

# CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

01 February 2016

**CLS Work Order #: CZA1293**

**COC #: 29077**

Greg Stanton  
El Dorado County Environmental

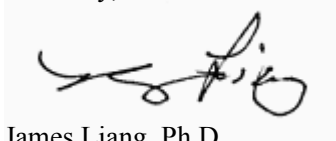
2850 Fairlane Court, Building C  
Placerville, CA 95667

**Project Name: Lime Plant**

Enclosed are the results of analyses for samples received by the laboratory on 01/28/16 14:21. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed below as well as under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'James Liang', is written over a light gray rectangular background.

James Liang, Ph.D.  
Laboratory Director

# CALIFORNIA LABORATORY SERVICES

02/01/16 14:17

El Dorado County Environmental  
2850 Fairlane Court, Building C  
Placerville CA, 95667

Project: Lime Plant  
Project Number: [none]  
Project Manager: Greg Stanton

CLS Work Order #: CZA1293  
COC #: 29077

## Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	MDL	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
			Limit	Units						
<b>Lime-2 (CZA1293-01) Water</b> <b>Sampled: 01/28/16 13:31</b> <b>Received: 01/28/16 14:21</b>										
Bicarbonate as CaCO3	ND	0.50	5.0	mg/L	1	CZ00711	01/29/16	01/29/16	SM2320B	
<b>Calcium</b>	<b>400</b>	0.16	5.0	"	5	CZ00694	01/29/16	02/01/16	200.7/2340B	
Carbonate as CaCO3	100	0.50	5.0	"	1	CZ00711	01/29/16	01/29/16	SM2320B	
Chloride	4.2	0.026	0.50	"	1	CZ00696	01/29/16	01/29/16	EPA 300.0	
Fluoride	0.40	0.0079	0.10	"	1	"	"	"	"	
Hardness as CaCO3	1000	1.0	1.0	"	1	CZ00694	01/29/16	02/01/16	200.7/2340B	
Hydroxide as CaCO3	1200	0.50	5.0	"	1	CZ00711	01/29/16	01/29/16	SM2320B	
Magnesium	ND	0.028	1.0	"	1	CZ00694	01/29/16	02/01/16	200.7/2340B	
MBAS as LAS, mol wt 340	ND	0.067	0.10	"	1	CZ00710	01/29/16	01/29/16	SM5540 C	
Nitrate as N	0.39	0.053	0.40	"	1	CZ00696	01/29/16	01/29/16	EPA 300.0	J
<b>pH</b>	<b>12.07</b>	0.01	0.01	pH Units	1	CZ00686	01/28/16	01/28/16	SM4500-H B	HT-F
Potassium	2.8	0.87	1.0	mg/L	1	CZ00694	01/29/16	02/01/16	200.7/2340B	
Sodium	6.5	0.021	1.0	"	1	"	"	"	"	
Specific Conductance (EC)	3000	0.090	1.0	µmhos/cm	1	CZ00732	02/01/16	02/01/16	EPA 120.1	
Sulfate as SO4	120	0.19	2.5	mg/L	5	CZ00696	01/29/16	01/29/16	EPA 300.0	
Total Alkalinity	1300	1.0	5.0	"	1	CZ00711	01/29/16	01/29/16	SM2320B	
Total Dissolved Solids	1400	10	10	"	1	CZ00691	01/29/16	02/01/16	SM2540C	

CA DOHS ELAP Accreditation/Registration Number 1233

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El Dorado County Environmental 2850 Fairlane Court, Building C Placerville CA, 95667	Project: Lime Plant Project Number: [none] Project Manager: Greg Stanton	CLS Work Order #: CZA1293 COC #: 29077
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## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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### Batch CZ00691 - General Preparation

**Blank (CZ00691-BLK1)** Prepared: 01/29/16 Analyzed: 02/01/16

Total Dissolved Solids	ND	10	10	mg/L							
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**Duplicate (CZ00691-DUP1)** Source: CZA1291-01 Prepared: 01/29/16 Analyzed: 02/01/16

Total Dissolved Solids	266	10	10	mg/L		277			4	20	
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### Batch CZ00694 - EPA 3010A

**Blank (CZ00694-BLK1)** Prepared & Analyzed: 01/29/16

Calcium	0.0952	0.031	1.0	mg/L							J
Hardness as CaCO3	ND	1.0	1.0	"							
Magnesium	ND	0.028	1.0	"							
Potassium	ND	0.87	1.0	"							
Sodium	0.0484	0.021	1.0	"							J

**LCS (CZ00694-BS1)** Prepared: 01/29/16 Analyzed: 02/01/16

Calcium	5.38	0.031	1.0	mg/L	5.00		108	85-115			
Magnesium	5.29	0.028	1.0	"	5.00		106	85-115			
Potassium	5.10	0.87	1.0	"	5.00		102	85-115			
Sodium	4.88	0.021	1.0	"	5.00		98	85-115			

**Matrix Spike (CZ00694-MS1)** Source: CZA1244-01 Prepared & Analyzed: 01/29/16

Calcium	14.4	0.031	1.0	mg/L	5.00	8.68	113	70-130			
Magnesium	15.4	0.028	1.0	"	5.00	9.71	114	70-130			
Potassium	10.6	0.87	1.0	"	5.00	5.20	108	70-130			
Sodium	9.41	0.021	1.0	"	5.00	4.08	107	70-130			

**Matrix Spike (CZ00694-MS2)** Source: CZA1291-02RE1 Prepared & Analyzed: 01/29/16

Calcium	34.4	0.031	1.0	mg/L	5.00	26.7	153	70-130			QM-7
Magnesium	21.7	0.028	1.0	"	5.00	15.3	129	70-130			
Potassium	9.38	0.87	1.0	"	5.00	3.29	122	70-130			
Sodium	30.6	0.021	1.0	"	5.00	23.9	136	70-130			QM-7

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El Dorado County Environmental  
2850 Fairlane Court, Building C  
Placerville CA, 95667

Project: Lime Plant  
Project Number: [none]  
Project Manager: Greg Stanton

CLS Work Order #: CZA1293  
COC #: 29077

## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

### CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch CZ00694 - EPA 3010A

##### Matrix Spike Dup (CZ00694-MSD1)

Source: CZA1244-01

Prepared & Analyzed: 01/29/16

Calcium	13.9	0.031	1.0	mg/L	5.00	8.68	105	70-130	3	25	
Magnesium	15.1	0.028	1.0	"	5.00	9.71	107	70-130	2	25	
Potassium	10.4	0.87	1.0	"	5.00	5.20	105	70-130	1	25	
Sodium	9.25	0.021	1.0	"	5.00	4.08	103	70-130	2	25	

#### Batch CZ00696 - General Prep

##### Blank (CZ00696-BLK1)

Prepared & Analyzed: 01/29/16

Chloride	ND	0.026	0.50	mg/L							
Fluoride	ND	0.0079	0.10	"							
Nitrate as N	ND	0.053	0.40	"							
Sulfate as SO4	ND	0.038	0.50	"							

##### LCS (CZ00696-BS1)

Prepared & Analyzed: 01/29/16

Chloride	4.69	0.026	0.50	mg/L	5.00		94	80-120			
Fluoride	1.97	0.0079	0.10	"	2.00		98	80-120			
Nitrate as N	0.466	0.053	0.40	"	0.451		103	80-120			
Sulfate as SO4	5.27	0.038	0.50	"	5.00		105	80-120			

##### LCS Dup (CZ00696-BSD1)

Prepared & Analyzed: 01/29/16

Chloride	4.70	0.026	0.50	mg/L	5.00		94	80-120	0.3	20	
Fluoride	1.89	0.0079	0.10	"	2.00		94	80-120	4	20	
Nitrate as N	0.465	0.053	0.40	"	0.451		103	80-120	0.1	20	
Sulfate as SO4	5.12	0.038	0.50	"	5.00		102	80-120	3	20	

##### Matrix Spike (CZ00696-MS1)

Source: CZA1290-01

Prepared & Analyzed: 01/29/16

Chloride	39.6	0.026	0.50	mg/L	5.00	35.5	81	80-120			
Fluoride	2.53	0.0079	0.10	"	2.00	0.227	115	80-120			
Nitrate as N	0.707	0.053	0.40	"	0.451	0.248	102	80-120			
Sulfate as SO4	12.3	0.038	0.50	"	5.00	7.61	93	80-120			

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Project: Lime Plant  
Project Number: [none]  
Project Manager: Greg Stanton

CLS Work Order #: CZA1293  
COC #: 29077

## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

### CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch CZ00696 - General Prep

<b>Matrix Spike Dup (CZ00696-MSD1)</b>		<b>Source: CZA1290-01</b>			<b>Prepared &amp; Analyzed: 01/29/16</b>						
Chloride	39.5	0.026	0.50	mg/L	5.00	35.5	80	80-120	0.2	20	
Fluoride	2.31	0.0079	0.10	"	2.00	0.227	104	80-120	9	20	
Nitrate as N	0.703	0.053	0.40	"	0.451	0.248	101	80-120	0.6	20	
Sulfate as SO4	12.2	0.038	0.50	"	5.00	7.61	93	80-120	0.4	20	

#### Batch CZ00710 - General Preparation

<b>Blank (CZ00710-BLK1)</b>		<b>Prepared &amp; Analyzed: 01/29/16</b>									
MBAS as LAS, mol wt 340	ND	0.067	0.10	mg/L							
<b>LCS (CZ00710-BS1)</b>		<b>Prepared &amp; Analyzed: 01/29/16</b>									
MBAS as LAS, mol wt 340	0.481	0.067	0.10	mg/L	0.500		96	80-120			
<b>LCS Dup (CZ00710-BSD1)</b>		<b>Prepared &amp; Analyzed: 01/29/16</b>									
MBAS as LAS, mol wt 340	0.497	0.067	0.10	mg/L	0.500		99	80-120	3	20	
<b>Matrix Spike (CZ00710-MS1)</b>		<b>Source: CZA1290-01</b>			<b>Prepared &amp; Analyzed: 01/29/16</b>						
MBAS as LAS, mol wt 340	0.472	0.067	0.10	mg/L	0.500	ND	94	75-125			
<b>Matrix Spike Dup (CZ00710-MSD1)</b>		<b>Source: CZA1290-01</b>			<b>Prepared &amp; Analyzed: 01/29/16</b>						
MBAS as LAS, mol wt 340	0.478	0.067	0.10	mg/L	0.500	ND	96	75-125	1	25	

#### Batch CZ00711 - General Preparation

<b>Blank (CZ00711-BLK1)</b>		<b>Prepared &amp; Analyzed: 01/29/16</b>									
Bicarbonate as CaCO3	ND	0.50	5.0	mg/L							
Carbonate as CaCO3	ND	0.50	5.0	"							
Hydroxide as CaCO3	ND	0.50	5.0	"							
Total Alkalinity	ND	1.0	5.0	"							

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Project: Lime Plant  
Project Number: [none]  
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## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

### CLS Labs

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch CZ00711 - General Preparation

##### Duplicate (CZ00711-DUP1)

Source: CZA1244-01

Prepared & Analyzed: 01/29/16

Bicarbonate as CaCO <sub>3</sub>	ND	0.50	5.0	mg/L		29.4				20	
Carbonate as CaCO <sub>3</sub>	ND	0.50	5.0	"		ND				20	
Hydroxide as CaCO <sub>3</sub>	ND	0.50	5.0	"		ND				20	
Total Alkalinity	ND	1.0	5.0	"		29.4				20	

#### Batch CZ00732 - General Preparation

##### Blank (CZ00732-BLK1)

Prepared & Analyzed: 02/01/16

Specific Conductance (EC)	ND	0.090		1.0 µmhos/cm							
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02/01/16 14:17

El Dorado County Environmental  
2850 Fairlane Court, Building C  
Placerville CA, 95667

Project: Lime Plant  
Project Number: [none]  
Project Manager: Greg Stanton

CLS Work Order #: CZA1293  
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## Notes and Definitions

QM-7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration.
HT-F	This is a field test method and it is performed in the lab outside holding time.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

**This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.**

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02/01/16 14:17

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2850 Fairlane Court, Building C  
Placerville CA, 95667

Project: Lime Plant  
Project Number: [none]  
Project Manager: Greg Stanton

CLS Work Order #: CZA1293  
COC #: 29077

## CLS Laboratories

3249 Fitzgerald Road, Rancho Cordova, CA  
Phone: (916) 638-7301

## CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

CZA1293

Lab Login# \_\_\_\_\_ Date 1/28/15 Page 1 of 1

Former Lime Plant				Analysis Requested										Comments	
Report to: Robert Lauritzen El Dorado County Environmental Management 2850 Fairlane Court, Bldg C Placerville, CA 95667 Office: (530)-621-5130 Fax: (530) 626-7130				# of Containers	General Minerals	Bicarb/Carb/Hydrox	Alkalinity								
Sample ID	Date	Time	Lab ID	Sample Matrix	NP	NP									
Lime-2	1/28/15	12:37 13:31		water	1	X	X								X
Relinquished by: Signature: <u>[Signature]</u> Printed Name: <u>Robert Lauritzen</u> El Dorado County Date/Time: <u>1/28/15</u>			Received by: Signature: _____ Printed Name: _____ Date/Time: _____			TAT Requirements <u>Standard (10 days)</u> <u>48-HR TAT</u>				Report Requirements <input checked="" type="checkbox"/> I. Routine Report <input type="checkbox"/> II. Report (includes DUP, MS MSD, as required) <input type="checkbox"/> III. Data Validation Report <input type="checkbox"/> RWQCB (MDLs/PQLs/Trace#)					
Additional Info: <u>Lab to filter for CAM 17 metals analysis</u>						Invoice: Greg Stanton, EDCEM Address: 2850 Fairlane Ct., Bldg C, Placerville, CA, 95667 Contract # 037-C-0607-BOS CO#29077									

[Signature] 1-28-16 1421 (21)