ALS Environmental
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www.alsglobal.com

February 18, 2015

Analytical Report for Service Request No: K1501241

Brad Kwasnowski
Cardno TEC
Pacific Guardian Center
737 Bishop Street Tower Suite 3020
Honolulu, HI 96813

RE: Kaelepulu Pond

Dear Brad,

Enclosed are the results of the sample(s) submitted to our laboratory February 06, 2015
For your reference, these analyses have been assigned our service request number **K1501241.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3363. You may also contact me via email at Lisa.Domenighini@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Lisa A Domenighini

Lisa Domenighini
Project Manager

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Chain of Custody

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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Environmental

CHAIN OF CUSTODY
47408

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SR# K150241

COC Set____of____

COC#_____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

Project Name: Kaelepulu Pond	Project Number: 9682 - 28853
Project Manager: Brad Kwasnowski	
Company: Cardno TEC	
Address: 1003 Bishop Street #1550, Honolulu, HI 96813	
Phone #: 808-469-8997	email: bdkwasnowski@tecinc.com
Sampler Signature: BBA	Sampler Printed Name: Ben Berridge

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	7D: SM 2540 D / TSS	28D: 350.1 / Ammonia T	28D: 353.2 / NO2 NO3 T	28D: 365.3 / Phos T	1	2	3	4	5	Remarks
1. Kaopa		2/3/15	13:30	W	2	X	X	X	X						comp.
2. Hele		2/3/15	15:30	W	2	X	X	X	X						comp
3. Hamakua		2/3/15	15:30	W	2	X	X	X	X						comp
4. Akipola		2/3/15	15:30	W	2	X	X	X	X						comp
5. Keolu 1		2/3/15	8:30	W	2	X	X	X	X						* only 500ml available
6. Keolu 2		2/3/15	9:30	W	2	X	X	X	X						
7. Keolu 3		2/3/15	10:30	W	2	X	X	X	X						
8. Keolu 4		2/3/15	11:30	W	2	X	X	X	X						
9. Keolu 5		2/3/15	12:30	W	2	X	X	X	X						
10. Keolu 6		2/3/15	16:30	W	2	X	X	X	X						

Report Requirements

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

___ IV. Data Validation Report

___ V. EDD

Invoice Information

P.O.#_____

Bill To:_____

Turnaround Requirements

____ 24 hr ____ 48 hr

____ 5 Day

____ Standard

Requested Report Date

Circle which metals are to be analyzed

Special Instructions/Comments:

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other_____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: BBA	Signature: Tracie Sober	Signature: Tracie Sober	Signature:	Signature	Signature
Printed Name: Ben Berridge	Printed Name: Tracie Sober	Printed Name: Tracie Sober	Printed Name: Les Kennedy	Printed Name	Printed Name
Firm: Cardno	Firm: ALS	Firm: ALS	Firm: ALS	Firm	Firm
Date/Time: 2/5/15 8:30	Date/Time: 2/5/15 0930	Date/Time: 2/5/15 0930	Date/Time: 2/6/15 0950	Date/Time	Date/Time

PC Lisa

Cooler Receipt and Preservation Form

Client / Project: Valley Well Drilling Service Request K15 01241

Received: 2/6/15 Opened: 2/6/15 By: MM Unloaded: 2/6/15 By: MM

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.7	-0.6	4.6	4.7	+0.1	360	47408/56795	7728 4529 5490	
-0.5	-0.6	3.4	3.3	-0.1	308	1	7728 4529 6085	

4. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) (*Gel Packs*) *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

RUSH MM 2/6/15

Notes, Discrepancies, & Resolutions: _____

Page ____ *of* ____

General Chemistry

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Collected:**	02/3/15
Sample Matrix:	Water	**Date Received:**	02/6/15
Analysis Method:	350.1	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Ammonia as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Kaopa	K1501241-001	**0.140**	0.010	1	02/12/15 15:31	2/12/15	
Hele	K1501241-002	**0.161**	0.010	1	02/12/15 15:31	2/12/15	
Hamakua	K1501241-003	**0.216**	0.010	1	02/12/15 15:31	2/12/15	
Akipola	K1501241-004	**0.065**	0.010	1	02/12/15 15:31	2/12/15	
Keolu 1	K1501241-005	**0.057**	0.010	1	02/12/15 15:31	2/12/15	
Keolu 2	K1501241-006	**0.039**	0.010	1	02/12/15 15:31	2/12/15	
Keolu 3	K1501241-007	**0.044**	0.010	1	02/12/15 15:31	2/12/15	
Keolu 4	K1501241-008	**0.043**	0.010	1	02/12/15 15:31	2/12/15	
Keolu 5	K1501241-009	**0.041**	0.010	1	02/12/15 15:31	2/12/15	
Keolu 6	K1501241-010	**0.055**	0.010	1	02/12/15 15:31	2/12/15	
Method Blank	K1501241-MB1	ND U	0.010	1	02/12/15 15:31	2/12/15	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project	Kaelepulu Pond/9682-28853	**Date Collected:**	02/03/15
Sample Matrix:	Water	**Date Received:**	02/06/15
		Date Analyzed:	02/12/15

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Kaopa	**Units:**	mg/L
Lab Code:	K1501241-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1501241-001DUP Result	Average	RPD	RPD Limit
Ammonia as Nitrogen	350.1	0.010	0.140	0.139	0.140	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Collected:**	02/03/15
Sample Matrix:	Water	**Date Received:**	02/06/15
		Date Analyzed:	02/12/15
		Date Extracted:	02/12/15

Duplicate Matrix Spike Summary
Ammonia as Nitrogen

Sample Name:	Kaopa	**Units:**	mg/L
Lab Code:	K1501241-001	**Basis:**	NA
Analysis Method:	350.1		
Prep Method:	Method		

		Matrix Spike K1501241-001MS			**Duplicate Matrix Spike** K1501241-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Ammonia as Nitrogen	0.140	0.340	0.200	100	0.334	0.200	97	90-110	2	20

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ALS Group USA, Corp.
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QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Analyzed:**	02/12/15
Sample Matrix:	Water	**Date Extracted:**	02/12/15

Lab Control Sample Summary
Ammonia as Nitrogen

Analysis Method:	350.1	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	432607

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1501241-LCS1	15.0	15.1	99	90-110

Analytical Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Collected:**	02/3/15
Sample Matrix:	Water	**Date Received:**	02/6/15
Analysis Method:	353.2	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Nitrate+Nitrite as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Kaopa	K1501241-001	**0.414**	0.050	1	02/13/15 11:44	2/13/15	
Hele	K1501241-002	**0.379**	0.050	1	02/13/15 11:44	2/13/15	
Hamakua	K1501241-003	ND U	0.050	1	02/13/15 11:44	2/13/15	
Akipola	K1501241-004	**0.194**	0.050	1	02/13/15 11:44	2/13/15	
Keolu 1	K1501241-005	**0.180**	0.050	1	02/13/15 11:44	2/13/15	
Keolu 2	K1501241-006	**0.100**	0.050	1	02/13/15 11:44	2/13/15	
Keolu 3	K1501241-007	**0.085**	0.050	1	02/13/15 11:44	2/13/15	
Keolu 4	K1501241-008	**0.071**	0.050	1	02/13/15 11:44	2/13/15	
Keolu 5	K1501241-009	**0.151**	0.050	1	02/13/15 11:44	2/13/15	
Keolu 6	K1501241-010	**0.385**	0.050	1	02/13/15 11:44	2/13/15	
Method Blank	K1501241-MB1	ND U	0.050	1	02/13/15 11:44	2/13/15	

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QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project	Kaelepulu Pond/9682-28853	**Date Collected:**	02/03/15
Sample Matrix:	Water	**Date Received:**	02/06/15
Analysis Method:	353.2	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Replicate Sample Summary
Nitrate+Nitrite as Nitrogen

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Kaopa	K1501241-001DUP	0.050	0.414	0.416	0.415	<1	20	02/13/15
Keolu 6	K1501241-010DUP	0.050	0.385	0.386	0.386	<1	20	02/13/15

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Collected:**	02/03/15
Sample Matrix:	Water	**Date Received:**	02/06/15
		Date Analyzed:	02/13/15
		Date Extracted:	02/13/15

Duplicate Matrix Spike Summary
Nitrate+Nitrite as Nitrogen

Sample Name:	Kaopa	**Units:**	mg/L
Lab Code:	K1501241-001	**Basis:**	NA
Analysis Method:	353.2		
Prep Method:	Method		

		Matrix Spike K1501241-001MS			**Duplicate Matrix Spike** K1501241-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate+Nitrite as Nitrogen	0.414	1.45	1.00	104	1.42	1.00	101	89-114	2	20

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Results flagged with a pound (#) indicate the control criteria is not applicable.

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Collected:**	02/03/15
Sample Matrix:	Water	**Date Received:**	02/06/15
		Date Analyzed:	02/13/15
		Date Extracted:	02/13/15

Duplicate Matrix Spike Summary
Nitrate+Nitrite as Nitrogen

Sample Name:	Keolu 6	**Units:**	mg/L
Lab Code:	K1501241-010	**Basis:**	NA
Analysis Method:	353.2		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1501241-010MS			K1501241-010DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate+Nitrite as Nitrogen	0.385	1.47	1.00	108	1.42	1.00	104	89-114	3	20

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Analyzed:**	02/13/15
Sample Matrix:	Water	**Date Extracted:**	02/13/15

Lab Control Sample Summary
Nitrate+Nitrite as Nitrogen

Analysis Method:	353.2	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	432780

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1501241-LCS1	3.82	3.52	109	90-110

Analytical Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Collected:**	02/3/15
Sample Matrix:	Water	**Date Received:**	02/6/15
Analysis Method:	365.3	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Phosphorus, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Kaopa	K1501241-001	**0.285**	0.010	1	02/11/15 12:26	2/11/15	
Hele	K1501241-002	**0.463**	0.010	1	02/11/15 12:26	2/11/15	
Hamakua	K1501241-003	**0.136**	0.010	1	02/11/15 12:26	2/11/15	
Akipola	K1501241-004	**0.183**	0.010	1	02/11/15 12:26	2/11/15	
Keolu 1	K1501241-005	**0.239**	0.010	1	02/11/15 12:26	2/11/15	
Keolu 2	K1501241-006	**0.194**	0.010	1	02/11/15 12:26	2/11/15	
Keolu 3	K1501241-007	**0.154**	0.010	1	02/11/15 12:26	2/11/15	
Keolu 4	K1501241-008	**0.144**	0.010	1	02/11/15 12:26	2/11/15	
Keolu 5	K1501241-009	**0.211**	0.010	1	02/11/15 12:26	2/11/15	
Keolu 6	K1501241-010	**0.166**	0.010	1	02/11/15 12:26	2/11/15	
Method Blank	K1501241-MB1	ND U	0.010	1	02/11/15 12:26	2/11/15	

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QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project	Kaelepulu Pond/9682-28853	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	02/11/15

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1501264-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1501264-001DUP Result	Average	RPD	RPD Limit
Phosphorus, Total	365.3	0.010	0.005 J	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	02/11/15
		Date Extracted:	02/11/15

Duplicate Matrix Spike Summary
Phosphorus, Total

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1501264-001	**Basis:**	NA
Analysis Method:	365.3		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1501264-001MS			K1501264-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Phosphorus, Total	0.005 J	0.519	0.500	103	0.500	0.500	99	60-135	4	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Analyzed:**	02/11/15
Sample Matrix:	Water	**Date Extracted:**	02/11/15

Lab Control Sample Summary
Phosphorus, Total

Analysis Method:	365.3	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	432407

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1501241-LCS1	3.17	3.46	92	85-115

Analytical Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Collected:**	02/3/15
Sample Matrix:	Water	**Date Received:**	02/6/15
Analysis Method:	SM 2540 D	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Solids, Total Suspended (TSS)

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
Kaopa	K1501241-001	**28.0**	6.7	1	02/09/15 16:25	
Hele	K1501241-002	**101**	10	1	02/09/15 16:25	
Hamakua	K1501241-003	**8.0**	5.0	1	02/09/15 16:25	
Akipola	K1501241-004	**5.0**	5.0	1	02/09/15 16:25	
Keolu 1	K1501241-005	**42.0**	6.7	1	02/09/15 16:25	
Keolu 2	K1501241-006	**22.0**	6.7	1	02/09/15 16:25	
Keolu 3	K1501241-007	**11.3**	6.7	1	02/09/15 16:25	
Keolu 4	K1501241-008	**8.5**	5.0	1	02/09/15 16:25	
Keolu 5	K1501241-009	**47.3**	6.7	1	02/09/15 16:25	
Keolu 6	K1501241-010	**6.5**	5.0	1	02/09/15 16:25	
Method Blank	K1501241-MB1	ND U	4.0	1	02/09/15 16:25	
Method Blank	K1501241-MB2	ND U	4.0	1	02/09/15 16:25	
Method Blank	K1501241-MB3	ND U	4.0	1	02/09/15 16:25	

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QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project	Kaelepulu Pond/9682-28853	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Analysis Method:	SM 2540 D	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA

Replicate Sample Summary

Solids, Total Suspended (TSS)

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1501248-001DUP	10	119	125	122	5	10	02/09/15
Batch QC	K1501248-005DUP	10	283	287	285	1	10	02/09/15

Results flagged with an asterisk (*) indicate values outside control criteria.

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QA/QC Report

Client:	Cardno TEC	**Service Request:**	K1501241
Project:	Kaelepulu Pond/9682-28853	**Date Analyzed:**	02/09/15
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Solids, Total Suspended (TSS)

Analysis Method:	SM 2540 D	**Units:**	mg/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	432204

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1501241-LCS1	314	280	112	85-115
Lab Control Sample	K1501241-LCS2	312	280	111	85-115