

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

28 January 2016

CLS Work Order #: CZA0870

COC #:

Greg Stanton
El Dorado County Environmental

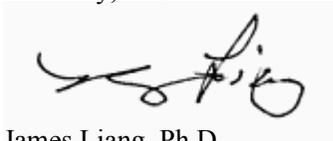
2850 Fairlane Court, Building C
Placerville, CA 95667

Project Name: Former Lime Plant

Enclosed are the results of analyses for samples received by the laboratory on 01/20/16 09:26. 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

01/28/16 09:05

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

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

CLS Work Order #: CZA0870
COC #:

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Lime-soil (CZA0870-01) Soil Sampled: 01/19/16 14:15 Received: 01/20/16 09:26										
Bicarbonate as CaCO3	800	0.50	5.0	mg/L	1	CZ00553	01/25/16	01/25/16	SM2320B	
Carbonate as CaCO3	74	0.50	5.0	"	1	"	"	"	"	
Chloride	8.4	0.059	5.0	mg/kg	1	CZ00532	01/22/16	01/22/16	EPA 300.0	
Hydroxide as CaCO3	ND	0.50	5.0	mg/L	1	CZ00553	01/25/16	01/25/16	SM2320B	
Sulfate as SO4	59		5.0	mg/kg	1	CZ00532	01/22/16	01/22/16	EPA 300.0	
Total Alkalinity	880	1.0	5.0	mg/L	1	CZ00553	01/25/16	01/25/16	SM2320B	
Lime-1 (CZA0870-02) Water Sampled: 01/19/16 14:10 Received: 01/20/16 09:26										
Bicarbonate as CaCO3	ND	0.50	5.0	mg/L	1	CZ00553	01/25/16	01/25/16	SM2320B	
Calcium	230	0.031	1.0	"	1	CZ00595	01/26/16	01/26/16	200.7/2340B	
Carbonate as CaCO3	100	0.50	5.0	"	1	CZ00553	01/25/16	01/25/16	SM2320B	
Chloride	3.0	0.026	0.50	"	1	CZ00431	01/20/16	01/20/16	EPA 300.0	
Fluoride	0.32	0.0079	0.10	"	1	"	"	"	"	
Hardness as CaCO3	570	1.0	1.0	"	1	CZ00595	01/26/16	01/26/16	200.7/2340B	
Hydroxide as CaCO3	470	0.50	5.0	"	1	CZ00553	01/25/16	01/25/16	SM2320B	
Magnesium	0.075	0.028	1.0	"	1	CZ00595	01/26/16	01/26/16	200.7/2340B	J
MBAS as LAS, mol wt 340	0.076	0.067	0.10	"	1	CZ00473	01/21/16	01/21/16	SM5540 C	J
Nitrate as N	0.32	0.053	0.40	"	1	CZ00431	01/20/16	01/20/16	EPA 300.0	J
pH	11.82	0.01	0.01	pH Units	1	CZ00435	01/20/16	01/20/16	SM4500-H B	HT-F
Potassium	1.9	0.87	1.0	mg/L	1	CZ00595	01/26/16	01/26/16	200.7/2340B	
Sodium	6.9	0.021	1.0	"	1	"	"	"	"	
Specific Conductance (EC)	2300	0.090	1.0	µmhos/cm	1	CZ00481	01/21/16	01/21/16	EPA 120.1	
Sulfate as SO4	120	0.19	2.5	mg/L	5	CZ00431	01/20/16	01/25/16	EPA 300.0	
Total Alkalinity	580	1.0	5.0	"	1	CZ00553	01/25/16	01/25/16	SM2320B	
Total Dissolved Solids	740	10	10	"	1	CZ00487	01/21/16	01/22/16	SM2540C	

CA DOHS ELAP Accreditation/Registration Number 1233

CALIFORNIA LABORATORY SERVICES

01/28/16 09:05

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

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

CLS Work Order #: CZA0870
COC #:

Metals by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Lime-soil (CZA0870-01) Soil Sampled: 01/19/16 14:15 Received: 01/20/16 09:26										
Calcium	190000	130	500	mg/kg	10	CZ00598	01/26/16	01/27/16	EPA 6010B	
Magnesium	1900	9.5	50	"	1	"	"	"	"	
Potassium	41	16	50	"	1	"	"	"	"	J
Sodium	120	9.4	50	"	1	"	"	"	"	

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CALIFORNIA LABORATORY SERVICES

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El Dorado County Environmental
2850 Fairlane Court, Building C
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Project: Former Lime Plant
Project Number: [none]
Project Manager: Greg Stanton

CLS Work Order #: CZA0870
COC #:

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 CZ00431 - General Prep

Blank (CZ00431-BLK1)

Prepared & Analyzed: 01/20/16

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 (CZ00431-BS1)

Prepared & Analyzed: 01/20/16

Chloride	4.74	0.026	0.50	mg/L	5.00		95	80-120			
Fluoride	1.92	0.0079	0.10	"	2.00		96	80-120			
Nitrate as N	0.470	0.053	0.40	"	0.451		104	80-120			
Sulfate as SO4	5.19	0.038	0.50	"	5.00		104	80-120			

LCS Dup (CZ00431-BSD1)

Prepared & Analyzed: 01/20/16

Chloride	4.73	0.026	0.50	mg/L	5.00		95	80-120	0.3	20	
Fluoride	1.98	0.0079	0.10	"	2.00		99	80-120	3	20	
Nitrate as N	0.470	0.053	0.40	"	0.451		104	80-120	0.1	20	
Sulfate as SO4	5.20	0.038	0.50	"	5.00		104	80-120	0.1	20	

Matrix Spike (CZ00431-MS1)

Source: CZA0852-01

Prepared & Analyzed: 01/20/16

Chloride	9.57	0.026	0.50	mg/L	5.00	4.87	94	80-120			
Fluoride	1.94	0.0079	0.10	"	2.00	ND	97	80-120			
Nitrate as N	2.76	0.053	0.40	"	0.451	2.34	93	80-120			
Sulfate as SO4	5.35	0.038	0.50	"	5.00	0.455	98	80-120			

Matrix Spike Dup (CZ00431-MSD1)

Source: CZA0852-01

Prepared & Analyzed: 01/20/16

Chloride	9.47	0.026	0.50	mg/L	5.00	4.87	92	80-120	1	20	
Fluoride	1.94	0.0079	0.10	"	2.00	ND	97	80-120	0.2	20	
Nitrate as N	2.75	0.053	0.40	"	0.451	2.34	93	80-120	0.1	20	
Sulfate as SO4	5.28	0.038	0.50	"	5.00	0.455	97	80-120	1	20	

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El Dorado County Environmental
2850 Fairlane Court, Building C
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Project: Former Lime Plant
Project Number: [none]
Project Manager: Greg Stanton

CLS Work Order #: CZA0870
COC #:

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 CZ00473 - General Preparation

Blank (CZ00473-BLK1)					Prepared & Analyzed: 01/21/16						
MBAS as LAS, mol wt 340	ND	0.067	0.10	mg/L							
LCS (CZ00473-BS1)					Prepared & Analyzed: 01/21/16						
MBAS as LAS, mol wt 340	0.485	0.067	0.10	mg/L	0.500		97	80-120			
LCS Dup (CZ00473-BSD1)					Prepared & Analyzed: 01/21/16						
MBAS as LAS, mol wt 340	0.519	0.067	0.10	mg/L	0.500		104	80-120	7	20	
Matrix Spike (CZ00473-MS1)					Source: CZA0870-02		Prepared & Analyzed: 01/21/16				
MBAS as LAS, mol wt 340	0.526	0.067	0.10	mg/L	0.500	0.0755	90	75-125			
Matrix Spike Dup (CZ00473-MSD1)					Source: CZA0870-02		Prepared & Analyzed: 01/21/16				
MBAS as LAS, mol wt 340	0.553	0.067	0.10	mg/L	0.500	0.0755	96	75-125	5	25	

Batch CZ00481 - General Preparation

Blank (CZ00481-BLK1)					Prepared & Analyzed: 01/21/16						
Specific Conductance (EC)	ND	0.090		1.0 µmhos/cm							

Batch CZ00487 - General Preparation

Blank (CZ00487-BLK1)					Prepared: 01/21/16 Analyzed: 01/22/16						
Total Dissolved Solids	ND	10	10	mg/L							
Duplicate (CZ00487-DUP1)					Source: CZA0886-03		Prepared: 01/21/16 Analyzed: 01/22/16				
Total Dissolved Solids	450	10	10	mg/L		476			6	20	

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Project Number: [none]
Project Manager: Greg Stanton

CLS Work Order #: CZA0870
COC #:

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
Batch CZ00532 - General Prep											
Blank (CZ00532-BLK1)											
Prepared & Analyzed: 01/22/16											
Chloride	ND	0.059	5.0	mg/kg							
Sulfate as SO4	ND		5.0	"							
LCS (CZ00532-BS1)											
Prepared & Analyzed: 01/22/16											
Chloride	46.0	0.059	5.0	mg/kg	50.0		92	75-125			
Sulfate as SO4	50.6		5.0	"	50.0		101	75-125			
LCS Dup (CZ00532-BSD1)											
Prepared & Analyzed: 01/22/16											
Chloride	47.7	0.059	5.0	mg/kg	50.0		95	75-125	4	25	
Sulfate as SO4	52.2		5.0	"	50.0		104	75-125	3	25	
Matrix Spike (CZ00532-MS1)											
Source: CZA0870-01 Prepared & Analyzed: 01/22/16											
Chloride	49.1	0.059	5.0	mg/kg	50.0	8.44	81	75-125			
Sulfate as SO4	107		5.0	"	50.0	59.0	96	75-125			
Matrix Spike Dup (CZ00532-MSD1)											
Source: CZA0870-01 Prepared & Analyzed: 01/22/16											
Chloride	49.4	0.059	5.0	mg/kg	50.0	8.44	82	75-125	0.5	30	
Sulfate as SO4	108		5.0	"	50.0	59.0	98	75-125	0.7	30	
Batch CZ00553 - General Preparation											
Blank (CZ00553-BLK1)											
Prepared & Analyzed: 01/25/16											
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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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 CZ00553 - General Preparation

Duplicate (CZ00553-DUP1)	Source: CZA1043-01	Prepared & Analyzed: 01/25/16									
Bicarbonate as CaCO3	54.4	0.50	5.0	mg/L	56.0				3	20	
Carbonate as CaCO3	ND	0.50	5.0	"	ND					20	
Hydroxide as CaCO3	ND	0.50	5.0	"	ND					20	
Total Alkalinity	54.4	1.0	5.0	"	56.0				3	20	

Batch CZ00595 - 6010A/No Digestion

Blank (CZ00595-BLK1)	Prepared & Analyzed: 01/26/16										
Calcium	ND	0.031	1.0	mg/L							
Hardness as CaCO3	ND	1.0	1.0	"							
Magnesium	ND	0.028	1.0	"							
Potassium	ND	0.87	1.0	"							
Sodium	0.0364	0.021	1.0	"							J

LCS (CZ00595-BS1)	Prepared & Analyzed: 01/26/16										
Calcium	4.71	0.031	1.0	mg/L	5.00		94	85-115			
Magnesium	5.15	0.028	1.0	"	5.00		103	85-115			
Potassium	4.90	0.87	1.0	"	5.00		98	85-115			
Sodium	5.25	0.021	1.0	"	5.00		105	85-115			

Matrix Spike (CZ00595-MS1)	Source: CZA0798-06	Prepared & Analyzed: 01/26/16									
Calcium	25.6	0.031	1.0	mg/L	5.00	21.6	81	70-130			
Magnesium	21.9	0.028	1.0	"	5.00	17.6	87	70-130			
Potassium	6.69	0.87	1.0	"	5.00	0.973	114	70-130			
Sodium	14.3	0.021	1.0	"	5.00	8.76	110	70-130			

Matrix Spike (CZ00595-MS2)	Source: CZA0870-02	Prepared: 01/26/16 Analyzed: 01/27/16									
Calcium	288	0.031	1.0	mg/L	5.00	227	NR	70-130			QM-7
Magnesium	8.60	0.028	1.0	"	5.00	0.0753	170	70-130			QM-7
Potassium	8.85	0.87	1.0	"	5.00	1.86	140	70-130			QM-7
Sodium	12.7	0.021	1.0	"	5.00	6.95	114	70-130			

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CALIFORNIA LABORATORY SERVICES

01/28/16 09:05

El Dorado County Environmental 2850 Fairlane Court, Building C Placerville CA, 95667	Project: Former Lime Plant Project Number: [none] Project Manager: Greg Stanton	CLS Work Order #: CZA0870 COC #:
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Metals by EPA 6000/7000 Series 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 CZ00598 - EPA 3050B

Blank (CZ00598-BLK1)

Prepared: 01/26/16 Analyzed: 01/27/16

Calcium	ND	13	50	mg/kg							
Magnesium	ND	9.5	50	"							
Potassium	ND	16	50	"							
Sodium	9.85	9.4	50	"							J

LCS (CZ00598-BS1)

Prepared: 01/26/16 Analyzed: 01/27/16

Calcium	458	13	50	mg/kg	500		92	75-125			
Magnesium	476	9.5	50	"	500		95	75-125			
Potassium	522	16	50	"	500		104	75-125			
Sodium	475	9.4	50	"	500		95	75-125			

Matrix Spike (CZ00598-MS1)

Source: CZA0961-01

Prepared: 01/26/16 Analyzed: 01/27/16

Calcium	4820	13	50	mg/kg	500	4180	128	75-125	16	30	QM-4X
Magnesium	3000	9.5	50	"	500	2750	49	75-125	0.3	30	QM-4X
Potassium	1620	16	50	"	500	1280	69	75-125	10	30	QM-4X
Sodium	603	9.4	50	"	500	98.2	101	75-125	4	30	

Matrix Spike Dup (CZ00598-MSD1)

Source: CZA0961-01

Prepared: 01/26/16 Analyzed: 01/27/16

Calcium	5670	13	50	mg/kg	500	4180	297	75-125	16	30	QM-4X
Magnesium	3010	9.5	50	"	500	2750	51	75-125	0.3	30	QM-4X
Potassium	1790	16	50	"	500	1280	102	75-125	10	30	
Sodium	625	9.4	50	"	500	98.2	105	75-125	4	30	

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CALIFORNIA LABORATORY SERVICES

01/28/16 09:05

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

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

CLS Work Order #: CZA0870
COC #:

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.
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.
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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01/28/16 09:05

El Dorado County Environmental
2850 Fairlane Court, Building C
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Project: Former Lime Plant
Project Number: [none]
Project Manager: Greg Stanton

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COC #:

CZA0870

CLS Laboratories

CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

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

Lab Login# _____ Date 1/20/15 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																
Sample ID	Date	Time	Lab ID	Sample Matrix	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Lime-soil	9/1/2015	1415		soil	1		X				X												
Lime-1	9/1/2015	1410		water	1	X	X					X											
Relinquished by: Signature: <i>Robert Lauritzen</i>					Received by: Signature: <i>[Signature]</i>					TAT Requirements <input checked="" type="checkbox"/> Standard (10 days)					Report Requirements <input checked="" type="checkbox"/> I. Routine Report <input type="checkbox"/> II. Report (includes DUP, MSD, as required). <input type="checkbox"/> III. Data Validation Report <input type="checkbox"/> RWQCB (MDLs/POLs/Trace#)								
Printed Name: Robert Lauritzen					Printed Name: <i>926</i>																		
El Dorado County Date/Time: <i>1/20/15</i>					Date/Time: <i>(09)</i>																		
Additional Info:					Invoice: Greg Stanton, EDCEM Address: 2850 Fairlane Ct., Bldg C, Placerville, CA, 95667 Contract # 037-C-0607-BOS CO#29077																		

CALIFORNIA LABORATORY SERVICES

01/28/16 09:05

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

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

CLS Work Order #: CZA0870
COC #:

CHANGE OF STATUS

CLS Labs Job # CZA0870

Project Name: _____

Date Sample(s) Were Received: _____ Original Date _____

ROBERT LAURITZ of EL DORADO CO. called
(Client Contacted) (Company)

on 1/27/16 at 0920 hrs (Central)
(Date) (Time)

... and requested the following:

CHANGE SAMPLE DATE TO 1/19/2016

Turnaround time requested for additional work: _____

(Signature)

1/27/16
(Date)

N/A

Updated lab job database and file folder by: _____

Cc: _____

H:\WillOrellana\ChangeOfStatus.Doc