQ40d: ♂		2100Q: ♂	
Date	4/24/19		pH:	6	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 PFF190424	Y	8:20	24.9	35.3	6.39	93.9	8.13	2.8	2.7	3.3	0	1	0
Lindsey Hale PLH190424	N	8:37	25.1	35.8	6.46	95.6	8.11	1.68	1.24	1.41	1	8	0
Lahaina Town PLT190424	—	8:55	25.6	34.8	5.94	88.1	8.11	4.64	4.52	4.45	2	2	0
Olowalu Pier OSF190424	—	9:29	26.2	35.9	6.86	103.4	8.18	3.18	3.38	3.34	0	0	0

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

Use the back of the form if needed.

PFF stream flowing straight down

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.46	60.0	577
Pre-sampling	0.07	6.75	60.5	576
Post-sampling	0.04	6.83	60.7	576

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

James Strickland

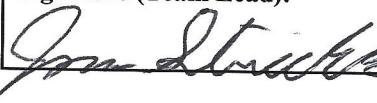
Printed Name:

James Strickland

Team	Polanui	Samplers (Last Name, 1st Initial)	Maxwell, J			
Session	55		Bayly, R			
Date	4/24/19		Harris, K			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF190424-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH190424-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT190424-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OSF190424-N-1	Olowalu Pier	<input checked="" type="checkbox"/>	<input type="checkbox"/>		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)	Noponen, Rick Ranice, Lindsay Strickland, James						Meters and Probes ID		
Session	55								HQ40d:	2	2100Q:
Date	4/25/19		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 OPM190425	N	7:10	23.7	35.6	5.57	80.4	8.05	1.62	1.68	1.74	0	0	0
Camp Olowalu OCO190425	N	7:30	24.4	35.7	6.30	92.2	8.08	3.16	3.88	4.04	0	0	0
Ukumehame OUN190425	N	7:45	24.5	36.0	6.70	98.3	8.15	23.7	24.8	25.5	4	1	0
Papalaua Beach OPB190425	N	8:05	24.3	36.0	6.62	96.8	8.16	6.27	5.89	6.91	0	0	0
Papulua Pali OPP190425	N	8:15	24.5	35.6	6.03	100.1	8.17	3.18	3.10 LR 3.06	3.83	0	0	0

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

Use the back of the form if needed.

OCO - D10 2nd READING OF SALINITY
 - Value was SAME

OUN - D10 2nd READING OF SALINITY
 - Value was 35.9

Had trouble getting a D.O. reading
 to pop up a few times but eventually
 it worked.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.46	60.0	577
Pre-sampling	0.06	6.67	60.5	577
Post-sampling	0.06	6.80	60.5	576

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

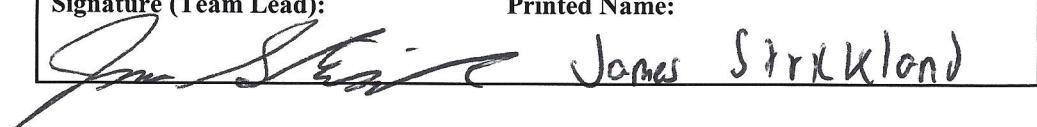
James Strickland

Team	Olowalu	Samplers (Last Name, 1st Initial)	Noponen, R	Strickland, J
Session	55		Ronieri, L	
Date	4/25/19			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
OPM190425-N-1	Martin Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO190425-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OUN190425-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPB190425-N-1	Papalaua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP190425-N-1	Papulua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:15	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)	B. Bonker J. Strickland C. Hehemann						Meters and Probes ID			
Session	55		HQ40d: 2			2100Q: 2						
Date	4/26/19		pH: 6			DO: 7			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
Honolua Bay RHL190426	Y	8:00	23.9	31.1	6.34	89.6	8.14	2.69	2.85	3.01	8
Oneloa Bay RON190426	N	8:35	25.0	35.9	6.81	101.0	8.19	0.71	0.62	0.67	2
Kapalua Bay RFS190426	N/A	9:10	25.9	34.2	7.04	104.9	8.19	1.53	1.64	1.39	6
Ka'opala Bay RKO190426	N	9:31	25.0	34.7	6.66	98.0	8.14	8.46	8.96	8.68	1
Kahana Village RKV190426	N	9:53	25.4	34.9	7.13	105.7	8.31	9.45	8.83	8.31	0

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

RHL - Heavy flowing stream

RHL - Large boat 400' out

RKO - No stream flow

~~5.82~~ JS

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.46	60.0	577
Pre-sampling	0.05	6.71	60.6	577
Post-sampling	0.06	6.82	60.8	575

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

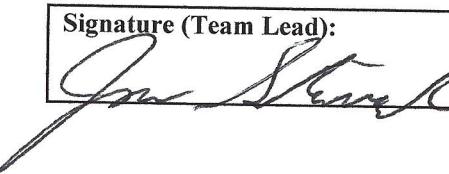
Printed Name:

James Strickland

Team	R2RN	Samplers (Last Name, 1st Initial)	Bonker, B Strickland, J Hehemann, C				
Session	55						
Date	4/26/19						

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL190426-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON190426-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS190426-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO190426-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV190426-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>		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: Jamie Strickland