

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 320-10085-1
Client Project/Site: Hanalei Bay Sediments

For:
Hanalei River Heritage Foundation
PO BOX 518
Hanalei, Hawaii 96714

Karen Sellers

Authorized for release by:
10/30/2014 5:00:21 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Hanalei River Heritage Foundation
Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Hanalei River Heritage Foundation
Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Job ID: 320-10085-1

Laboratory: TestAmerica Sacramento

Narrative

Receipt

The samples were received on 10/22/2014 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler exceeded the recommended temperature of 6° Celsius (C). It was measured as 15.1° C at time of receipt. The client was notified. Please note that a Chain-of-Custody (COC) was not received with these samples. Information was taken from an email from the client. Additionally there was no sample collection date or time provided for these samples. The collection date of 10/21/14 and time of 12:00AM was used as default collection date/time.

Metals

Method 6020:

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Detection Summary

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Client Sample ID: 1 Ben-Dor Canal

Lab Sample ID: 320-10085-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.14	J	0.19	0.097	mg/Kg	1	☼	6020	Total/NA
Arsenic	8.5		0.19	0.15	mg/Kg	1	☼	6020	Total/NA
Barium	14		0.19	0.14	mg/Kg	1	☼	6020	Total/NA
Beryllium	0.85		0.097	0.0097	mg/Kg	1	☼	6020	Total/NA
Cadmium	0.069	J	0.097	0.048	mg/Kg	1	☼	6020	Total/NA
Chromium	280		0.19	0.097	mg/Kg	1	☼	6020	Total/NA
Cobalt	61		0.097	0.058	mg/Kg	1	☼	6020	Total/NA
Copper	75		0.19	0.097	mg/Kg	1	☼	6020	Total/NA
Lead	1.4		0.097	0.058	mg/Kg	1	☼	6020	Total/NA
Molybdenum	1.4		0.19	0.019	mg/Kg	1	☼	6020	Total/NA
Nickel	480		0.19	0.097	mg/Kg	1	☼	6020	Total/NA
Selenium	0.47		0.19	0.097	mg/Kg	1	☼	6020	Total/NA
Silver	0.030	J	0.097	0.029	mg/Kg	1	☼	6020	Total/NA
Thallium	0.097		0.097	0.048	mg/Kg	1	☼	6020	Total/NA
Vanadium	160		0.97	0.29	mg/Kg	1	☼	6020	Total/NA
Zinc	99		0.97	0.58	mg/Kg	1	☼	6020	Total/NA
Mercury	0.028	J	0.070	0.015	mg/Kg	1	☼	7471A	Total/NA

Client Sample ID: 2 100 meters up from #1

Lab Sample ID: 320-10085-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.9		0.33	0.25	mg/Kg	1	☼	6020	Total/NA
Barium	21		0.33	0.23	mg/Kg	1	☼	6020	Total/NA
Beryllium	0.69		0.16	0.016	mg/Kg	1	☼	6020	Total/NA
Cadmium	0.088	J	0.16	0.082	mg/Kg	1	☼	6020	Total/NA
Chromium	250		0.33	0.16	mg/Kg	1	☼	6020	Total/NA
Cobalt	40		0.16	0.099	mg/Kg	1	☼	6020	Total/NA
Copper	66		0.33	0.16	mg/Kg	1	☼	6020	Total/NA
Lead	4.5		0.16	0.099	mg/Kg	1	☼	6020	Total/NA
Molybdenum	2.1		0.33	0.033	mg/Kg	1	☼	6020	Total/NA
Nickel	310		0.33	0.16	mg/Kg	1	☼	6020	Total/NA
Selenium	0.76		0.33	0.16	mg/Kg	1	☼	6020	Total/NA
Vanadium	160		1.6	0.49	mg/Kg	1	☼	6020	Total/NA
Zinc	80		1.6	0.99	mg/Kg	1	☼	6020	Total/NA
Mercury	0.087	J	0.097	0.021	mg/Kg	1	☼	7471A	Total/NA

Client Sample ID: 3 Mowry lower canal

Lab Sample ID: 320-10085-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.7		0.22	0.17	mg/Kg	1	☼	6020	Total/NA
Barium	14		0.22	0.16	mg/Kg	1	☼	6020	Total/NA
Beryllium	0.51		0.11	0.011	mg/Kg	1	☼	6020	Total/NA
Cadmium	0.064	J	0.11	0.056	mg/Kg	1	☼	6020	Total/NA
Chromium	240		0.22	0.11	mg/Kg	1	☼	6020	Total/NA
Cobalt	74		0.11	0.067	mg/Kg	1	☼	6020	Total/NA
Copper	51		0.22	0.11	mg/Kg	1	☼	6020	Total/NA
Lead	2.6		0.11	0.067	mg/Kg	1	☼	6020	Total/NA
Molybdenum	2.2		0.22	0.022	mg/Kg	1	☼	6020	Total/NA
Nickel	840		0.22	0.11	mg/Kg	1	☼	6020	Total/NA
Selenium	0.30		0.22	0.11	mg/Kg	1	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Client Sample ID: 3 Mowry lower canal (Continued)

Lab Sample ID: 320-10085-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	110		1.1	0.34	mg/Kg	1	☼	6020	Total/NA
Zinc	87		1.1	0.67	mg/Kg	1	☼	6020	Total/NA
Mercury	0.044	J	0.071	0.015	mg/Kg	1	☼	7471A	Total/NA

Client Sample ID: 4 below Mowry big drain diversion

Lab Sample ID: 320-10085-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	14		0.13	0.099	mg/Kg	1	☼	6020	Total/NA
Barium	8.4		0.13	0.092	mg/Kg	1	☼	6020	Total/NA
Beryllium	0.23		0.066	0.0066	mg/Kg	1	☼	6020	Total/NA
Chromium	150		0.13	0.066	mg/Kg	1	☼	6020	Total/NA
Cobalt	56		0.066	0.040	mg/Kg	1	☼	6020	Total/NA
Copper	22		0.13	0.066	mg/Kg	1	☼	6020	Total/NA
Lead	2.2		0.066	0.040	mg/Kg	1	☼	6020	Total/NA
Molybdenum	0.21		0.13	0.013	mg/Kg	1	☼	6020	Total/NA
Nickel	660		0.13	0.066	mg/Kg	1	☼	6020	Total/NA
Selenium	0.087	J	0.13	0.066	mg/Kg	1	☼	6020	Total/NA
Vanadium	57		0.66	0.20	mg/Kg	1	☼	6020	Total/NA
Zinc	62		0.66	0.40	mg/Kg	1	☼	6020	Total/NA

Client Sample ID: 5 USFW concrete culvert to river

Lab Sample ID: 320-10085-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	6.1		0.25	0.19	mg/Kg	1	☼	6020	Total/NA
Barium	29		0.25	0.18	mg/Kg	1	☼	6020	Total/NA
Beryllium	0.72		0.13	0.013	mg/Kg	1	☼	6020	Total/NA
Cadmium	0.12	J	0.13	0.064	mg/Kg	1	☼	6020	Total/NA
Chromium	270		0.25	0.13	mg/Kg	1	☼	6020	Total/NA
Cobalt	63		0.13	0.076	mg/Kg	1	☼	6020	Total/NA
Copper	76		0.25	0.13	mg/Kg	1	☼	6020	Total/NA
Lead	6.4		0.13	0.076	mg/Kg	1	☼	6020	Total/NA
Molybdenum	1.7		0.25	0.025	mg/Kg	1	☼	6020	Total/NA
Nickel	530		0.25	0.13	mg/Kg	1	☼	6020	Total/NA
Selenium	0.61		0.25	0.13	mg/Kg	1	☼	6020	Total/NA
Vanadium	160		1.3	0.38	mg/Kg	1	☼	6020	Total/NA
Zinc	100		1.3	0.76	mg/Kg	1	☼	6020	Total/NA
Mercury	0.053	J	0.090	0.019	mg/Kg	1	☼	7471A	Total/NA

Client Sample ID: 6 USFW first ditch above bridge

Lab Sample ID: 320-10085-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.6		0.28	0.21	mg/Kg	1	☼	6020	Total/NA
Barium	180		0.28	0.20	mg/Kg	1	☼	6020	Total/NA
Beryllium	1.2		0.14	0.014	mg/Kg	1	☼	6020	Total/NA
Cadmium	0.48		0.14	0.071	mg/Kg	1	☼	6020	Total/NA
Chromium	370		0.28	0.14	mg/Kg	1	☼	6020	Total/NA
Cobalt	77		0.14	0.085	mg/Kg	1	☼	6020	Total/NA
Copper	100		0.28	0.14	mg/Kg	1	☼	6020	Total/NA
Lead	28		0.14	0.085	mg/Kg	1	☼	6020	Total/NA
Molybdenum	0.68		0.28	0.028	mg/Kg	1	☼	6020	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Client Sample ID: 6 USFW first ditch above bridge (Continued)

Lab Sample ID: 320-10085-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nickel	390		0.28	0.14	mg/Kg	1	☼	6020	Total/NA
Selenium	0.82		0.28	0.14	mg/Kg	1	☼	6020	Total/NA
Silver	0.060	J	0.14	0.042	mg/Kg	1	☼	6020	Total/NA
Vanadium	250		1.4	0.42	mg/Kg	1	☼	6020	Total/NA
Zinc	140		1.4	0.85	mg/Kg	1	☼	6020	Total/NA
Mercury	0.093		0.090	0.019	mg/Kg	1	☼	7471A	Total/NA

Client Sample ID: 7 Opposite Rice Mill Warehouse

Lab Sample ID: 320-10085-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.54		0.19	0.14	mg/Kg	1	☼	6020	Total/NA
Barium	120		0.19	0.14	mg/Kg	1	☼	6020	Total/NA
Beryllium	0.71		0.097	0.0097	mg/Kg	1	☼	6020	Total/NA
Cadmium	0.072	J	0.097	0.048	mg/Kg	1	☼	6020	Total/NA
Chromium	230		0.19	0.097	mg/Kg	1	☼	6020	Total/NA
Cobalt	59		0.097	0.058	mg/Kg	1	☼	6020	Total/NA
Copper	69		0.19	0.097	mg/Kg	1	☼	6020	Total/NA
Lead	2.1		0.097	0.058	mg/Kg	1	☼	6020	Total/NA
Molybdenum	0.37		0.19	0.019	mg/Kg	1	☼	6020	Total/NA
Nickel	480		0.19	0.097	mg/Kg	1	☼	6020	Total/NA
Selenium	0.26		0.19	0.097	mg/Kg	1	☼	6020	Total/NA
Vanadium	140		0.97	0.29	mg/Kg	1	☼	6020	Total/NA
Zinc	84		0.97	0.58	mg/Kg	1	☼	6020	Total/NA
Mercury	0.053	J	0.069	0.015	mg/Kg	1	☼	7471A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Client Sample ID: 1 Ben-Dor Canal

Lab Sample ID: 320-10085-1

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 54.1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.14	J	0.19	0.097	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Arsenic	8.5		0.19	0.15	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Barium	14		0.19	0.14	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Beryllium	0.85		0.097	0.0097	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Cadmium	0.069	J	0.097	0.048	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Chromium	280		0.19	0.097	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Cobalt	61		0.097	0.058	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Copper	75		0.19	0.097	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Lead	1.4		0.097	0.058	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Molybdenum	1.4		0.19	0.019	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Nickel	480		0.19	0.097	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Selenium	0.47		0.19	0.097	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Silver	0.030	J	0.097	0.029	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Thallium	0.097		0.097	0.048	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Vanadium	160		0.97	0.29	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1
Zinc	99		0.97	0.58	mg/Kg	☼	10/28/14 07:00	10/28/14 18:44	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.028	J	0.070	0.015	mg/Kg	☼	10/28/14 10:49	10/28/14 13:26	1

Client Sample ID: 2 100 meters up from #1

Lab Sample ID: 320-10085-2

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 35.5

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.33	0.16	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Arsenic	3.9		0.33	0.25	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Barium	21		0.33	0.23	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Beryllium	0.69		0.16	0.016	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Cadmium	0.088	J	0.16	0.082	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Chromium	250		0.33	0.16	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Cobalt	40		0.16	0.099	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Copper	66		0.33	0.16	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Lead	4.5		0.16	0.099	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Molybdenum	2.1		0.33	0.033	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Nickel	310		0.33	0.16	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Selenium	0.76		0.33	0.16	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Silver	ND		0.16	0.049	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Thallium	ND		0.16	0.082	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Vanadium	160		1.6	0.49	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1
Zinc	80		1.6	0.99	mg/Kg	☼	10/28/14 07:00	10/28/14 18:48	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.087	J	0.097	0.021	mg/Kg	☼	10/28/14 10:49	10/28/14 13:37	1

TestAmerica Sacramento

Client Sample Results

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Client Sample ID: 3 Mowry lower canal

Lab Sample ID: 320-10085-3

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 49.8

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.22	0.11	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Arsenic	2.7		0.22	0.17	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Barium	14		0.22	0.16	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Beryllium	0.51		0.11	0.011	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Cadmium	0.064	J	0.11	0.056	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Chromium	240		0.22	0.11	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Cobalt	74		0.11	0.067	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Copper	51		0.22	0.11	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Lead	2.6		0.11	0.067	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Molybdenum	2.2		0.22	0.022	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Nickel	840		0.22	0.11	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Selenium	0.30		0.22	0.11	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Silver	ND		0.11	0.034	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Thallium	ND		0.11	0.056	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Vanadium	110		1.1	0.34	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1
Zinc	87		1.1	0.67	mg/Kg	☼	10/28/14 07:00	10/28/14 18:51	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.044	J	0.071	0.015	mg/Kg	☼	10/28/14 10:49	10/28/14 13:39	1

Client Sample ID: 4 below Mowry big drain diversion

Lab Sample ID: 320-10085-4

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 73.9

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.13	0.066	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Arsenic	14		0.13	0.099	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Barium	8.4		0.13	0.092	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Beryllium	0.23		0.066	0.0066	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Cadmium	ND		0.066	0.033	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Chromium	150		0.13	0.066	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Cobalt	56		0.066	0.040	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Copper	22		0.13	0.066	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Lead	2.2		0.066	0.040	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Molybdenum	0.21		0.13	0.013	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Nickel	660		0.13	0.066	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Selenium	0.087	J	0.13	0.066	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Silver	ND		0.066	0.020	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Thallium	ND		0.066	0.033	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Vanadium	57		0.66	0.20	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1
Zinc	62		0.66	0.40	mg/Kg	☼	10/28/14 07:00	10/28/14 18:54	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.049	0.011	mg/Kg	☼	10/28/14 10:49	10/28/14 13:41	1

TestAmerica Sacramento

Client Sample Results

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Client Sample ID: 5 USFW concrete culvert to river

Lab Sample ID: 320-10085-5

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 41.4

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.25	0.13	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Arsenic	6.1		0.25	0.19	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Barium	29		0.25	0.18	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Beryllium	0.72		0.13	0.013	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Cadmium	0.12	J	0.13	0.064	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Chromium	270		0.25	0.13	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Cobalt	63		0.13	0.076	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Copper	76		0.25	0.13	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Lead	6.4		0.13	0.076	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Molybdenum	1.7		0.25	0.025	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Nickel	530		0.25	0.13	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Selenium	0.61		0.25	0.13	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Silver	ND		0.13	0.038	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Thallium	ND		0.13	0.064	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Vanadium	160		1.3	0.38	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1
Zinc	100		1.3	0.76	mg/Kg	☼	10/28/14 07:00	10/28/14 18:57	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.053	J	0.090	0.019	mg/Kg	☼	10/28/14 10:49	10/28/14 13:43	1

Client Sample ID: 6 USFW first ditch above bridge

Lab Sample ID: 320-10085-6

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 40.4

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.28	0.14	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Arsenic	3.6		0.28	0.21	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Barium	180		0.28	0.20	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Beryllium	1.2		0.14	0.014	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Cadmium	0.48		0.14	0.071	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Chromium	370		0.28	0.14	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Cobalt	77		0.14	0.085	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Copper	100		0.28	0.14	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Lead	28		0.14	0.085	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Molybdenum	0.68		0.28	0.028	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Nickel	390		0.28	0.14	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Selenium	0.82		0.28	0.14	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Silver	0.060	J	0.14	0.042	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Thallium	ND		0.14	0.071	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Vanadium	250		1.4	0.42	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1
Zinc	140		1.4	0.85	mg/Kg	☼	10/28/14 07:00	10/28/14 19:00	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.093		0.090	0.019	mg/Kg	☼	10/28/14 10:49	10/28/14 13:45	1

TestAmerica Sacramento

Client Sample Results

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Client Sample ID: 7 Opposite Rice Mill Warehouse

Lab Sample ID: 320-10085-7

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 55.7

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.19	0.097	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Arsenic	0.54		0.19	0.14	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Barium	120		0.19	0.14	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Beryllium	0.71		0.097	0.0097	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Cadmium	0.072	J	0.097	0.048	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Chromium	230		0.19	0.097	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Cobalt	59		0.097	0.058	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Copper	69		0.19	0.097	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Lead	2.1		0.097	0.058	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Molybdenum	0.37		0.19	0.019	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Nickel	480		0.19	0.097	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Selenium	0.26		0.19	0.097	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Silver	ND		0.097	0.029	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Thallium	ND		0.097	0.048	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Vanadium	140		0.97	0.29	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1
Zinc	84		0.97	0.58	mg/Kg	☼	10/28/14 07:00	10/28/14 19:04	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.053	J	0.069	0.015	mg/Kg	☼	10/28/14 10:49	10/28/14 13:48	1

QC Sample Results

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 320-56434/1-A

Matrix: Solid

Analysis Batch: 56622

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 56434

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.10	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Arsenic	ND		0.20	0.15	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Barium	ND		0.20	0.14	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Beryllium	ND		0.10	0.010	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Cadmium	ND		0.10	0.050	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Chromium	ND		0.20	0.10	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Cobalt	ND		0.10	0.060	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Copper	ND		0.20	0.10	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Lead	ND		0.10	0.060	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Molybdenum	ND		0.20	0.020	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Nickel	ND		0.20	0.10	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Selenium	ND		0.20	0.10	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Silver	ND		0.10	0.030	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Thallium	ND		0.10	0.050	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Vanadium	ND		1.0	0.30	mg/Kg		10/28/14 07:00	10/28/14 18:03	1
Zinc	ND		1.0	0.60	mg/Kg		10/28/14 07:00	10/28/14 18:03	1

Lab Sample ID: LCS 320-56434/2-A

Matrix: Solid

Analysis Batch: 56622

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 56434

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	20.0	18.9		mg/Kg		95	80 - 120
Arsenic	20.0	20.2		mg/Kg		101	80 - 120
Barium	20.0	19.2		mg/Kg		96	80 - 120
Beryllium	20.0	19.5		mg/Kg		97	80 - 120
Cadmium	20.0	19.1		mg/Kg		95	80 - 120
Chromium	20.0	19.5		mg/Kg		98	80 - 120
Cobalt	20.0	19.5		mg/Kg		97	80 - 120
Copper	20.0	19.2		mg/Kg		96	80 - 120
Lead	20.0	20.3		mg/Kg		102	80 - 120
Molybdenum	20.0	20.7		mg/Kg		104	80 - 120
Nickel	20.0	19.3		mg/Kg		96	80 - 120
Selenium	20.0	19.9		mg/Kg		100	80 - 120
Silver	5.00	4.77		mg/Kg		95	80 - 120
Thallium	5.00	4.91		mg/Kg		98	80 - 120
Vanadium	20.0	19.4		mg/Kg		97	80 - 120
Zinc	20.0	20.8		mg/Kg		104	80 - 120

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 320-56478/11-A

Matrix: Solid

Analysis Batch: 56554

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 56478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040	0.0086	mg/Kg		10/28/14 10:49	10/28/14 13:18	1

TestAmerica Sacramento

QC Sample Results

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 320-56478/12-A

Matrix: Solid

Analysis Batch: 56554

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 56478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0841	0.0808		mg/Kg		96	86 - 114

Lab Sample ID: 320-10085-1 MS

Matrix: Solid

Analysis Batch: 56554

Client Sample ID: 1 Ben-Dor Canal

Prep Type: Total/NA

Prep Batch: 56478

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.028	J	0.459	0.459		mg/Kg	☼	94	86 - 114

Lab Sample ID: 320-10085-1 MSD

Matrix: Solid

Analysis Batch: 56554

Client Sample ID: 1 Ben-Dor Canal

Prep Type: Total/NA

Prep Batch: 56478

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.028	J	0.445	0.452		mg/Kg	☼	95	86 - 114	1	17

QC Association Summary

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Metals

Prep Batch: 56434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-10085-1	1 Ben-Dor Canal	Total/NA	Solid	3050B	
320-10085-2	2 100 meters up from #1	Total/NA	Solid	3050B	
320-10085-3	3 Mowry lower canal	Total/NA	Solid	3050B	
320-10085-4	4 below Mowry big drain diversion	Total/NA	Solid	3050B	
320-10085-5	5 USFW concrete culvert to river	Total/NA	Solid	3050B	
320-10085-6	6 USFW first ditch above bridge	Total/NA	Solid	3050B	
320-10085-7	7 Opposite Rice Mill Warehouse	Total/NA	Solid	3050B	
LCS 320-56434/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 320-56434/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 56478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-10085-1	1 Ben-Dor Canal	Total/NA	Solid	7471A	
320-10085-1 MS	1 Ben-Dor Canal	Total/NA	Solid	7471A	
320-10085-1 MSD	1 Ben-Dor Canal	Total/NA	Solid	7471A	
320-10085-2	2 100 meters up from #1	Total/NA	Solid	7471A	
320-10085-3	3 Mowry lower canal	Total/NA	Solid	7471A	
320-10085-4	4 below Mowry big drain diversion	Total/NA	Solid	7471A	
320-10085-5	5 USFW concrete culvert to river	Total/NA	Solid	7471A	
320-10085-6	6 USFW first ditch above bridge	Total/NA	Solid	7471A	
320-10085-7	7 Opposite Rice Mill Warehouse	Total/NA	Solid	7471A	
LCS 320-56478/12-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 320-56478/11-A	Method Blank	Total/NA	Solid	7471A	

Analysis Batch: 56554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-10085-1	1 Ben-Dor Canal	Total/NA	Solid	7471A	56478
320-10085-1 MS	1 Ben-Dor Canal	Total/NA	Solid	7471A	56478
320-10085-1 MSD	1 Ben-Dor Canal	Total/NA	Solid	7471A	56478
320-10085-2	2 100 meters up from #1	Total/NA	Solid	7471A	56478
320-10085-3	3 Mowry lower canal	Total/NA	Solid	7471A	56478
320-10085-4	4 below Mowry big drain diversion	Total/NA	Solid	7471A	56478
320-10085-5	5 USFW concrete culvert to river	Total/NA	Solid	7471A	56478
320-10085-6	6 USFW first ditch above bridge	Total/NA	Solid	7471A	56478
320-10085-7	7 Opposite Rice Mill Warehouse	Total/NA	Solid	7471A	56478
LCS 320-56478/12-A	Lab Control Sample	Total/NA	Solid	7471A	56478
MB 320-56478/11-A	Method Blank	Total/NA	Solid	7471A	56478

Analysis Batch: 56622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-10085-1	1 Ben-Dor Canal	Total/NA	Solid	6020	56434
320-10085-2	2 100 meters up from #1	Total/NA	Solid	6020	56434
320-10085-3	3 Mowry lower canal	Total/NA	Solid	6020	56434
320-10085-4	4 below Mowry big drain diversion	Total/NA	Solid	6020	56434
320-10085-5	5 USFW concrete culvert to river	Total/NA	Solid	6020	56434
320-10085-6	6 USFW first ditch above bridge	Total/NA	Solid	6020	56434
320-10085-7	7 Opposite Rice Mill Warehouse	Total/NA	Solid	6020	56434
LCS 320-56434/2-A	Lab Control Sample	Total/NA	Solid	6020	56434
MB 320-56434/1-A	Method Blank	Total/NA	Solid	6020	56434

TestAmerica Sacramento

QC Association Summary

Client: Hanalei River Heritage Foundation
Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

General Chemistry

Analysis Batch: 56435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-10085-1	1 Ben-Dor Canal	Total/NA	Solid	D 2216	
320-10085-2	2 100 meters up from #1	Total/NA	Solid	D 2216	
320-10085-3	3 Mowry lower canal	Total/NA	Solid	D 2216	
320-10085-4	4 below Mowry big drain diversion	Total/NA	Solid	D 2216	
320-10085-5	5 USFW concrete culvert to river	Total/NA	Solid	D 2216	
320-10085-6	6 USFW first ditch above bridge	Total/NA	Solid	D 2216	
320-10085-7	7 Opposite Rice Mill Warehouse	Total/NA	Solid	D 2216	

Lab Chronicle

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Client Sample ID: 1 Ben-Dor Canal

Lab Sample ID: 320-10085-1

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 54.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.91 g	100 mL	56434	10/28/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6020		1	1.91 g	100 mL	56622	10/28/14 18:44	TTP	TAL SAC
Total/NA	Prep	7471A			0.6315 g	50 mL	56478	10/28/14 10:49	CV1	TAL SAC
Total/NA	Analysis	7471A		1	0.6315 g	50 mL	56554	10/28/14 13:26	CV1	TAL SAC
Total/NA	Analysis	D 2216		1			56435	10/27/14 13:01	MAH	TAL SAC

Client Sample ID: 2 100 meters up from #1

Lab Sample ID: 320-10085-2

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 35.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.71 g	100 mL	56434	10/28/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6020		1	1.71 g	100 mL	56622	10/28/14 18:48	TTP	TAL SAC
Total/NA	Prep	7471A			0.6934 g	50 mL	56478	10/28/14 10:49	CV1	TAL SAC
Total/NA	Analysis	7471A		1	0.6934 g	50 mL	56554	10/28/14 13:37	CV1	TAL SAC
Total/NA	Analysis	D 2216		1			56435	10/27/14 13:01	MAH	TAL SAC

Client Sample ID: 3 Mowry lower canal

Lab Sample ID: 320-10085-3

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 49.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.79 g	100 mL	56434	10/28/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6020		1	1.79 g	100 mL	56622	10/28/14 18:51	TTP	TAL SAC
Total/NA	Prep	7471A			0.6772 g	50 mL	56478	10/28/14 10:49	CV1	TAL SAC
Total/NA	Analysis	7471A		1	0.6772 g	50 mL	56554	10/28/14 13:39	CV1	TAL SAC
Total/NA	Analysis	D 2216		1			56435	10/27/14 13:01	MAH	TAL SAC

Client Sample ID: 4 below Mowry big drain diversion

Lab Sample ID: 320-10085-4

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 73.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			2.05 g	100 mL	56434	10/28/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6020		1	2.05 g	100 mL	56622	10/28/14 18:54	TTP	TAL SAC
Total/NA	Prep	7471A			0.6629 g	50 mL	56478	10/28/14 10:49	CV1	TAL SAC
Total/NA	Analysis	7471A		1	0.6629 g	50 mL	56554	10/28/14 13:41	CV1	TAL SAC
Total/NA	Analysis	D 2216		1			56435	10/27/14 13:01	MAH	TAL SAC

Lab Chronicle

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Client Sample ID: 5 USFW concrete culvert to river

Lab Sample ID: 320-10085-5

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 41.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.90 g	100 mL	56434	10/28/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6020		1	1.90 g	100 mL	56622	10/28/14 18:57	TTP	TAL SAC
Total/NA	Prep	7471A			0.6460 g	50 mL	56478	10/28/14 10:49	CV1	TAL SAC
Total/NA	Analysis	7471A		1	0.6460 g	50 mL	56554	10/28/14 13:43	CV1	TAL SAC
Total/NA	Analysis	D 2216		1			56435	10/27/14 13:01	MAH	TAL SAC

Client Sample ID: 6 USFW first ditch above bridge

Lab Sample ID: 320-10085-6

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 40.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.75 g	100 mL	56434	10/28/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6020		1	1.75 g	100 mL	56622	10/28/14 19:00	TTP	TAL SAC
Total/NA	Prep	7471A			0.6570 g	50 mL	56478	10/28/14 10:49	CV1	TAL SAC
Total/NA	Analysis	7471A		1	0.6570 g	50 mL	56554	10/28/14 13:45	CV1	TAL SAC
Total/NA	Analysis	D 2216		1			56435	10/27/14 13:01	MAH	TAL SAC

Client Sample ID: 7 Opposite Rice Mill Warehouse

Lab Sample ID: 320-10085-7

Date Collected: 10/21/14 00:00

Matrix: Solid

Date Received: 10/22/14 08:00

Percent Solids: 55.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.86 g	100 mL	56434	10/28/14 07:00	NIM	TAL SAC
Total/NA	Analysis	6020		1	1.86 g	100 mL	56622	10/28/14 19:04	TTP	TAL SAC
Total/NA	Prep	7471A			0.6217 g	50 mL	56478	10/28/14 10:49	CV1	TAL SAC
Total/NA	Analysis	7471A		1	0.6217 g	50 mL	56554	10/28/14 13:48	CV1	TAL SAC
Total/NA	Analysis	D 2216		1			56435	10/27/14 13:01	MAH	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: Hanalei River Heritage Foundation
 Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-16
Alaska (UST)	State Program	10	UST-055	12-18-14
Arizona	State Program	9	AZ0708	08-11-15
Arkansas DEQ	State Program	6	88-0691	06-17-15
California	State Program	9	2897	01-31-15
Colorado	State Program	8	N/A	08-31-15
Connecticut	State Program	1	PH-0691	06-30-15
Florida	NELAP	4	E87570	06-30-15
Hawaii	State Program	9	N/A	01-29-15
Illinois	NELAP	5	200060	03-17-15
Kansas	NELAP	7	E-10375	10-31-14 *
Louisiana	NELAP	6	30612	06-30-15
Michigan	State Program	5	9947	01-31-15
Nebraska	State Program	7	NE-OS-22-13	01-29-15
Nevada	State Program	9	CA44	07-31-15
New Jersey	NELAP	2	CA005	06-30-15
New York	NELAP	2	11666	04-01-15
Oregon	NELAP	10	CA200005	01-29-15
Oregon	NELAP Secondary AB	10	E87570	06-30-15
Pennsylvania	NELAP	3	9947	03-31-15
Texas	NELAP	6	T104704399-08-TX	05-31-15
US Fish & Wildlife	Federal		LE148388-0	12-31-14
USDA	Federal		P330-11-00436	12-30-14
USEPA UCMR	Federal	1	CA00044	11-06-16
Utah	NELAP	8	QUAN1	02-28-15
Washington	State Program	10	C581	05-05-15
West Virginia (DW)	State Program	3	9930C	12-31-14
Wyoming	State Program	8	8TMS-Q	01-29-15

* Certification renewal pending - certification considered valid.

Method Summary

Client: Hanalei River Heritage Foundation
Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL SAC
7471A	Mercury (CVAA)	SW846	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Hanalei River Heritage Foundation
Project/Site: Hanalei Bay Sediments

TestAmerica Job ID: 320-10085-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-10085-1	1 Ben-Dor Canal	Solid	10/21/14 00:00	10/22/14 08:00
320-10085-2	2 100 meters up from #1	Solid	10/21/14 00:00	10/22/14 08:00
320-10085-3	3 Mowry lower canal	Solid	10/21/14 00:00	10/22/14 08:00
320-10085-4	4 below Mowry big drain diversion	Solid	10/21/14 00:00	10/22/14 08:00
320-10085-5	5 USFW concrete culvert to river	Solid	10/21/14 00:00	10/22/14 08:00
320-10085-6	6 USFW first ditch above bridge	Solid	10/21/14 00:00	10/22/14 08:00
320-10085-7	7 Opposite Rice Mill Warehouse	Solid	10/21/14 00:00	10/22/14 08:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Login Sample Receipt Checklist

Client: Hanalei River Heritage Foundation

Job Number: 320-10085-1

Login Number: 10085

List Source: TestAmerica Sacramento

List Number: 1

Creator: Nelson, Kym D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	x3 melted gel packs
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	15.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Out of temp, no COC, time and date not on samples
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	