



Alpha

Alpha Analytical Laboratories Inc.

e-mail: clientservices@alpha-labs.com

Corporate: 208 Mason St., Ukiah, CA 95482 • Phone: (707) 468-0401 • Fax: (707) 468-5267

Satellite Laboratory: 6398 Dougherty Rd., Suite 35, Dublin, CA 94568 • Phone: (925) 828-6226 • Fax: (925) 828-6309

ELAP Certificate Numbers 1551 and 2728

19 June 2012

Clark Pacific

Attn: Ryan Nakken

1980 South River Road

West Sacramento, CA 95691

RE: Howald Ranch Drinking Water Well

Work Order: 12E0238

Enclosed are the results of analyses for samples received by the laboratory on 05/03/12 20:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette L. Poplin For Clint T. Ostenberg
Project Manager



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CHEMICAL EXAMINATION REPORT

Page 1 of 9

Clark Pacific
1980 South River Road
West Sacramento, CA 95691
Attn: Ryan Nakken

Report Date: 06/19/12 15:14
Project No: Howard Ranch DW Well
Project ID: Howald Ranch Drinking Water Well

<u>Order Number</u>	<u>Receipt Date/Time</u>	<u>Client Code</u>	<u>Client PO/Reference</u>
12E0238	05/03/2012 20:35	CV CLARKPACIFIC	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Howald Ranch Drinking Water Well	12E0238-01	Water	05/03/12 09:46	05/03/12 20:35

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove
Laboratory Director

6/19/2012



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Project ID: Howald Ranch Drinking Water Well

Order Number Receipt Date/Time Client Code Client PO/Reference
12E0238 05/03/2012 20:35 CV CLARKPACIFIC

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
Howald Ranch Drinking Water Well (12E0238-01)							
Metals by EPA 200 Series Methods				Sample Type: Water		Sampled: 05/03/12 09:46	
Calcium	EPA 200.7	AE20821	05/08/12 08:47	05/10/12 13:33	1	69 mg/l	1.0
Magnesium	"	"	"	"	"	69 "	1.0
Sodium	"	"	"	"	"	72 "	1.0
Conventional Chemistry Parameters by APHA/EPA Methods							
Ammonia as N	SM4500NH3C	AE20742	05/07/12 09:51	05/07/12 16:00	1	ND mg/l	0.20
Bicarbonate	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	500 "	5.0
Bicarbonate Alkalinity as CaCO3	"	"	"	"	"	410 "	5.0
Carbonate	"	"	"	"	"	ND "	5.0
Hardness, Total	SM2340B	AE20821	05/08/12 08:47	05/15/12 13:42	"	455 "	5
pH	SM4500-H+ B	AE20414	05/04/12 08:47	05/04/12 17:00	"	7.77 pH Units	1.00 T-14
Specific Conductance (EC)	SM2510B	"	"	"	"	1100 umhos/cm	20
Total Dissolved Solids	SM2540C	AE20823	05/08/12 08:30	05/11/12 16:00	"	670 mg/l	10
Turbidity	SM2310B	AE20414	05/04/12 08:47	05/04/12 17:00	"	0.72 NTU	0.10
Carbonate Alkalinity as CaCO3	SM2320B	"	"	"	"	ND mg/l	5.0
Fixed Dissolved Solids	EPA 160.4	AE20824	05/10/12 15:00	05/11/12 15:00	"	460 "	10
Total Organic Carbon	SM5310C	AE21034	05/10/12 14:27	05/11/12 10:13	"	ND "	1.00
Hydroxide Alkalinity as CaCO3	SM2320B	AE20414	05/04/12 08:47	05/04/12 17:00	"	ND "	5.0
Total Alkalinity as CaCO3	"	"	"	"	"	410 "	5.0
Anions by EPA Method 300.0							
Chloride	EPA 300.0	AE20417	05/04/12 11:51	05/05/12 02:03	20	88 mg/l	10
Nitrate as N	"	"	"	05/05/12 02:48	1	5.7 "	0.20

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Report Date: 06/19/12 15:14
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Project ID: Howald Ranch Drinking Water Well

Order Number Receipt Date/Time Client Code Client PO/Reference
12E0238 05/03/2012 20:35 CV CLARKPACIFIC

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE20821 - Metals Digest										
Blank (AE20821-BLK1)				Prepared: 05/08/12 Analyzed: 05/10/12						
Calcium	ND	1.0	mg/l							
Magnesium	ND	1.0	"							
Sodium	ND	1.0	"							
LCS (AE20821-BS1)				Prepared: 05/08/12 Analyzed: 05/10/12						
Calcium	7.66	1.0	mg/l	8.00		95.8	85-115			
Magnesium	7.99	1.0	"	8.00		99.9	85-115			
Sodium	7.79	1.0	"	8.00		97.4	85-115			
Duplicate (AE20821-DUP1)				Source: 12E0311-07			Prepared: 05/08/12 Analyzed: 05/10/12			
Calcium	20.9	1.0	mg/l		22.5			7.46	20	
Magnesium	15.4	1.0	"		15.9			3.18	20	
Sodium	12.7	1.0	"		13.6			7.02	20	
Matrix Spike (AE20821-MS1)				Source: 12E0311-07			Prepared: 05/08/12 Analyzed: 05/10/12			
Calcium	30.9	1.0	mg/l	8.00	22.5	105	70-130			
Magnesium	23.8	1.0	"	8.00	15.9	98.2	70-130			
Sodium	21.7	1.0	"	8.00	13.6	102	70-130			
Matrix Spike (AE20821-MS2)				Source: 12E0272-02			Prepared: 05/08/12 Analyzed: 05/10/12			
Calcium	241	1.0	mg/l	8.00	232	112	70-130			
Magnesium	730	1.0	"	8.00	718	150	70-130			QM-4X
Sodium	333	1.0	"	8.00	328	56.4	70-130			QM-4X
Matrix Spike Dup (AE20821-MSD1)				Source: 12E0311-07			Prepared: 05/08/12 Analyzed: 05/10/12			
Calcium	30.6	1.0	mg/l	8.00	22.5	102	70-130	0.869	20	
Magnesium	23.1	1.0	"	8.00	15.9	90.1	70-130	2.75	20	

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Laboratory Director

6/19/2012



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Report Date: 06/19/12 15:14
Project No: Howard Ranch DW Well
Project ID: Howald Ranch Drinking Water Well

Order Number 12E0238 Receipt Date/Time 05/03/2012 20:35 Client Code CV CLARKPACIFIC Client PO/Reference

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
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Batch AE20821 - Metals Digest

Matrix Spike Dup (AE20821-MSD1)

Source: 12E0311-07

Prepared: 05/08/12 Analyzed: 05/10/12

Sodium	21.5	1.0	"	8.00	13.6	99.4	70-130	0.914	20	
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Project ID: Howald Ranch Drinking Water Well

Order Number: 12E0238 Receipt Date/Time: 05/03/2012 20:35 Client Code: CV CLARKPACIFIC Client PO/Reference:

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE20414 - General Preparation										
Duplicate (AE20414-DUP1)		Source: 12E0247-06			Prepared & Analyzed: 05/04/12					
Turbidity	1.25	0.10	NTU		1.48			16.8	30	
Carbonate	ND	5.0	mg/l		ND				200	
Specific Conductance (EC)	1340	20	umhos/cm		1360			1.19	10	
Bicarbonate Alkalinity as CaCO3	560	5.0	mg/l		575			2.64	20	
Bicarbonate	683	5.0	"		702			2.64	20	
pH	7.90	1.00	pH Units		7.66			3.08	20	
Carbonate Alkalinity as CaCO3	ND	5.0	mg/l		ND				20	
Hydroxide Alkalinity as CaCO3	ND	5.0	"		ND				20	
Total Alkalinity as CaCO3	560	5.0	"		575			2.64	20	

Batch AE20742 - General Preparation

Blank (AE20742-BLK1)		Prepared & Analyzed: 05/07/12								
Ammonia as N	ND	0.20	mg/l							
LCS (AE20742-BS1)		Prepared & Analyzed: 05/07/12								
Ammonia as N	3.92	0.20	mg/l	4.00		98.0	90-110			
LCS Dup (AE20742-BSD1)		Prepared & Analyzed: 05/07/12								
Ammonia as N	3.99	0.20	mg/l	4.00		99.8	90-110	1.77	10	
Matrix Spike (AE20742-MS1)		Source: 12E0198-02			Prepared & Analyzed: 05/07/12					
Ammonia as N	4.03	0.20	mg/l	4.00	ND	101	70-130			

Batch AE20821 - Metals Digest

Duplicate (AE20821-DUP1)		Source: 12E0311-07			Prepared: 05/08/12 Analyzed: 05/10/12					
Hardness, Total	116	5	mg/l		122			5.13	20	

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Project ID: Howald Ranch Drinking Water Well

Order Number Receipt Date/Time Client Code Client PO/Reference
12E0238 05/03/2012 20:35 CV CLARKPACIFIC

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE20823 - General Preparation										
Blank (AE20823-BLK1)				Prepared: 05/08/12 Analyzed: 05/11/12						
Total Dissolved Solids	ND	10	mg/l							
Duplicate (AE20823-DUP1)				Source: 12E0247-02 Prepared: 05/08/12 Analyzed: 05/11/12						
Total Dissolved Solids	1460	10	mg/l		1440			1.38	30	
Batch AE20824 - General Preparation										
Blank (AE20824-BLK1)				Prepared: 05/10/12 Analyzed: 05/11/12						
Fixed Dissolved Solids	ND	10	mg/l							
Duplicate (AE20824-DUP1)				Source: 12E0247-02 Prepared: 05/10/12 Analyzed: 05/11/12						
Fixed Dissolved Solids	1030	10	mg/l		1020			0.781	30	
Batch AE21034 - General Prep										
Blank (AE21034-BLK1)				Prepared & Analyzed: 05/10/12						
Total Organic Carbon	ND	1.00	mg/l							
LCS (AE21034-BS1)				Prepared & Analyzed: 05/10/12						
Total Organic Carbon	9.72	1.00	mg/l	10.0		97.2	85-115			
LCS Dup (AE21034-BSD1)				Prepared & Analyzed: 05/10/12						
Total Organic Carbon	10.0	1.00	mg/l	10.0		100	85-115	2.88	20	
Duplicate (AE21034-DUP1)				Source: 12E0454-01 Prepared & Analyzed: 05/10/12						
Total Organic Carbon	1.65	1.00	mg/l		1.68			1.82	20	

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12E0238	05/03/2012 20:35	CV CLARKPACIFIC	

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE21034 - General Prep										
Matrix Spike (AE21034-MS1) Source: 12E0454-02 Prepared & Analyzed: 05/10/12										
Total Organic Carbon	21.5	2.00	mg/l	20.0	ND	99.9	70-130			
Matrix Spike Dup (AE21034-MSD1) Source: 12E0454-02 Prepared & Analyzed: 05/10/12										
Total Organic Carbon	21.3	2.00	mg/l	20.0	ND	99.0	70-130	0.876	20	

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12E0238 05/03/2012 20:35 CV CLARKPACIFIC

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE20417 - General Preparation										
Blank (AE20417-BLK1)				Prepared & Analyzed: 05/04/12						
Chloride	ND	0.50	mg/l							
Nitrate as N	ND	0.20	"							
LCS (AE20417-BS1)				Prepared & Analyzed: 05/04/12						
Chloride	11.0	0.50	mg/l	11.1		99.4	90-110			
Nitrate as N	5.51	0.20	"	5.56		99.2	90-110			
Duplicate (AE20417-DUP1)				Source: 12E0154-01		Prepared: 05/04/12 Analyzed: 05/05/12				
Chloride	10.4	0.50	mg/l		10.5			0.535	20	
Nitrate as N	0.299	0.20	"		0.301			0.451	20	
Matrix Spike (AE20417-MS1)				Source: 12E0154-01		Prepared: 05/04/12 Analyzed: 05/05/12				
Chloride	21.2	2.5	mg/l	11.1	10.5	96.3	80-120			
Nitrate as N	5.63	1.0	"	5.56	ND	96.0	80-120			
Matrix Spike (AE20417-MS2)				Source: 12E0247-06		Prepared: 05/04/12 Analyzed: 05/05/12				
Nitrate as N	16.8	5.0	mg/l	5.56	11.5	95.4	80-120			
Chloride	98.0	12	"	11.1	86.0	108	80-120			
Matrix Spike Dup (AE20417-MSD1)				Source: 12E0154-01		Prepared: 05/04/12 Analyzed: 05/05/12				
Chloride	21.0	2.5	mg/l	11.1	10.5	94.2	80-120	1.08	20	
Nitrate as N	5.58	1.0	"	5.56	ND	95.0	80-120	0.984	20	

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12E0238	05/03/2012 20:35	CV CLARKPACIFIC	

Notes and Definitions

- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- T-14 Residual chlorine, dissolved oxygen, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time. Sample was received and analyzed outside of this "window."
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- PQL Practical Quantitation Limit

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Chain of Custody Record

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Reports and Invoices will be delivered by email in .pdf format.

Lab No. 12E0238 Page of

Report to: Company: Clark Pacific Attn: Ryan Nakken Address: 1980 South River Road West Sacramento CA 95961 Phone/Fax: 916.275.3752 Email Address: maknen@clarkpacific.com		Project Info for Report: Project ID: Former Spreckels Sugar Facility DW Well Project No: PO/Reference:		Signature: Client: <u>Clint T. O'fenbey</u>	
Invoice to (if different): Company: Attn: Address: Phone/Fax: Email Address:		Container: Adm VOA Amber Soil Jar Matrix:		Preservative: H3PO4 H2SO4 HNO3 HCL None Water Soil Other	
Analyses Requested pH Conductivity Chloride / Nitrate as N Bicarbonate / Carbonate Alkalinity, Total Hardness, Total / Na Total 200.7 Turbidity Ammonia as N TOC		TAT 10 days RUSH: 5 days 48 hours Other: days		Sample Notes (lab use only) Temperature: 5 deg. C Shipment Method: Custody Seals: Y / N	
Signature below authorizes work under terms stated on reverse side.		Lab Approval Required For Rush TATs		Sample Notes or CDPH Source Numbers:	
Total Number of Containers:		Date:		Time:	
Sample Identification Spreckels DW Well		Date: 5/3/12 9:45 5/3/12 9:45 5/3/12 9:45 5/3/12 9:46		Received by:	
State System Number:		CDPH Write On EDT Transmission? Yes <input type="radio"/> No <input type="radio"/>		Global ID:	
If "Y" please enter the Source Number(s) in the column above		State System Number:		CA Geotracker EDF Report? Yes <input type="radio"/> No <input type="radio"/>	
Global ID:		State System Number:		Sampling Company Log Code:	
EDF to (Email Address):		State System Number:		Misc. Supplies:	
Travel and Site Time:		State System Number:		Mileage:	