

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
58	BruCE BAnCKER, JAMES STRICKLAND	06/24/2019	09:45	BruCE BAnCKER	06-28-2019	11:15

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 23.6 °C	NIST 23.6 °C	NIST 26.1 °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water
	2	3	n/a		23.5		26.1		
	2	2	n/a		23.4		—		
Salinity			3 months	Std Val	Tap water 11/26/18 date 35.0 ppt	Tap water 6-31-19 date 34.3 ppt	Salin Std 6-31-19 date 34.3 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle
	1	3	6/24/19		0.04	34.9	0.04	34.2	PRE - HACH SCAUTION STD. 35.0 ppt
	#	2	6/24/19		0.04	35.0	—	—	POST - LAB MADE
Dissolved Oxygen			1 year	Std Val	100%	100%	100%	± 5 %	
	1	1	5/13/19		102.5	102.2			
	1	3	8/6/18		100.3	—			
pH	9		3 weeks	Std Val	pH 7.00	pH 10.00	pH 7.00	pH 10.00	± 0.1 pH of pH std value
	1	5	6/24/19		7.02	10.02	7.08	10.07	Compare to Manufacturer pH Std value on bottle
	1	6	6/24/19		7.02	10.03	—	—	
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
	3	n/a	6/24/19		0.04	6.36	0.03	6.42	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?

LAB TEMP 23.0° - PRE  
 22.8° - POST

Team	R2RS	Samplers (Last Name, 1st Initial)	FREIBERG, T. ABROMAITIS, A. Jarmakani, B.						Meters and Probes ID			
Session	58								HQ40d: 1			2100Q: 3
Date	6/25/2019		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 RNS190625	NA	8:12	27.8	34.6	6.58	102.1	8.10	3.98	4.52	3.92	6 15 Ø
Pohaku RPO190625	No	8:32	27.5	34.9	6.61	101.9	8.17	2.84	2.73	3.33	0 5 Ø
Kaanapali Sh RKS190625	-	8:54	27.7	35.9	6.35	99.0	8.17	7.95	7.75	7.72	6 6 Ø
Canoe Beach RCB190625	-	9:18	27.6	34.4	6.86	105.8	8.20	3.42	3.62	3.53	3 12 Ø
Wahikuli RWA190625	-	9:39	27.7	34.4	6.73	103.9	8.21	1.88	1.82	2.25	5 - Ø

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

Use the back of the form if needed.

RNS very calm - KONA WINDS

RCB - Windy KONA - LIFE GUARD TRAINING IN PROGRESS.

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.36	56.8	585
Pre-sampling	0.08	6.41	57.3	584
Post-sampling	0.03	6.43	57.2	584

## CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	LLHS	B.BANCER
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

BRUCE H. BANCER

Team	R2RS	Samplers (Last Name, 1st Initial)	FREIBERG, T. ABROMAITIS, A. JAHAKANI, B			
Session	58					
Date	6/25/2019					

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
RNS190625-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO190625-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:32	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS190625-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB190625-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA190625-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:34	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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. BANEKER

Team	Polanui	Samplers (Last Name, 1st Initial)	Bayly, R Banker, B Harris, K						Meters and Probes ID				
Session	58								HQ40d:	1	2100Q: 3		
Date	06/26/2019								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
505 Front St PFF190626	Y	08:16	26.5	32.2	6.07	92.4	8.03	5.31	6.84	7.38	Q
Lindsey Hale PLH190626	N	8:39	26.7	34.7	5.98	91.1	8.06	13.5	11.6	9.95	Q
Lahaina Town PLT190626	/	8.59	26.5	34.5	5.98	90.8	8.10	5.27	6.50	5.67	Q
Olowalu Pier OSF190626	/	9:32	27.2	35.9	7.06	109.0	8.07	5.56	5.53	5.73	Q

## 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	0.03	6.36	56.8	585
Pre-sampling	0.04	6.42	57.2	585
Post-sampling	0.03	6.43	57.3	584

## CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

*BRUCE H. BANKER*

Printed Name:

*BRUCE H. BANKER*

Team	Polanui	Samplers (Last Name, 1st Initial)	<i>BATLY, R. HARRIS, K. BAKKER, B.</i>			
Session	58					
Date	06/26/2019					

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
PFF190626-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:16	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH190626-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:39	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT190626-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:59	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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-BB*

Printed Name:

*Bruce H. BAKER*

Team	Olowalu	Samplers (Last Name, 1st Initial)	Nofon EN, R BAKER, B						Meters and Probes ID		
Session	58								HQ40d:	1	2100Q:
Date	06/27/2019		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 OPM190627	—	07:13	27.5	36.2	5.41	83.7	7.98	0.91	1.09	1.16	Ø
Camp Olowalu OCO190627	—	07:33	27.5	35.9	6.16	95.6	8.07	1.78	2.08	2.14	Ø 9 Ø
Ukumehame OUB190627	—	07:49	27.6	36.2	6.51	101.3	8.10	7.55	7.63	7.18	Ø Ø Ø
Papalaua Beach OPB190627	—	08:07	27.4	36.1	6.72	104.3	8.11	5.58	5.03	5.34	Ø Ø Ø 4
Papulua Pali OPP190627	N	08:24	27.7	35.9	6.61	102.9	8.12	7.38	6.75	7.77	2 Ø Ø

**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)

#### TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.03	6.36	56.8	585
Pre-sampling	0.08,05	6.45	57.0	584
Post-sampling	0.03	6.40	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):

*BH.Baker*

Printed Name:

*BRUCE H. BAKER*

Team	Olowalu	Samplers (Last Name, 1st Initial)	<i>NOPONEN, R. BANKIER, B.</i>			
Session	58					
Date	06/27/2019					

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
		<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
		<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
		<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
		<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
		<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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. BANKIER*

Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, Lyn Bankert, Bruce Hehemann, Cici						Meters and Probes ID			
Session	58								HQ40d: 1		2100Q: 3	
Date	6/28/2019								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 RHL190628	N	7:50A	26.4°	35.0	6.01	91.0	8.13	2.04	1.90	1.96	1 RLH
Onealoa Bay RON190628	NA	8:31 A	26.8	36.1	6.81	101.4	8.20	1.09	1.06	1.08	1 4 0
Kapalua Bay RFS190628	NA	09:15	28.0	34.6	6.31	98.0	8.09	1.41	2.67	1.47	22 45 0
Ka'opala Bay RKO190628	N	9:35A	29.2	35.5	6.46	101.1	8.16	1.53	7.27	7.33	0 0 0
Kahana Village RKV190628	N	10:00A	28.6	35.5	7.58	119.3	8.26	2.80	2.88	2.70	0 0 0

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

Use the back of the form if needed.

RKV - RECENT DUNE RESTORATION PROJECT  
 RKV - High DO confirmed

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.03	6.36	56.8	585
Pre-sampling	0.05	6.46	57.1	584
Post-sampling	0.03	6.42	57.4	583

## CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	LLHS	BH BANKER
Bacteria	-	-	-

Signature (Team Lead):

BH.Bank

Printed Name:

BRUCE H. BANKER

Team	R2RN	Samplers (Last Name, 1st Initial)	<i>HUTCHINGS, L HEHENMANN, C BANKER, B</i>			
Session	58					
Date	6/28/2019					

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
RHL190628-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	
RON190628-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:37	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS190628-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO190628-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV190628-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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. Banker*

Printed Name:

*Bruce H. BANKER*